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Peter Parycek, Noella Edelmann (Editors)  
Michael Sachs (Co-Editor)

## CeDEM12

Conference for E-Democracy  
and Open Government

3-4 May 2012

Danube University Krems, Austria



# CeDEM12

Proceedings of the International  
Conference for E-Democracy and Open Government



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# CeDEM12 Editorial

*Krems, May 2012*

Peter Parycek, Noella Edelmann

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**W**hat makes a good CeDEM conference? The Conference for E-Democracy and Open Government would not even be worth its name without the “dēmos”, the people.

So we begin this editorial by thanking the dēmos of the CeDEM 2012 conference. The editors would like to thank all the contributors and authors for their participation in the CeDEM, it is their knowledge and expertise that ensures the success of an academic conference. The CeDEM12 presents state-of-the-art research papers from all over the world (except Australia and Antarctica). These papers are selected through a stringent double-blind review process (with a 50% rejection rate!) and a strict acceptance policy that ensures the high quality of the papers presented in the conference and these proceedings. So further thanks go to all members of the Programme Committee and Honorary Board who take the time to read and critically evaluate the submissions as well as support the conference in many ways. Good conferences also need good keynotes, so many thanks to our distinguished speakers Anke Domscheit-Berg, Arthur Lupia and Ralph Schroeder. They look at bottom-up and top-down strategies in open governments, the internet, and its impact on knowledge and civic competence. And then, Michael Sachs, Gerlinde Ecker, Nicole Waldorf, David Kudish, Kelly Mannix: we would neither be able to attend the conference nor read these proceedings without their ongoing and invaluable management skills. Many thanks also to our sponsors, BRZ – the Austrian Federal Computing Centre and AIT – the Austrian Institute of Technology as well as to our media partner Behörden Spiegel.

CeDEM is known for its range of topics, but this year’s contributions have focused mainly on e-participation (Molinari; Ruesch and Märker; Geana, Taylor and Wandhoefer; Meyerhoff Nielsen and Igari; Svensson, Neumayer, Banfield-Mumb and Schoßböck; Griessler; Eegunlusi and Omilusi), open government (Parycek, Schossböck, Piswanger and Harm; Sandoval-Almazán) and open data (Zuiderwijk, Jeffery and Janssen; Krabina; Eibl and Lutz; Huber). Other aspects of e-democracy (Karna; Goleminova) such as transparency (Vieira and Wahrendorff Caldas; Mbera) and bottom-up movements (Litvinenko; Kraicsich, Naber, Purgathofer and Purgathofer-Müller) have also been considered. Further topics addressed are e-politics and e-campaigning (Fraefel; Dahdal; Barlai) as well as the issues necessary for e-democracy to be successful, such as security (Ilieva and Bobeva), and the role of technology and social media (Maireder, Ausserhofer and Kittenberger; Cestnik and Kern; Stegherr). Traditional topics such as e-government (Guemide and Benachaiba) and e-voting (Mac Namara, Gibson and Oakley) support a profound discourse at CeDEM12. All these topics are important, as can be seen by their implementation in countries around the world such as Algeria, Austria, Brasil, the Hungary, India, Japan, Mexico, Nigeria, Romania and Russia. During the conference these issues will be discussed during presentations,

additionally highlighted in lightening talks, and studied in more depth during the workshops (Höchtel; King and Jung; Zuiderwijk, Janssen, Jeffery and Charalabidis; Sonntagbauer).

The conference has a reputation for its interdisciplinary approach and eagerness to support “openness”. Last year’s proceedings, published according to Open Access principles, was accessed over 10,000 times. For CeDEM authors and keynotes, this means that their contributions are accessible to many and widely read. It also means that the conference and its proceedings are valued by many. We hope that the CeDEM 12 proceedings will again prove to be just as valuable!

*Noella Edelmann*

*Peter Parycek*

## Keynotes







# Can Evolving Communication Technologies Increase Civic Competence?

Arthur Lupia

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***Abstract:** This essay examines how advocates and experts can use evolving communication technologies to increase civic competence. It describes challenges faced by many groups whose aspiration is to improve what the public knows and clarifies when communication technologies can, and cannot, help overcome these challenges.*

**Keywords:** knowledge, information, competence, attention, social marketing

**Acknowledgement:** I thank the conveners of CeDem for the opportunity to participate in the 2012 conference.

**A**s politics evolve, so do the challenges they face. New conflicts emerge. Long-running concerns about poverty and security take previously unseen forms. In such cases, past strategies for managing social problems may seem ill-suited for new challenges.

Technology also evolves. Over the last century, people in many parts of the world have seen successive waves of evolving communication technologies change their lives. With each wave of change from radio to broadcast television to cable television to desktop-based network computing to cloud computing and a proliferation of mobile communication devices, there is great excitement about the future. Evolving communication technologies change how individuals live their lives and transform entire societies.

The technologies that are now evolving in laboratories, and before our eyes, have the potential to provide politics with powerful new ways to manage their challenges. Today's evolving technologies provide faster access to ever more comprehensive knowledge bases and they provide individuals from far-flung locations have increasingly dynamic mechanisms for coordinating expectations and activities. These technologies have the potential to help diverse societies more effectively manage present and future challenges.

New communication technologies, however, are no panacea. While they have the potential to improve many aspects of democratic life, there is no guarantee that the potential will be realized. Consider the domain of civic education; specifically attempts to increase civic competence on critical social tasks such as voting. The successes of attempts to use evolving communication technologies to increase civic competence are constrained by the human dimension of civic education (Lupia and Sin 2003). The success or failure of their efforts depends on attributes of information processing that affect what people remember about the things that they see and hear.

Many people who understand the mechanics of evolving communication technologies in great detail misunderstand the human dimension of civic education. A common consequence is that they are surprised to learn that websites, social networks and other devices that they believed would increase civic engagement and learning in ways that correspond to increased competence have no such effect (Lupia and Philpot 200). In this essay, I will explain several factors that cause civic education attempts to be less effective than their sponsors and designers anticipate. I will then use information about these same factors to recommend strategies that can help interested persons to use evolving technologies more effectively and efficiently in the domain of e-democracy.

## 1. Meet the Fixers

In this essay, I refer to people who seek to use evolving communication technologies to improve some aspect of social or democratic life as “fixers.” I focus on fixers who believe that providing information to others is a path to more competent decisions and a better future.

Fixers come from many walks of life. Some fixers are advocates. These advocate-fixers (e.g., the Sierra Club) are typically motivated by a desire for a particular outcome (e.g., “a safe and healthy community in which to live”). Some advocate-fixers seek to preserve an existing policy outcome. Others provide information in the hope that audiences will join them in becoming agents of change.

Other fixers view themselves as experts on a topic rather than as outcome-oriented advocates. These expert-fixers are typically motivated by ideas they have gleaned from fields such as science, medicine or theology. These fixers tend to devote themselves to educating people about how things work, without making explicit appeals for or against specific policies. Many academics who study policy and politics related subjects, including those who study what citizens do and do not know about politics, see themselves in this manner.

Of course, many fixers see themselves as both advocates and experts. They not only want to educate audiences about how things work, but also want to enlighten them about how things could work if certain options were chosen. These fixers try to often help others by engaging in educational endeavors that can bring policy outcomes in line with what the content of their expertise recommends.

Whether fixers see themselves as advocates, experts, or both, and whether their target audience is large or small, they tend to view themselves as having benevolent intentions and points of view that can help others. Highly visible national-level issues for which many fixers are active include world hunger, climate change, arms control, maintenance of traditional values, and all manner of causes related to individual and public health. Millions of other fixers focus on thousands of more local causes such as the policies of local schools and whether specific pieces of land, or other natural resources, should be used for commerce, for recreation, or preserved. For some fixers, a single issue is the cause that motivates them. For other fixers, their focus is not a single issue, but on the importance of applying the teachings of a particular religious tradition or other worldview to a broad class of problems.

A common motivating factor for fixers is the belief that certain audiences are not paying enough attention to issues or ways of thinking about issues that the fixer sees as vital. As opposed to a salesman whose sole objective is to line his own pocketbook, the fixers upon whom I focus in this

essay believe that greater citizen attention towards, and engagement with, certain kinds of information will bring substantial benefits to others.

If you are a fixer, want to help a fixer, or if you think you may attempt to become a fixer in the future, the point of this essay is not to question your desire to help others. Similarly, if you are a scholar, or think that you might want to study civic competence in the future, the point of this essay is not to question the importance of understanding what citizens do or do not know and why political ignorance matters. Instead, the point of this essay is to cause you to ask, and more effectively answer, a few important questions that are pertinent to your ability to understand and improve what citizens do.

The first questions to ask are, "If citizens lack vital information about politics and policy, can anything really be done about that? If so, are you the kind of fixer that can help to solve the problem? If not, are there things you can learn about how citizens think that can help you be more effective at increasing civic competence? In what follows, I highlight a few topics that can offer clarity to questions such as these.

## 2. Recognizing Common Mistakes

Despite good intentions, a passion for the topics on which they seek to educate others, and scientific or other expertise, many fixers are simply ineffective at educating citizens. A common problem is that fixers believe that their passion for, or expertise in, a given political or policy area makes them well-suited to educate the target audiences about which they care and to cause them to make different political choices. Neither passion nor many kinds of expertise are sufficient for a fixer to persuade citizens to think anew about a given policy or candidate.

A problem that prevents fixers from using evolving communication technologies to achieve their social aspirations is that they lack information about how people learn and make decisions. Many fixers, for example, choose not to collect evidence about what citizens would need to know to make better decisions. They also choose not to collect evidence about the extent to which their target audiences are paying even the slightest amount of attention to their presentations. Most fixers rely, instead, on wishful thinking to convince themselves that their target audiences need the information that they are presenting and that the audiences see the information as important and worth committing to memory. As a result of these practices, many well-intentioned fixers channel their great passion and/or substantial expertise into educational efforts that fail to have their intended impact.

My central proposition is that fixers can be fixed -- at least some of them. It is possible to improve many fixers' effectiveness as long as they are open to basing their educational strategies on basic and knowable attributes of human cognition and behavior. A key to fixing fixers is to get them to recognize common fixer mistakes. If fixers take a moment to contemplate mistakes that many other fixers make, they may begin to recognize errors and inefficiencies in their own ways of thinking. They may have a new way of seeing how such errors are undermining their own efforts' success and can use this knowledge to pursue more effective directions.

The first mistake that fixers make is misunderstanding the relationship between information and choice. Many fixers simply assume that if a citizen cannot correctly answer commonly asked questions about politics and policy, then they must also be making incompetent decisions. These assumptions are typically false. In fact, it is very easy to write political and policy-related

questions for which few citizens give correct answers. Most such questions reveal very little about how citizens actually think about politics or policy (Lupia 2006).

The second mistake that fixers make is relying on folk theories of learning when attempting to improve civic competence. For example, I have met many people who make an argument of the following form: "Being an expert in [say, physics] will make me persuasive. Citizens and policymakers will respect me and be interested in what I have to say."

In reality, people ignore most of what they are shown, forget most everything to which they have paid attention (Baddeley 1999), and fail to change their minds about many topics to which they devote conscious thought (Lord, Ross, and Leeper 1979). Many fixers believe that because their motives are so benevolent or their expertise so great, that the laws of nature that govern human attention and memory will make an exception for them. In other words, they believe that they will be granted an exemption from universal attributes of human learning and cognition that lead people to ignore and forget almost every stimulus to which they are exposed. Such folk theories of learning are widely held by many fixers despite the fact that they have been thoroughly discredited by modern neuroscience and social science (Druckman and Bolsen 2011). Many fixers cling to folk theories of learning not because they have obtained hard evidence that their persuasive efforts are effective, but because these fictional accounts about how others see them are what many fixers want to believe about themselves (Kunda 2001).

### 3. A Better Way Forward

Understanding and integrating basic principles from fields such as psychology and marketing, in ways that are appropriate for the unique challenges of political and policy domains, can help fixers become more effective. Consider, for example, that politics presents communicative challenges, which often pertain to "who trusts whom", that are not present in many other educational or marketing domains. Hence, the conditions for persuasive success in political environments can be quite different than in traditional classrooms or when selling consumer products (Lupia and McCubbins 1998). In other words, educational strategies that work in classrooms or at academic conferences are often disastrous when attempted with larger audiences. Fixers who understand conditions for persuasive success in political contexts can benefit by redirecting their efforts to projects where success is more likely.

Consider, for example, that many current critiques of civic competence are based on incorrect beliefs about the relationship between how citizens respond to survey questions and important qualities of how they think and act (Lupia 2006). Errors about this relationship lead many fixers to draw false conclusions about their target audience's competence and to pursue persuasive strategies that are doomed from the start -- because the information they are attempting to convey can have little or no effect on citizens' ability to make important choices competently. For example, one common error is a belief that competence requires citizens to recall pieces of information that are highly valued to the fixer. Many fixers who make such claims cannot demonstrate that the knowledge is necessary, or even useful, for increasing broadly valuable competences for the citizens in question.

To establish whether a certain kind of knowledge is, or is not, relevant to a particular competence, it is first important to recognize that competence is always with respect to a task. To say that a person is competent is to say that they are competent at something (Kuklinski and Quirk 2001).

While this point may seem obvious when stated plainly, many critics of citizens' civic competence skip this step. They proceed as if the value of the information that they want citizens to know is self-evident. They contend that one need not reference specific tasks to validate the importance of the information that they think you should know. Such errors lead to larger problems when the information in question is made a core component of an educational effort.

Other critics name tasks but fail to connect the dots from "having certain kinds of knowledge" to "performing important tasks competently." A common problem with such arguments is that there are an infinite number of facts as well as an infinite number of statements about what values people should have that are often presented as facts. Many of these statements are potentially relevant to many political choices. If human brains had unlimited receptive and processing capacities, then remembering and processing large numbers of potentially relevant facts and statements would not be problematic. But human brains are quite limited. These limits make acquiring information, storing it in memory, and acting upon it more difficult than many fixers imagine. Even when highly motivated, there is only so much that people can learn.

If citizens' learning capacities are quite limited, then an important question for fixers becomes, "What information is important for citizens to learn?" With respect to this question, I argue that a critic's or fixer's claims that an audience ought to privilege particular kinds of information in their thinking should be accompanied by a demonstration of why the information is of tangible value to the citizens in question. At present, many critics proceed as if information that is important to them is valuable to others by default. They are often wrong about this. If a target audience has different responsibilities or values than critics, then information that seems essential from the critic's point of view may have little or no value to the audience. Having a clearer understanding of the relationship between being exposed to certain types of information, possessing certain types of knowledge, and being competent at well-specified political tasks (such as the ability to make a choice from amongst several candidates for office that is consistent with a set of relevant facts and values), can help fixers develop credible measures of whether their persuasive strategies are failing or succeeding at increasing specific competences.

Fixers can also benefit by thinking about conditions that must be satisfied if a fixer is to transform a citizen who is initially competent at a political or policy-relevant task into a person who is more competent at the task. To this end, it can be useful for fixers to understand the kinds of information that different types of people are, and are not, likely to remember and then act upon later when making decisions. Many fixers' educational strategies are based on common folk theories of learning. These folk theories often lead fixers with technical expertise to inundate audiences with technical monologues. What recent science reveals about human brains, however, suggests audiences will not remember presentations do not place data, analyses and other technical details in contexts that the audience finds both familiar and personally vital (Hamann 2001). Even when a fixer's presentation is very sophisticated and technically correct, audiences are not likely to remember any part of the presentation in any detail.

A key fact for fixers in the e-democracy realm to keep in mind is that the conditions for educational success in non-political contexts differ from the conditions for educational success in political contexts. A key insight for fixers who are coming to e-democracy from other communicative domains is that educational and persuasive strategies that work well in other domains often fail in political arenas. Many fixers are annoyed by this difference. In response, many fixers then blame lazy audiences, public apathy, selfishness, or "politics" for the

communicative failures that result. But much of the explanation for these failures lies primarily with the fixers rather than the audiences.

For example, many fixers appear not to realize that political debates are waged not just over factual matters. Political arguments are often about value conflicts as well. When an audience suspects that a speaker's values are different than their own, the audience can become skeptical of explanations that they would otherwise accept (Lupia and Menning 2008). Political audiences often interpret images and messages in ways that catch even experienced nonpolitical communicators by surprise. To be effective in such circumstances, fixers can benefit by learning about the value and aspirations of the audience that they are attempting to reach – as opposed to simply assuming that the audience shares their values. When the task at hand is to get an audience in a political context to think anew about a particular topic, advocate-fixers and expert-fixers can be much more persuasive if they communicate their ideas differently than they would in a non-politicized context.

By exploring foundations of successful communication strategies in political domains, we discover an important insight: the value of seeing things from an audience's point of view (Andreasen 2005). While fixers are often knowledgeable about the topics on which they advocate or have expertise, they typically see the topics from very different perspectives than their target audiences. To attract an audience's scarce and often fleeting attention, to get an audience to do the mental work that converts the content of a fixer's presentation into memories that can change how the audience thinks, fixers should base their presentations on knowledge of how their audience's view of the problem differs from their own. They can either acquire this knowledge themselves or commit to working with people who have such knowledge and want to help the fixer be more effective.

In many cases, fixers must find a way to revise a presentation that they find pleasing, but that strikes an audience as too abstract or distant from their day-to-day experiences. They must find a way to present material in ways that their audiences view as concrete and vital. Many fixers, particularly those with scientific or technical expertise, react to such requests by suggesting that they are being asked to "dumb down" their materials. Instead, I am proposing that they increase their likelihood of persuasive success by "smartening up" about what their target audiences want and need. Today, many fixers ignore their audiences' points of view. They believe that the fixer's point of view would become obvious to, and accepted by, the audience if only audience members would take the time to see things from the fixer's point of view. In many cases, audiences have little incentive to do this and would make greater use of the fixer's expertise if the fixer's presentation that spoke to the audience's problems and worldviews. By smartening up about the differences between their perspectives and those of their audiences, many fixers can develop communicative strategies that have a better chance of success.

A related piece of information from which fixers can benefit is that, at any moment, there are many things about which an audience can think. In other words, fixers can benefit from regarding themselves as in an ongoing battle for an audience's attention. For every audience member and every moment, some speaker (perhaps the fixer or perhaps the person sitting near them who is fidgeting with their smartphone) or other stimulus (the design of the wallpaper) is going to win this battle. The question for a fixer is whether, when, and for whom, the information they he or she wants to convey can win these battles. Many fixers do not recognize that such battles are occurring. Instead, they believe that their presentation is so important that their audience is



naturally gravitating toward it, even when the audience appears not to be paying attention. When seeing their audience in this way, many fixers effectively cede the battle for attention before it has even begun. Recognizing that an audience's attention has to be won, and not taken for granted, is a key step in developing an effective persuasive strategy.

In sum, the ideas described in this section reveal that many of the unusual rules of communication games in politics follow a logic that is not difficult to understand – if one takes the time to do so.

## 4. Conclusion

Because politics is an arena that creates winners by simultaneously creating losers, not everyone who tries to get citizens to see the wisdom of favoring a particular policy or point of view can succeed. While not everyone can win, many fixers defeat themselves because they misunderstand what their audiences know, how their audiences learn, and the conditions under which attempts to persuade or educate their audiences will increase their competence. Fixers effectively shoot themselves in both feet before they ever get out of their own doorway.

By making an effort to understand not just what motivates us, as fixers, but also what motivates the audiences we are attempting to reach, we can replace failing communication strategies with alternatives that have a greater chance to succeed. In some cases, we will discover more cost effective strategies for achieving a particular set of educational goals. In other cases, we will discover that there are no conditions under which a particular audience's mind can be changed – and that that our energies would be better directed towards other endeavors. In all such cases, I contend that fixers who learn how not to make the kinds of mistakes described above can employ their scarce resources more effectively and efficiently.

Another way of stating my objective is as follows: there are lessons from science that if properly understood can help fixers not shoot themselves in the foot before they even start to walk. These lessons do not guarantee victories in the often rough-and-tumble worlds of politics and civic education, but they can improve the odds of success. Indeed, what I have observed in scholarship on, and attempts to increase, civic competence is that many fixer mistakes are common and correctable.

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# The Internet, Science, and Transformations of Knowledge

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***Abstract:** In recent years, there has been a proliferation of research projects and programmes under the labels of e-Science, e-Humanities, cyberinfrastructures, and e-Infrastructures. The broader term 'e-Research' encompasses all of these, and can be defined in shorthand form as: distributed and collaborative digital tools and data for online knowledge production. Even beyond these labels and this definition, there have been other large-scale and widespread efforts to digitize scholarly materials and use shared digital resources in research. e-Research has transformed knowledge, and the aim of this talk will be to analyze the emergence and consequences of e-Research and related changes - for scholarship, and for how we understand the world around us.*

**Keywords:** Science, knowledge, internet, e-Research

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**I**n recent years, there has been a proliferation of research projects and programmes under the labels of e-Science, e-Humanities, cyberinfrastructures, and e-Infrastructures. The broader term 'e-Research' encompasses all of these, and can be defined in shorthand form as: distributed and collaborative digital tools and data for online knowledge production. Even beyond these labels and this definition, there have been other large-scale and widespread efforts to digitize scholarly materials and use shared digital resources in research. e-Research has transformed knowledge, and the aim of this talk will be to analyze the emergence and consequences of e-Research and related changes - for scholarship, and for how we understand the world around us.

To do so, the first task is to identify how e-Research fits into a longer-term pattern of using computers in research. These include changes in electronic publishing, the growth of distributed project teams, and especially technologies for storing, exchanging, and manipulating research materials. These changes are partly driven by funding agencies, but also stem from the ever greater availability and use of digitized data and software to organize and analyze them. Yet these changes, in turn, are also part of a larger trend towards 'big science' and ever larger teams of researchers (Wuchty, Jones and Uzzi 2007). Separating these much larger trends from what makes online e-Research distinctive - to make research materials available for distributed collaborative use - is the first task of this talk.

A second task is to show that, underlying the myriad ways in which e-Research is being done – such as creating repositories of information that can be queried, providing access to remote instruments, and pooling high-performance computing resources – there is a unifying drive towards a new system of knowledge production. This system faces a number of challenges, which will be detailed at length in the sections that follow, and which are primarily social rather than technical. Despite these challenges, however, there are powerful reasons why this way of doing research will become dominant in the 21st century. These are not necessarily to do with lowering costs and the benefits of sharing, even though these benefits are often touted (Hine 2008): e-Research efforts are expensive and often add to existing tools and data collections instead of centralizing and combining them. Nevertheless, pooling and aggregating research materials is often required for other reasons, such as the complexity and scale of the task, greater collaboration among institutions and across national boundaries, the increasing interdependence of researchers in more long-term directed efforts, and attempts to incorporate research materials within more accessible, all-encompassing and manipulable computer-based models. The consequences of relying on these tools and resources may often be to remove researchers further from the objects of research, but it can also lead to greater disintermediation between researchers and how materials are accessed, as when primary rather than secondary data become available. These tools and resources are therefore not only transforming science and scholarship, but also how knowledge is produced, disseminated, and used.

## 1. Research Technologies

The key argument is based in the sociology of science and technology, and departs from the dominant view that science and technology are socially shaped. Instead, this talk will argue that research technologies occupy a special place in driving changes in scientific or scholarly knowledge: first, because they emerge interstitially outside of existing disciplinary boundaries; second, because they subsequently become embedded across a variety of fields; and third, because they enable more powerful manipulations of data and other research resources – and thus more penetrating ways to intervene in the materials that advance knowledge. This position will be illustrated with a number of e-Research technologies, which also provide examples of the obstacles that must be overcome (Schroeder 2008).

Again, these obstacles are not primarily technical but social, and include having to find a sufficient base of users and having enough resources – in terms of personnel, funding, and organizational support to maintain software – to sustain the effort. Another obstacle in some cases is finding and implementing a legal framework for agreement between institutions. What is often overlooked, however, is that despite these challenges, more powerful tools and data collections often emerge which overcome them and supersede existing research practices by virtue of becoming standards within fields – or at least by being able to mobilize the key institutions within fields.

These ideas also point to the limits of the perspective of the sociology of science and technology. This perspective mainly focuses on how consensus is created when research instruments are made robust enough to produce a steady stream of results, which allows researchers to move onto new terrain. Yet this focus on artefacts must be complemented in the case of e-Research by a broader understanding of the organizational and ‘political’ requirements of developing uniform processes and common formats. A systematic understanding of e-Research, it will be argued, also requires

an analysis of how disciplines have been affected quite differently by computerization movements (Elliot and Kraemer 2008). This is not so much a question of a willingness (or otherwise) to collaborate with computer scientists, but rather of the usefulness and practicalities of digitizing research materials, as well as of enrolling a large enough base of users. These issues are addressed in the following.

## 2. Open Science?

It has been argued that open science is a precondition for the whole of modern science (David 2004), but this argument has taken new forms in the case of e-Research (David, den Besten and Schroeder 2010; Schroeder 2007). The push towards openness, and against it, is currently coming from several directions: in publishing, funding bodies are trying to mandate open (often gratis) publication, including of data, to maximize return on the taxpayer's investment. At the same time, many publishers are fighting against this trend in order to maintain profits from professional journals. Among NGOs, there are various initiatives to promote a more open intellectual property regime that would, for example, benefit the fledging biotechnology industries, especially in developing societies (Hope 2008). On the other side, industry lobbies have been pushing for more restrictive intellectual property rights as part of a wider effort to lock down the sharing of digital materials and to monetize the fruits of basic academic research. And finally, open source software constitutes another push, since the software for e-Research is often licensed with an open source license and efforts are made to maximize the user community with interoperable standards. However, these efforts suffer from confusions concerning which licenses are most suited in different circumstances (Fry, den Besten and Schroeder 2009), as well as from standards 'wars' among competing groups that promote different types of software within a shifting ecology of interconnecting parts and rival models (such as web services versus dedicated Grid software, recently joined by 'cloud' computing).

The multi-tiered battle between more open and closed forms of e-Research is nevertheless part of a larger struggle between different ways of pursuing knowledge, and this struggle is not and will not be decided with one model triumphing over the other. Instead, there are bound to be variations within and between fields, depending, if this applies, on the commercial value and copyright legacy of the knowledge concerned. Even here, however, certain new rules of the game (which also apply in other areas, like business and consumer software development) affect e-Research in particular, such as the notion that locking in a large user community with free access may be more valuable than charging for subscriptions to a database. These new rules are still fluid, so that the sustainability of open science models remains in question, though there is increasing pressure for open access to born-digital research materials (Borgman 2007).

## 3. Distributed Collaboration

The idea of collaboratories as distributed laboratories without walls has been an essential part of the vision of e-Research from the start; ultimately sharing tools and resources not just across distances but also globally. Many experimental studies have shown that research collaboration at-a-distance is not effective as co-located collaboration (see the essays in Hinds and Kiesler 2002). Yet these studies, it will be argued, are flawed by not taking into account tasks that can be done more efficiently in distributed mode, such as peer-to-peer contributions to common repositories (Schroeder and den Besten 2008). More importantly, there are various ways, apart from non-co-

located work, in which e-Research can be distributed: these include remote access to tools and resources, online communities of project developers and users, and multi-sited teams.

To be sure, there are many social and technical obstacles in these efforts. However, it is also necessary to consider the changes that have already been brought about by the various multi-tiered forms of collaboration at-a-distance, such as methods for enrolling organizations and sustaining commitment in large-scale distributed research projects by means of shared online workspaces. Further, it is necessary to examine precisely where the pressure for distributed collaboration comes from: One such pressure comes from funding bodies that want to allocate expensive efforts across a number of sites, chosen for their track record and for 'political' reasons such as regional distribution and integration. Another pressure comes from the need of multi-sited teams to make resources accessible across different locations. Finally, it is thought that creating common tools and repositories across extensive user communities will enable greater research productivity. As we shall see, however, e-Research tools and resources are not necessarily more efficient in terms of productivity, nor are the benefits primarily from greater distributed collaboration. Their value lies rather in the technical and organizational coherence that is brought about through the use of standardized technologies and in bringing personnel from different disciplines to bear on a common goal.

#### 4. Infrastructures

The creation of research e-Infrastructures is currently at the top of the agenda in the large-scale funding of research. Thus the US has already invested heavily in cyberinfrastructure, and continues to do so. The EU has embarked on an ambitious programme to build infrastructures across the European Research Area (and beyond) and across the whole range of academic disciplines. The challenges of these attempts to establish a more permanent and systemic resource base for researchers have quickly become clear: how to promote a shared resource across a community such that this effort incorporates existing materials, does not unduly duplicate or compete with other efforts, and most importantly caters to a user base that goes beyond early adopters and 'tame' users.

Several examples can illustrate the attempts to create e-Infrastructures. Some of these consist of computing resources, such as the National Grid Service in the UK and TeraGrid in the US. Some are discipline specific, such as the various planks of the emerging European network ESFRI. Some are institutional or cross-institutional, like distributed inter-university collaborations (Sonnenwald 2004) or virtual learning environments. What we see is proliferation as well as consolidation, overlaps as well as aggregation. Battles over standards, access, and above all buy-in are shaping these infrastructures on the side of development and users. In the early phases however, as with all large technological systems (Hughes 1987), the key factor is mobilizing the resources, human and financial, in order to embed these systems within a wider socio-technical environment.

#### 5. Disciplines

Disciplinary uptake of e-Research tools has been variable, but it would be wrong to see the humanities as lagging behind the natural and social sciences (Nentwich 2003). Apart from the traditional hierarchy of funding with sciences at one end of the scale and humanities at the other – with the social sciences in between – it is more useful to distinguish between different types of tools and data that are used in different disciplines. The humanities are primarily digitizing

materials such as texts and images to provide enhanced access to resources. The social sciences are making materials such as quantitative databases accessible, but in this case, as with some qualitative materials like video analyzing people's interactions that can be made available via networks, key concerns include privacy and anonymity. In the sciences, finally, the main impetus is to organize datastreams from instruments and sensors, to create coherent queryable datasets, and develop complex visual and numerical models.

These tools are transforming knowledge in quite different ways. In the natural sciences and engineering, access to common stores of data allows researchers to identify gaps, to make links between different sources and types of sources, and to extend data analysis into new domains where opportunities for gains by modelling and querying datasets exist. These opportunities can be analyzed as part of an ongoing process of 'representing and intervening' in science, or 'refining and manipulating' in technological development (Schroeder 2008). In the social sciences, the enhancement of scale and linkability in databases, and the possibility to capture and annotate human behaviours, is putting the various disciplines on a more cumulative footing as these efforts are designed to build up resources, whether these are more of the collections type or the type that can be used for modelling and prediction. In the humanities, finally, collections of materials are the norm, and these can be mainly be divided into resources that gain value from customizability, or opening new approaches to scholarship, or if they primarily pool resources for distributed access.

## 6. Datasharing

Sharing data and other resources has become a holy grail among research policymakers and funding bodies, but it is also a prime objective within research fields where a standardized and annotated body of data is useful. A major problem here are standards, in two ways: one is that different individual researchers or teams will have often begun to create databases in their own idiosyncratic ways, which are then impossible to amalgamate. A second problem is that it is difficult to establish a single resource that becomes so dominant as to engage the whole of the community in contributing and sustaining it. And finally, sharing sensitive data has proven difficult, and requires not only trust among researchers, but also an environment of trust in society as a whole (Axelsson and Schroeder 2009)

If databasing the world (Bowker 2000) has become a common aim in research, making these databases accessible and manipulable via the desktop has become the more specific aim of e-Research. The problem of heterogeneity of these databases has been much discussed, and this is often seen as an obstacle to their success. What has been less well noted is the large-scale momentum behind the generation and systematization of data, which comes partly from the side of the objects of research that lend themselves to this effort. So, for example, after the human genome was mapped, research moved on to the various processes connected with it. A key driving factor in this case is the identification of gaps in sequencing data by means of mappings which allow comparisons between known, uninteresting, and unknown territories - and working systematically to eliminate the latter (Brown 2003).

Another source of momentum has come from the side of research technologies, which offer a range of possibilities for organizing and manipulating data that can be embedded in different contexts. Finally, there is also the combination of scientific competition and competition for funding. On this terrain, the imperative in e-Research has been to develop, often by means of alliances, a pre-eminent position within a particular field. In this case, the perspective which

regards large-scale and long-term databases as infrastructures which require entrepreneurship that mobilizes resources and the integration of heterogeneous social and technical components (Kling, McKim and King 2007) - is a useful one.

## 7. The Globalization and Digitization of Research - and Its Limits

Some e-Research efforts have aimed to be global in scope, for example the physicists' sharing of computing power to analyze experiments, or astronomers federating their databases of observations (Ackerman, Hofer and Hanish 2008). The global scale of e-Research is also evident when different groups from around the world try to coordinate their efforts around a common goal, such as when national demographic databases try to put their data into a shared format that will enable comparative analyses. Among the challenges here are agreements about resources and about research priorities, although there is an increasingly dense network of transnational professional organizations which underpins these efforts.

One argument that has nevertheless been made is that e-Research will not extend to the developing world, where even access to email is often a scarce resource. e-Research in this case will deepen digital divides instead of overcoming them. Yet this is to misread the nature of e-Research, which is engaging with the developing world in various ways, such as when the EU funds large parts of the outreach of projects like EGEE so that partners in the developing world can be incorporated in the network. Similarly when the links between the developed and developing worlds is asymmetrical, as when the attempt is made to implement sensors to measure arsenic levels in the water supply in Bangladesh by researchers from the UCLA-led CENS project. Even if this project does not lead to technology transfer, this type of collaboration nevertheless creates multiple ties which create the impetus to extend environmental monitoring towards a more global reach.

e-Research can thus be seen as the creation of an online realm of knowledge, which can be treated as a single global entity, even if this realm is grounded in the offline practices of researchers. Here is a domain in which we can see globalizing processes as well as their limits: while research outputs are increasingly measured by means of global tools such as webmetrics (Park, Meyer and Schroeder 2009), these measurements will also make it increasingly transparent to researchers and research policymakers where their efforts overlap, and hence where single or coordinated efforts to tackle particular problems can supersede multiple and competing ones. Again, this may not lead to greater efficiency or avoidance of duplication, but with scarce resources, e-Research will contribute to an increasing reflexivity about prioritizing resources for certain types of scientific and technological advance rather than others (Meyer and Schroeder 2009a, 2009b). This is an unintended consequence of the combination of the drive towards e-Research and towards an increasing push to measure and evaluate research impacts. The combination of the two will increasingly affect research priorities, yet this is but one of the transformations of knowledge production.

## 8. Variety and Homogeneity in Knowledge Transformations

Apart from a comprehensive analysis of e-Research from a social science perspective, the talk will put forward a novel theoretical framework for analyzing contemporary changes in scholarship. Even though Whitley has convincingly argued that there is no overall transformation towards a new mode of knowledge production (Whitley 2000), there are nevertheless a number shifts



towards online distributed and collaborative research practices which demand, by their very nature, to be analyzed in a multi-tiered way. Individual case studies of projects can only take the analysis so far, pinpointing the problems and changes in knowledge-producing practices 'on the ground'. But these projects also need to be integrated – or analysed in terms of where they fail to be integrated – within more large-scale and long-term transformations of infrastructures, resource systems, and networked tools. Yet these, in turn, can only be analysed at a more macro-level of research policy on the one hand, and measures of the size of user communities or impact on the field on the other.

These three levels (cases, infrastructures, size or penetration of user community) must then be combined, and yet another level must be added: the meso-level which consists of changing work practices across organizations where it is possible to gauge the cumulative nature of the transformative effects of e-Research: How extensive is the community of users in practice, and to what extent are research organizations able to build alliances which dominate and advance the research front? Put differently, which constellations of research institutions occupy the most powerful positions and attract the most resources by means of using these systems? Only by answering these questions will it be possible to answer the central question which needs to be answered about e-Research; namely, where, in the overall chain of work practices from the production to the dissemination of knowledge, are the key changes taking place?

There are important implications of this approach for how we understand the social dynamic of research and technology generally. Both a local 'laboratory studies' approach and surveys of particular fields have shortcomings; the former because individual cases cannot be generalized, the latter because the exclusive focus is on adoption without considering everyday practices (Schroeder and Spencer 2009). Moreover, any analysis of individual disciplines is bound to miss the interesting commonalities and differences between them, as well as how research technologies often travel between disciplines. Only a multi-level analysis, based on a range of in-depth analyses of project cases, an understanding of everyday practices, as well as issues across disciplinary boundaries, combined with an understanding of the larger context of changes in science and science policy, can hope to do justice to the social implications of e-Research. And only this type of comprehensive analysis can help us to understand how e-Research is transforming knowledge.

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# E-Democracy & Transparency

(peer-reviewed)





# The impact of public transparency in fighting corruption

*A study on Brazilian Municipalities E-Government*

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**Abstract:** *This paper is an attempt to shed light on the causes of corruption through the empirical analysis of the impact of public transparency mechanisms on the frequency of improbities in Brazilian municipalities. First, we have presented a new model of corrupt agent's utility function to better explain the results, and then some empirical evidence in favor of the hypotheses that E-government mechanisms are negatively associated with improbities in Brazilian local government.*

**Keywords:** transparency, corruption, municipalities, e-government

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**D**espite all the criticism, it is feasible to assume that agents will perform a cost-benefit analysis before their engagement on a corrupt transaction. (Becker, 1968) Most of the models of corrupt behavior are based upon the analysis of rational action. (Eide, 1997) In accordance with this assumption, I state that the corrupt agent will observe the following elementary equation:

$$U^a = b - c \quad \text{Eq. (1.0)}$$

$U^a$  = Corrupt agents' utility function;

b = Potential benefits from engagement;

c = Potential costs from engagement.

The equation (1.0) establishes that the agent will have an increasing utility function for the potential benefits of engagement (b), but decreasing in relation to the costs imposed by the transaction (c). I have assumed that the decision about engagement will necessarily result from an individual calculation based upon these general remarks: benefits less costs of engagement in corrupt transactions.

## 2. Analysis of the Potential Benefits

According to Donatella Della Porta and Alberto Vanucci (2005) the benefits perceived by the agents engaged in a corrupt transaction are usually expressed in the forms of bribes (financial, material or symbolic resources). The utility extracted by the agent is a result of a subjective assessment of the agent, but without exceptions it can be summarized in a kind of direct or indirect rent (obtained by privileged contracts, inside information, monopolies, etc.). (Krueger, 1974; Gorta, 2006)

The public choice theory emphasizes the role of benefits on the corrupt agents' utility function. That is why the rent-seeking perspective understood corruption as the result of monopolistic rents granted by the State. (JAIN, 2001) According to them, corrupt transactions are directly caused by the incentives of these complementary rents, including strategies like lobbying, bureaucratic capture, etc. (Tullock, 1987)

On the other hand, the role of agents' wage cannot be neglected. As Robert Klitgaard (1994) and Vito Tanzi (1997) stated: an increase in the average wages, especially in the public sector, expressively contributes to reduce corruption.<sup>1</sup> Attractive wages in the public sector reduce the incentives to engage in corrupt transactions by reducing the utility of the corrupt agents.

The total benefit of the corrupt agent is based upon the following equations (2.0):

$$B^a = r - w \quad \text{Eq. (2.0)}$$

$B^a$  = Agents' total benefit;

$r$  = Potential rents (benefits arising out of corrupt transactions)

$w$  = Wage (benefits not arising out of corrupt transactions)

Nevertheless, the corrupt agents' utility cannot be properly understood only as a result of the potential benefits – costs fulfill an essential role in the corrupt agents' utility function.

## 3. Analysis of the Potential Costs

Contracts are not free of costs. Every attempt of contract imposes a series of transaction costs, for negotiating, designing, implementing and enforcing agreements.<sup>2</sup> (Coase, 1937; North, 1990; Williamson, 1985; Brousseau & Glachant, 2002)

According to the new institutional economics principles, the efficiency and integrity of the contracts are based upon an institutional environment capable of limiting opportunism – main cause of transaction cost.<sup>3</sup> Contracts expose individuals to the risk of opportunism, especially

<sup>1</sup> According to Caroline Van Rijckeghem and Beatrice Weder (1997), it is particularly true when the average wages in the public sector were close to that of the private sector (called fair income).

<sup>2</sup> The main transaction costs can be classified in ex ante (select partners, bargain, design the contract) or ex post (oversight, enforce, renegotiate the contracts).

<sup>3</sup> The opportunism concept extends the simple self-interest seeking; it is better understood as the "self-interest seeking with guile". (Williamson, 1985, p.47)

when it is associated with asymmetric information.<sup>4</sup> That is the reason why it is absolutely essential to pay a deep attention to the adequate safeguards of contracts - aligning interests and improving the mechanisms of governance. (Williamson, 1985; 1996)

Particularly for the analysis of the corruption phenomenon, it is necessary to attend to the differences between the transaction cost of the principals and the corrupt agents all together.

#### 4. Transaction Costs I: From the Principal's Perspective

Under the principal's perspective, the resources spent to enforce the contracts are seen as the transaction cost. The logic is absolutely the same on public and private domains - in both cases, principals should develop adequate mechanisms of governance for integrity.

Governments and firms are continuously signing contracts and incurring transaction costs. As well as both trying to reduce these costs for efficiency reasons. For Ronald Coase (1937), Robert Simon (2000) and others, the ideal size of governments and firms can be properly evaluated from a transaction cost analysis. There is indeed a trade-off between integrity and its costs, exactly like Robert Klitgaard said. (Klitgaard, 1994) For this reason it is absolutely essential to evaluate, according to a risk criteria, how many resources can be or should be invested on integrity mechanisms. (Smith & Lipsky, 1993)

It is not hard to predict that a substantial amount of public and private money will be spent just to sustain these mechanisms. Nevertheless, such expenditures are fully justified in face of the large negative impact of corruption on profits (private domain) and social development (public domain). (Gambetta, 1998, p.59)

These particular transaction costs that function as "mechanisms of integrity" are summed up in the following equation (3.0):

$$G = Se + Po + En \quad \text{Eq. (3.0)}$$

$G$  = mechanisms of integrity;

$Se$  = mechanisms of information search and bargain;

$Po$  = mechanisms of policing opportunistic attitudes;

$En$  = mechanisms of enforcing.

According to Oliver Williamson (1985), mechanisms of information search and bargain impose *ex ante* costs to the principal, but are essential to preserve the contracts integrity and avoid the higher *ex post* costs of policing and enforcing. Furthermore, it is worthy to emphasize that these last *ex post* mechanisms must be dealt with in a coordinated manner. Both mechanisms are viewed as necessary conditions to sustain the integrity of contracts. As Oliver Williamson asserts these mechanisms reflect the key *ex post* transaction costs: information search and enforcement. (Williamson, 1985, p.21)

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<sup>4</sup> Asymmetrical information distribution is a situation in which parties of a transaction have uneven access to relevant information. (Macho-Standler & Pérez-Castrillo, 1997)



The mechanisms of policing and enforcing might integrate formal and informal initiatives. In other words auditing, oversight and monitoring (formal) are functional for policing purposes as much as the social control (informal). In the same way, the mechanisms of enforcement assume a formal (administrative, civil or legal measures) and an informal (social) dimension. The formal ones are related with legal prosecuting and sentencing of guilty - considering the legislation severity. On the other hand, the main informal punishment mechanisms available are strictly linked to the moral costs (like the shame and other sorts of psychological and social punishments).

## 5. Transaction Costs II: From the Corrupt Agents' Perspective

It is not hard to perceive that a corrupt transaction imposes as much costs as the legal one. Actually, as Johann Graf Lambsdorff (2002) declares, corrupt deals inflict higher transaction costs to their partners because corruption demands secrecy to prosper. According to him, transaction costs are particularly higher in corrupt agreements because:

- profitable deals must be found and negotiated in secrecy;
  - private mechanisms of governance should:
    1. entirely replace the jurisdictional protection of property rights;
    2. enforce the initial agreement and maintain impunity between partners.
- (Lambsdorff, 2002, p. 223)

In sum, the corrupt agents' total costs could be determined by corrupt transaction costs plus the integrity mechanisms costs, as described in the following equation (4.0):

$$C = [i + y] + g \quad \text{Eq. (4.0)}$$

$C$  = corrupt transaction total costs;

$i$  = costs of information search and bargain on secrecy;

$y$  = costs of sustaining a private mechanism of governance needed to enforce the agreement and guarantee the property rights.

$g$  = costs imposed by the mechanisms of integrity.

Notice that the equilibrium between these variables is not static, but dynamic. There is a dynamic interaction between agents and institutions whose evolution by social interaction and institutional adaptation tends to orient its development. (North, 1990) Two of these dynamical aspects will be analyzed bellow.

## 6. Dynamical Features I: Learning Processes

One of the main complementarities presented by Douglass North (1990) - largely described on corruption practices by Alessandro Pizzorno (1992) - are called the learning processes.<sup>5</sup> These

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<sup>5</sup> Learning processes are skills, knowledge and information - acquired and accumulated over time - regarded as the most efficient methods to create, manage, and secure transactions.

learning-by-doing processes result from the repetitive interaction between agents and might raise the corrupt utility for promoting innovations in two different sides:

- expanding the corrupt potential benefits; and/or
- reducing the corrupt potential costs.

These learning factors integrate the corrupt agents' utility function as the following:

$$U^a = [b^{k1} - c^{-k2}] \quad \text{Eq. (5.0)}$$

$U^a$  = corrupt agents' utility function;

$k1$  = learning about or innovating for rising the potential benefits;

$k2$  = learning or innovating for reducing the potential costs.

According to this equation, agents would not extract utility (take part) in a corrupt transaction if they ignore the potential benefits of engagement ( $k1=0$ ) and its transaction costs ( $k2=0$ ). Agents would become corrupt only when they perceive, by learning processes, a real possibility to extract benefits ( $k1 \geq 1$ ) or reduce the corrupt transaction costs ( $k2 \geq 1$ ).

## 7. Dynamical Features II: Agent's Moral Barriers

Finally, it is important to stress that any utility, originated by a corrupt transaction, is only realized if the barriers of moral costs were surpassed.

$$U^a = [b^{k1} - c^{-k2}] \cdot CM(x) \quad \text{Eq. (5.0)}$$

$$CM(x) = \{1 \text{ if } x \leq 0; 0 \text{ if } x > 0\} \quad \text{Eq. (5.1)}$$

$CM(x)$  = agents' moral cost function

This equation (5.0) reveals that the moral cost is a crucial aspect of agents' decision on corrupt engagement. If agents were susceptible to moral cost appeals ( $CM(x) > 0$ ), the expected utility for engagement would be null ( $U^a = 0$ ).

Respect to moral values and ethical principles, the social reputation and shame, all play a very important role in the moral costs dimension. Socialization processes in the family, at school, at work, at places where social life happens, are constantly influencing the individuals moral cost value. That is the reason why many experts, like Robert Putnam (1996), J lio Gonzalez and Timothy Power (2003), are evidencing the significant impact of social capital on corruption prevention and control.

In the jargon of Douglass North (1990) new institutional economics, moral cost functions like an entrance barrier on corrupt transactions. As its components have a strong socio-cultural influence, but can individually vary; the moral costs are directly associated with the agents' adaptive expectations. I mean, if the corrupt transactions were widely spread, agents would be motivated to easily engage in such agreements.

As an example of the analytical potential of this framework, I propose a reinterpretation of E-Government and better access to information contributions to the fight against corruption, based on the following empirical evidence on Brazilian municipalities.

## 8. Theoretical Implication

How does E-Government and better access to information contribute to the fight against corruption? In accordance with the ordinary literature, the E-Government tools enrich the interactions between government and citizens, government and businesses/commerce, government and employees, and also between government and other governments/agencies. (Jeong, 2007) Among many other things, E-Government strengthens the operations of public organizations with beneficial effects on its democratic governance – supporting social and institutional controls, citizens participation on decisions and evaluation of government operations and results. In addition, E-Government improves the public access of information – one of the transparent and most elementary dimensions.<sup>6</sup>

According to the previous model, corrupt transactions will not flourish (corrupt agents' utility function decays) in environments with robust integrity mechanisms. As the model predicts, it occurs because of overweighed costs imposed by the E-Government on corrupt agents' utility. For these reasons, the influence of E-Government would be particularly perceived by the corrupt agents:

- on reducing the benefits, because:
  1. the value contracted by the government would be publicized (preventing overbilling);
  2. the wages of the government officers would be publicized (allowing the social control of unjust enrichment);
- on rising the costs, because:
  1. better access to information will allow citizens (informally) and agencies (formally) control the public decisions (specially the public budget); [increasing oversight]
  2. better coordination between State's agencies, supported by superior information management, perfects their enforcement efforts.

I mean, the previous model asserts that corruption would be reduced as much as the mechanisms of E-Government are developed, because it has a great and negative impact on corrupt agents' utility. Theoretically speaking, these mechanisms of integrity, available by the new E-Government tools, will impose a significant risk to agents engagement in corrupt transactions and other opportunistic attitudes against the public contracts. That is the reason why improbities in general – including corrupt transactions – are expected to be reduced by these mechanisms of integrity.

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<sup>6</sup> 'E-government' (or digital government) is defined as: 'the employment of the Internet and the world-wide-web for delivering government information and services to the citizens.' (United Nations, 2006; Aoema, 2005)

## 9. Some Empirical Evidence

In order to present some empirical evidence in favor of these theoretical implications of the model, I have developed an exploratory research, variable oriented, based on a random sample of 840 Brazilian municipalities, audited by the Brazilian Federal Comptroller Office (Controladoria-Geral da União - CGU).<sup>7</sup>

Since 2003, CGU has been randomly auditing the Union monetary resources transferred to the Brazilian municipalities.<sup>8</sup> Compiling all the data, I have reached an objective quantification of improbities in Brazilian local government - a proxy for the frequency of corruption in Brazilian municipalities.

The analysis of this data, originated from the CGU auditing efforts, who offered us an unusual chance to realize a series of statistical tests, based upon objective data about improbities.<sup>9</sup> In other words, it allows us to evaluate empirically the model's predicted impact of E-Government and better access to information in the fight against government corruption in Brazil.<sup>10</sup>

In order to measure the quality of the E-Government mechanisms in Brazilian municipalities, I have used a proxy, based on the indicator elaborated by the Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia Estatística - IBGE) that has classified all the local government webpages in Brazil, into the following categories:

- 1<sup>st</sup> category (interactive or transactional): interactive/transactional pages allows the user to communicate with the government by the system, exchanging information and eventually offering online public services;
- 2<sup>nd</sup> category (informative): the most primitive stage of E-Government, informative pages allow the diffusion of a lot of information to citizens, but does not permit any kind of interaction with users;
- 3<sup>rd</sup> category (does not exist or under construction): webpage is not available. (IBGE, 2006, p. 40)

Actually, this IBGE indicator permits the ranking of all the Brazilian municipalities according to their E-Government quality - a speciously good independent variable to assess the impact of E-Governance on corruption. Descriptive statistics are presented in the following table (1):

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<sup>7</sup> According to Vic Barnett (1974) sample theory, margin of error equal to 3,4% at 95% confidence.

<sup>8</sup> It is worth emphasizing that, despite their formal federal autonomy, with a small exception, Brazilian municipalities are greatly dependent on Union transfers, the most important fiscal income to sustain local's public policies.

<sup>9</sup> The CGU audits are actually one of the most accurate attempts to objectively measure the improbities in local governments in Brazil; moreover, it has common classification criteria and well-trained auditors offered highly precise measurements.

<sup>10</sup> CGU audits identify improbities that have occurred in local government, counts and classify them according to their significance (high, medium or low). On this study, I have taken into account only the highly significant improbities, those characterized by embezzlement, the practice of an illegitimate, illegal and uneconomical break of legal standards. Although, not all these improbities could be correctly classified as corrupt transactions, most of them had this particular kind of contractual opportunism. In the absence of a more precise measure, the CGU data seems a suitable proxy for corrupt transactions in Brazilian municipalities.

Table 1: Sample Descriptive Statistics

	Mean	Cases	Std. Deviation	Std. Error
1 <sup>st</sup> Category	6,68	111	12,023	1,141
2 <sup>nd</sup> Category	8,40	281	10,324	0,616
3 <sup>rd</sup> Category	11,37	448	14,150	0,669
Total	9,76	840	12,824	0,442

There was a significant linear trend,  $F(2, 837) = 8,44$ ,  $p < .001$ ,  $\omega = .131$ , indicating that as the quality of e-government decreased, improbities increased proportionately.<sup>11</sup> Planned contrasts confirmed that implementing an interactive or transactional e-government significantly decreased improbities compared to non-available webpages,  $t(837) = -4,106$ ,  $p < .001$  (1-tailed). According to these results, municipalities with a better e-government status shows, on average, a reduced frequency of improbities (6,68) when compared with the worst status (11,37).

## 10. Conclusions

In Brazilian local government, the frequency of improbities is negatively associated with developing E-government mechanisms. As the model predicts, it occurs because of overweighed costs imposed by the E-Government on corrupt agents' utility. In sum, the influence of E-Government would be particularly perceived by the corrupt agents:

- on reducing the benefits of engagement on corruption, because:
  1. the value contracted by the government would be publicized (preventing overbilling);
  2. the wages of the government officers would be publicized (allowing the social control of unjust enrichment);
- on rising the costs of corrupt transactions, because:
  1. better access to information let the citizens (informally) and agencies (formally) control the public decisions (specially the public budget); [increasing oversight]
  2. better coordination between State's agencies, supported by superior information management, perfects their enforcement.

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<sup>11</sup> Results are based on 1000 bootstrap samples.

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# Towards budget transparency and improvement in the South Kivu Province

*A glimmer of hope raised by the Participatory Budgeting Process*

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**Abstract:** *The article examines the first experience of the Participatory Budgeting in the South Kivu Province. It highlights activities carried out that can promote the budget transparency and improvement since the decision of its inception in April 2010 up to the estimations of budgets for 2012 fiscal year. From capacity building of actors and stakeholders to investments priorities emerged during citizen's general meetings, South Kivu provincial authorities shown determination towards the success of the process. In fact, different provincial government instructions related to Participatory Budgeting process as well as their presence in workshops and citizen's general meetings while voting investment priorities for 2012, are to give hope for the sustainability of the Process. Financial resources collected during the first three months of 2011 imply better performances compared to previous years. However, from the process itself to the mobilization of more resources, much has to be done as to sustain the Process.*

**Keywords:** Transparency, Participation, Budget.

**B**udget Transparency was considered arcane or even undesirable. It has now; more recently come to be seen as a pillar of good governance. Development practitioners, donors and academics have taken an increasing interest in promoting openness in government budget making (Carlitz, 2012, 1). For instance, the International Monetary Fund (IMF) provided a set of guidelines to establish a sound and viable transparency framework for fiscal policy whose objectives consist of clarity of roles and responsibilities in public finance, public availability of information, open budget preparation, execution and reporting, and independent assurances of integrity such as through external audit<sup>1</sup>. Carlitz (2012) says that Participatory Budgeting (PB) represents one of the most prominent state-led initiatives. Introduced for the first time in Porto Alegre in Brazil, the Process has proved bearing fruits especially in terms of citizen participation in governance and implementation of public actions. It is now two years when sometimes in April 2010, the South Kivu Province of the Democratic Republic of Congo decided to introduce Participatory Budgeting process in the public management of 8 out of 27 decentralized entities

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<sup>1</sup> [http://www.pgexchange.org/index.php?option=com\\_content&view=article&id=158&Itemid=153](http://www.pgexchange.org/index.php?option=com_content&view=article&id=158&Itemid=153), accessed on 16/04/2012



pilots before expanding the process in the rest of others. Since then, a couple of activities towards citizen participatory have been conducted.

This paper intends to relate the conditions in which the PB process was initiated in the South Kivu Province, to analyze some results of the implementation of the process of the PB and to propose measures in the short, medium and long run aiming at the protection and viability of the Process. It aims at providing a clear understanding of the process and proposes concrete actions for its visibility and viability. For this purpose, I review the existing literature on the participatory budgeting as tool of budget transparency, the conditions in which the process has been introduced in the South Kivu Province, the activities planned and carried out related to the Process in that area, the reports, workshops recommendations, and finally some of Decentralized entities and province budget data analysis. It is therefore, structured into three chapters. The first is devoted to understand the process as a tool for budget transparency, and then the second intends to analyze the context in which the process was introduced in the South Kivu Province while the third evaluates the activities planned and carried out from the official launch to date. The fourth chapter attempts to provide the next step, next partners and means and finally comes the conclusion.

## 1. Participatory Budgeting as a tool of budget transparency

Fiscal transparency refers to the public availability of comprehensive, accurate and useful information on a government's financial activities (UN Habitat, 2008, 38). Transparency is denoted as the total disclosure of fiscal information in a timely and systematic way (De Simone, 2009, 4). It is also, in part, an end itself: taxpayers have the right to know what the government does with their money (UN Habitat, 2008, 38). The Participatory Budgeting then, through its definition and process constitutes a tool for a budget transparency. It is a decision-making process through which citizens deliberate and negotiate over the distribution of public resources (SHAH, 2009, 21), or a mechanism through which the population decides on, or contributes to decisions made on, the destination of all or part of the available public resources (UN Habitat, 2004, 20). Ubiratan de Souza quoted by UN Habitat (2004) sees the PB as a process of direct, voluntarily and universal democracy, where people can debate and decide on public budgets and policy. Goldfrank quoted by Carlitz (2012) defined the PB as a process by which citizens, either as individuals or through civic associations, may voluntarily and regularly contribute to decision-making over at least part of a public budget through an annual series of scheduled meetings with government authorities.

The access to information is a vital element for individual or collective decision-making. The information as defined by the Oxford English Dictionary is "a knowledge communicated concerning some particular fact, subject or event; of which one is apprised or told; intelligence, news (Kennerley & Mason, 2008, 3)." It can refer to both "facts" in themselves and the transmission of the facts, communication while a decision is a choice made from alternatives. It is a final product of the specific mental/cognitive process of an individual or a group of persons/organizations, which is called decision making (Kennerley & Mason, 2008, 3).

### 1.1. Participatory budgeting process and information disclosure

In its conception, the process of Participatory Budgeting from the elaboration of budget estimations to the monitoring of approved budget relies on information that has to be provided by government regarding aspects that can facilitate debate and decision-making. Wampler (2000) says that from the yearly participatory budgeting cycle, the government shares information in two

rounds with participants from the budget preparation to its approval. The first round involves the distribution of information, the initial discussions on policies, and the establishment of the number of elected representatives. It consists of regional meetings as well as neighborhood meetings. The second round defines the policies and projects that will be implemented by the government for the coming fiscal year. During this stage, participants should have acquired sufficient information to promote the priorities of their communities and to make decisions at the regional meetings. Final decisions on specific public works or the definition of general social priorities are made at the regional meetings. The first part of the meetings is information oriented in which participants can inform their colleagues, the second part is the formal presentation of information, and the last part is a question and answer period.

Wampler (2000) summarizes activities for the two rounds during regional meetings as well as neighborhood's ones in the table below in which the process needs total budget information disclosure:

**Table 1: Regional meetings (March-June)**

Government's role	Participants' responsibilities
<ul style="list-style-type: none"> <li>• Draws district and sub-districts</li> <li>• Prepares Quality Life Index</li> <li>• Distributes financial information</li> <li>• Bureaucrat is assigned to work with each region</li> <li>• Presents its own projects that it wants participants to approve for implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Mobilization of citizens</li> <li>• Capacity building meetings</li> <li>• Analysis of financial information</li> <li>• Preliminary discussions on available resources</li> </ul>

Source: Brian Wampler (2000)

**Table 2: Neighborhood meetings (March-June)**

Government's role	Participants' responsibilities
<ul style="list-style-type: none"> <li>• Provide detailed technical information</li> <li>• Support given by bureaucratic to participants (i.e. photocopies, telephones)</li> <li>• Meetings places and times established by government</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion of priorities for municipalities</li> <li>• Discussion of specific public works</li> <li>• Pre-selection of public works</li> </ul>

Source: Brian Wampler (2000)

**Table 3: Regional meetings (July-November)**

Government's role	Participants' responsibilities
<ul style="list-style-type: none"> <li>• Initial estimates of cost of proposed projects</li> <li>• Distributes information and arranges "priority trip" in each district</li> <li>• Monitors vote</li> <li>• Oversees Municipal Budget Council</li> </ul>	<ul style="list-style-type: none"> <li>• Debates on proposed policies or public works</li> <li>• "Priorities trip"-visits to sites of all proposed public works projects</li> <li>• Vote on policies or public works to be implemented</li> <li>• Election of two representatives from each region to municipal council</li> </ul>

Source: Brian Wampler (2000)

**Table 4: Neighborhood meetings (July-November)**

Government's role	Participants' responsibilities
<ul style="list-style-type: none"> <li>• Technical staff works closely with oversight committees</li> <li>• Drafting of technical plans</li> </ul>	<ul style="list-style-type: none"> <li>• Continued mobilization on behalf of projects and policies</li> <li>• Election for oversight committees</li> <li>• Approval of technical staff</li> </ul>

Source: Brian Wampler (2000)

## 1.2. Participatory Budgeting, budget transparency and improvement

The process, introduced for the first time in Brazil, has proved bearing fruits especially in terms of citizen participation in governance and implementation of public actions. Indeed, benefit of PB for local public administration is that it improves the transparency of public administration and efficiency in public expenditures, encourages citizen participation in decision-making and in the allocation and oversight of the use of public funds, demands increased accountability of public leaders and managers (UN Habitat, 2004, 23). Positive changes that can produce the introduction of this process can be observed in terms of participation in the direction of greater solidarity in general, a reduction of unpaid taxes, a citizen awareness of local resources and their limitations, a voluntary contribution of labor to the work approved, decrease of corruption and learning process for citizens as well as local government (Frères des Hommes, 2008, 7). In Latin America, there is clear evidence that the process of PB brings with an increase of fiscal collections (of taxes and other fees) and a reduction in evasion. The reason studied is have to do with the transparency of public administration which is implicit in the PB (UN Habitat, 2004, 43). SHAH (2009) says PB helps transparency, which has the potential to reduce government inefficiencies and corruption.

## 2. The context of the introduction of Participatory Budgeting

The government of the Democratic Republic of Congo through its activities program for five years (from 2007 to 2011) recognizes weaknesses of its public administration materialized by the low performance on both the quality and quantity of services expected by citizens and the poor management of available resources. It is in this regard, that it has raised a number of options including decentralization and the principle of good governance as fundamental principles of government actions. If good governance can be characterized by participation, transparency, accountability, respect of the rule of law, efficiency and equity, the government of the DRC intends to put, for its implementation at different levels of intervention, a series of mechanisms to ensure traceability, visibility and control of activities and investments. It wants this transparency is achieved through a participatory approach through media, the publication of reports on the state of funding programs to fight against poverty, the participation of parliament and beneficiaries in the monitoring of public spending. Regarding participation, the government wants that the implementation of programs is done through programs and projects managed or executed by the government, provincial governments, public enterprises, civil society, population and the private sector (Government Program 2007-2011).

South Kivu, which is one of the 10 provinces of the DRC plus the Kinshasa City, which has the status of a province, is experiencing a situation such that the living conditions of households are very poor with the poverty that affects more than eight out of ten households. It is the third

province in DRC with a highest poverty incidence (84,65%) after Equateur (93%) and Bandundu (89%) provinces. Structural constraints faced by the South Kivu and the DRC in general, as presented by the Governor of South Kivu during the presentation<sup>2</sup> of budget estimations at the provincial assembly can be summarized in the non tax compliance, systematic and systemic corruption of both servants and state officials, the archaic in the public services delivery, the opacity of the business (informal sector development), the low capacity of industries, the deficit of political incentives, etc., with consequences that can occur such as the lack of tax collection, evasion and tax fraud and embezzlement of public funds, etc.

It is on that note that South Kivu Province decided to experiment the Participatory Budgeting process in its 8 out of 27 decentralized in April 2010. In fact, in 2009, the World Bank Institute (WBI) and the Provincial government of the South Kivu province through its Project for Capacity Building in Governance (PCBG) have commissioned a feasibility study of the Participatory Budgeting in this province. The study has identified a number of challenges and opportunities for experimentation of the PB process. In April 2010, the WBI and the PCBG held a workshop on the dissemination of the results of the said feasibility study in which participants made up of provincial ministers, parliamentarians, provincial representatives of Non Government Organizations (NGO) and civil society operating in that province, students and academic researchers and managers of Decentralized Entities (DE) have unanimously opted for experimentation of the process in 8 out of 27 DE that has the south Kivu province.

### 3. Participatory Budgeting's activities planned and realized

From 21st April 2010 date on which the decision has been taken up to now, so far, many activities have been prepared and carried out in line with the process of Participatory Budgeting in DE pilots. We can mention here various training and workshops of stakeholders and DE managers, the creation of structures that facilitate the implementation of the process, the general meetings of the citizens aiming at discussing and voting investment priorities for the fiscal year 2012, evaluation activities process, etc. Due to the preliminary results, some can hope that the so-called "Baby<sup>3</sup> Participatory Budgeting" brings a significant change in the management of Decentralized Entities in the province of South Kivu in general and the DE pilots in particular.

#### 3.1. Giving back the feasibility study results

It is from the workshop whose objective was to give back the results of the feasibility study of the participatory budgeting, which was held from 19th to 21st April 2010 that the South Kivu province has opted for the introduction of participatory budgeting process in decentralized entities. The pilot project was to introduce the process in 8 out of 27 DE. The selection of entities was not easy as you can image. It should be remembered that virtually all DE were represented by their leader number one, that is to say, the Mayor for the city, the mayors for municipalities, the heads of chiefdoms and heads of sectors. Everyone then fought for his body to be considered for the pilot phase. Unanimously, the workshop participants agreed to start first with a small number of DE.

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<sup>2</sup> Presentation done on 26th August 2009

<sup>3</sup> During workshops on Participatory Budgeting, participants are often using "baby" in order to illustrate important steps and actions that have to be undertaken to protect, grow and sustain the process reference made to what is done to help child growing

### 3.2. Workshops and capacity building of actors and stakeholders

Apart from the decision to introduce the PB in eight DE, other resolutions concerning the establishment of the provincial steering committee, developing the schedule of activities related to the PB process, capacity building of stakeholders, wide dissemination of results of the study and the principles of participatory budgeting, to name a few. For instance, from 28 February to 1st March 2011 was held a workshop for capacity building of stakeholders on the PB and effective implementation process of PB in the DE pilots. One of the great achievements of this workshop was the discussion of activities of PB in the DE pilots in South Kivu since the official launch of that process until that date and the discussion of activities for the year 2012. From April to December 2011, it is expected the return of the budgets of DE from the provincial level, implementation coordination committee as well as monitoring and evaluation. Activities planned for from January to March 2012, activities related to the identification and awareness of stakeholders and the public, capacity building of stakeholders, creation of alliances, meetings of budget guidelines, forum topics and villages, General Assembly of population, etc. They then discussed the action plan for 2013 developed by each DE pilot. From 25th to 29th April 2011 held another workshop on public finances and local participatory budgeting pilots of DE in South Kivu province attended by three trainers sent by the World Bank Institute. The modules covered included among others the PB and principles of fiscal credibility.

### 3.3. Political and administrative decisions

The provincial government, represented in each workshop by the Governor or Deputy Governor accompanied by a large number of Ministers took a number of engagements vis-à-vis the participatory Budgeting process. In circular No 2 of the Minister of Planning and Budget also the Government spokesperson, we read that: *"the estimates of the decentralized entities will be developed with reference to the principles of the PB, which require that the base is associated in the preparation of the budget estimates"*. Also, as part of public participation in the process of budget preparation and monitoring citizen during the execution of the budget, the provincial government sought and obtained a green number with the mobile phone company Airtel Bukavu Agency with the possibility of sending and receiving of SMS as a contribution. The letter reads: *"... this process involves a strong participation of the population in developing the budget for the Chiefdom/Municipality and monitoring during the execution of the budget. We hope to increase our transparency in the management of public affairs and thus rekindle the flame of tax compliance in the population in a burst of patriotism and development. Thus, the Information and Communication Technology (ICT) as the mobile phone with its various applications, we seem to be an essential tool to reach as many as possible and regularly interact with people"*.

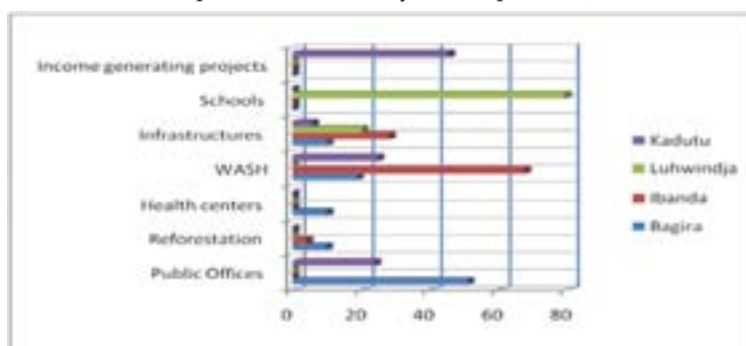
The presence of the Governor or his Vice Governor in the general citizen's meeting aiming at discussing and voting priorities for investment for 2012 fiscal year, testify a political commitment to the process. Apart from that, at the time of submitting this paper, the document institutionalizing the Participatory Budgeting in the South Kivu province has been adopted by provincial parliaments and is in the office of the Governor for approval.

### 3.4. From invitation to investment priorities

While inviting, communicating and informing citizen about the process, some can appreciate the following facts: existence of communiqué inviting citizen for participation by radio, posting

communiqué on public areas such as churches, markets, schools, streets, etc. The communiqué are written in both French and Kiswahili, languages that are largely spoken in the province, especially in Bukavu city. Time between the release of communiqué and the meeting is relatively acceptable to facilitate someone to attend (five days). The concept PB is not mentioned in order to not confuse people about a new word that can be confusing for people who never understand the process. Invitation released without discrimination. Indeed someone can read in the communiqué that all citizens are invited to attend. The place for meetings was enough to allow people attending. Often, the meetings were organized in stadium, schools compounds, etc. Invitations bearded words to encourage meeting attendance. Here, we can mention few of them: absents will regret, let us together build our entity, let us discuss our future, etc. Meetings scheduled to take place in weekends to allow a big numbers of people to attend. Creation of commissions aiming at sensitization, information about the priorities of 2012 composed of management of chiefdoms, religious leaders, schools leaders, civil society representatives, megaphones speakers to mention few. Encouraging agenda for the meeting (selection and validation of priorities), voting by hands, two priorities adopted by neighborhood in order to equalize chances. Some individualized invitations depending on the importance of some people (pastors, priests, sheikh, experts, etc.). Minutes countersigned by the president of civil society and the DE representative.

The priorities emerged during general meetings of the population of DE for which data are available and accessed, can be grouped in Water, Sanitation and Hygiene (WASH), Education, Health, Reforestation, Rehabilitation of small infrastructures and construction of offices for most neighborhoods. The chart below provides a summary of four priorities for DE:



**Figure 1: Investment priorities voted for 2012 in general citizen meetings**

*Source: Decentralized entities and province budget: our computation*

From the figure 1, it appears that BAGIRA focused on the construction and rehabilitation of public offices (over 50% of its investment) followed by the WASH (20%) and the rest is shared by the infrastructures, health and reforestation. IBANDA preferred to allocate over 60% on WASH followed by the infrastructures and reforestation while LUHWINDJA decided to put more money in the construction and rehabilitation of schools (80%) and the rest is allocated to basic infrastructures (20%). KADUTU has for its part, decided to invest in income generating projects by rehabilitating an attractive park for children and volleyball and basketball stadium followed by the construction of public offices and infrastructures.

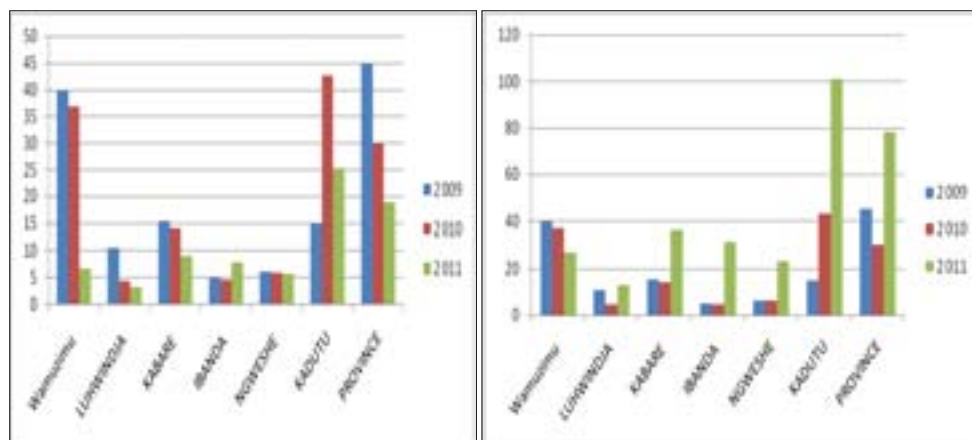
From the analysis of these choices, one can easily imagine that the construction of public offices cannot be the choice number one for the population that has limited access to basic public services



such as education, health and others, but this can be a significant strategic choice for managers who want to offer other services that people may need. They need a place where people can join them for services. Also, investing in income generating projects may not be the choice number one of the population, but it can also be strategic plan for a manager to invest in profitable activities that can continuously generate resources for the entity. So, the case of KADUTU and BAGIRA are debatable.

### 3.5. From the Budget improvement perspective

Subsequent to the results of the feasibility study of the PB in the South Kivu province, it was agreed to introduce this process in 8 out of 27 DE before expanding to other DE in the province. The selected entities include three municipalities of the city of Bukavu that is the capital of that province and five chiefdoms. The three municipalities are BAGIRA, IBANDA and KADUTU while the chiefdoms selected are BAFULIRU, KABARE, LUHWINDJA, NGWESHE and WAMUZIMU. Among the weaknesses identified by the feasibility study mentioned above were: the still low level of revenue collected against estimations, the low amount of the investment to interest debates, the accumulation of projects approved but unrealized to name few. Below I present a comparison of the revenues collected by six DE pilots as well as those of the province from 2009 to 2011<sup>4</sup>. They are presented as percentage of revenues raised from the forecast for easy reading and comparison.



**Figures 2 & 3: Percentage of taxes collected from 2009 to 2011**

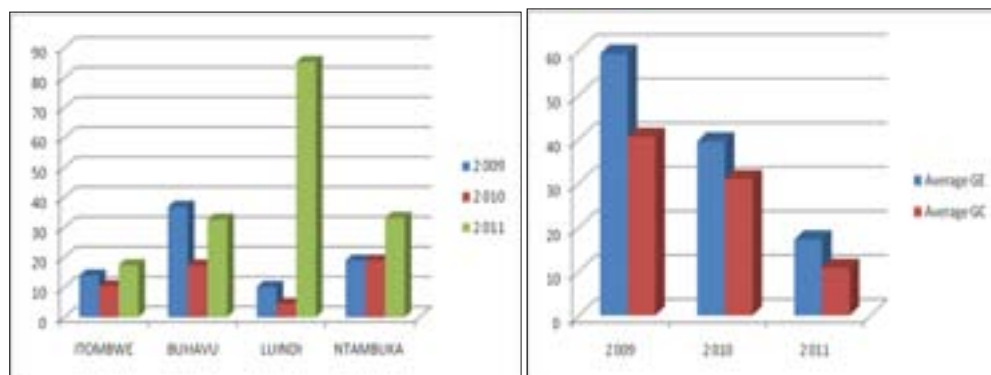
*Source: Decentralized entities and province budget: our computation. For better comparison, figures from figure 2 on right show collections from January to March extrapolated on 12 months.*

From the figure 1 (on left), IBANDA and NGWESHE indicated very remarkable progress in terms of revenues collected in the first three months of 2011 compared with 2009 and 2010. For a better comparison, we believe we can extend the achievements of three months in twelve months by multiplying the results by four quarters. From the figure 2 (on right) we can see that, apart WAMUZIMU, all things being equal, the results of 2011 were far better compared to years 2009 and 2010.

<sup>4</sup> Taxes collected in 2011 are those from January to March only. For comparison purposes they can be extrapolated to 12 months holding other things equal

Improvements in terms of budgetary revenues collected observed in the first three months of 2011 may be a result of several factors. In an attempt to attribute these results to the current budgeting process, it is important to compare the percentages of revenues collected from the forecast of DE pilots to those ones of non-pilots. We noted that generally, the trend of revenue collection is the same (figure 4 below on left) for the other six DE that constitute the study group. Indeed, the reasons for these results require further analysis. As seen early, during the workshop that decided to introduce the process of PB in the South Kivu, almost all 27 DE were highly represented and all officials who were present wished that their entities be considered in the pilot phase. After huge debates, participants have advised DEs that were not considered in the pilot phase, to begin the process according to their own pace. On top of that, the circular note no 02/MINIPLAN&BUDGET/2011 of 04/04/2011 the Minister of Budget and Planning relating to the elaboration of budget estimations of DE was clear: “...All DEs should follow the principles set by the PB which require that the population is involved in the preparation of budget estimations while preparing estimations for 2012 budget”.

After seeing that the trend of revenue collected was almost the same, we compared the average percentage of achievements of the revenue collected by the studied group with that of control group (figure 5 below on right). We can see that the results of the studied group (GE) are higher than the control group (GC).



**Figures 4 & 5: Percentage of tax collected from 2009 to 2011 (extrapolation), Comparison of control and studied group**

*Source: Decentralized entities and province budget: our computation. On left, the figure shows the trend of taxes collected by control group while on the right, the figure shows a comparison of performances of Studied group (GE) to the control group (GC)*

Generally, the achievement observed in terms of realization compared to target in 2011 is partly due to the fact that DEs have been realistic in doing their estimations of 2012. Indeed, almost revenue estimations witnessed a reduction or deletion by experience of previous years. For instance, IBANDA, in order to estimate its budget for 2012 has evaluated the realization for three first months of 2011 and then extrapolated it on twelve months of a year.



## 4. What next? With which partners and which means for the sustainability of the Process?

### 4.1. Next steps

In short term, as the priorities of investment voted in 2011 are those to be realized in fiscal year 2012, efforts to protect, feed and grow the “Baby Participatory Budgeting” will need to follow all priorities that emerged and defined during the general citizens’ assemblies in order to realize them early in the first quarter. In doing this, managers of DE assure their commitment to citizens’ needs. Again, as the budget estimations for 2013 start early in 2012<sup>5</sup>, it would be a weak departure if the priorities emerged during previous meetings would have not been realized. In the normal process, they can be realized throughout the year until the end, but really in order to acquire confidence from citizens, it is important that all or part of investments defined previously MUST be realized early in 2012 this to facilitate debates for investments of 2013. Alternatively, managers can early associate citizen in the monitoring of resources collections so that they can assure that investments are not realized because of shortage of resources, otherwise, the process would be compromised while the reverse situation would be a BIG asset for Decentralized Entities for the success of the PB process. During the first quarter of the fiscal year 2012, efforts to give information regarding the Process have also to be doubled. Managers should remind the priorities as they have been emerged and defined during general citizen’s meetings, post them in public areas, etc. In doing this, managers of DE break the silence between the vote and the realization of investment that would help them to build the confidence from citizens. In medium term, every decentralized entity should elaborate a development plan in a participatory way for its entity so that the priorities to be emerged come out from that plan. This will be a very good moment of debating the future of the entity and sharing some constraints and opportunities of the entity. Also every entity will scrutiny and analyze deeply every source of its income so that efforts to mobilize more resources must be affected where they can be productive. Trainings of all stakeholders have to be undertaken in order to know who does what for the success of the Process. Managers of Decentralized Entities can share their development plans with different donors and funding organizations so that they contribute financially and technically to their plans. In long run, as the transparency has been improved, DEs’ managers should think on investing in productive projects. As the law allows DEs to acquire loans and to get shares or own public enterprises, the perspective would be of business oriented in order to get more means to fulfill their obligations of public service delivery.

### 4.2. Partnerships

The steps as indicated above can’t be realized with the DE’s managers alone, it is a fruit of efforts of many people. Partners number one are citizens themselves. In order to success with Participatory Budgeting process and then improve transparency in public affairs management, citizens have to be sensitized on their role. They know what is priority for them, what they need from their entities in terms of rights but also they have to know their obligations. Partners number two, are the decentralized entities. DE have to change their mindsets, they have to be public services providers oriented and open for public participation. Partners number three, are the

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<sup>5</sup> Latest in April, every Decentralized Entity has to submit its budget estimations for approval at the provincial level. This require that debates have started early at DE level

central and provincial governments. They have to improve security and peace which are foundation of every development and sustainability. They also have to provide laws and framework that promote and facilitate participation for a sustainable development. Their advocacy to where DEs can reach is more than needed. From the sensitization to the evaluation through education and training process, civil society organizations have to play a very key role in the sustainability of the Process. Last and not least come the Financial and Technical Partners, these are very crucial for the sustainability of the process. They have to provide advices as well as financial assistance to DEs in order to cover their development plans.

#### **4.3. Means**

For the sustainability of the Process, means number one is that the Process is institutionalized. Means number two is the political will, without it all efforts will be futile. Central and provincial governments have to enforce all measures put in place so that they are effective in all aspects of life. They have to provide the retention and not retrocession of resources with the national character. This will avoid waiting long for resources that after all will not comeback in its totality if not failing. Financial and technical assistance from whoever interested in governance and development will be of high appreciation.

### **5. Conclusion**

Taking into accounts the conditions in which the Participatory Budgeting has been introduced in the South Kivu Province, so far some of its activities carried out give hope of its positive impact in the future. These are related to Investments priorities emerged and voted during the general citizen meetings, workshops and training aiming at capacity building of stakeholders, budgets estimations for the fiscal year 2012 and the trend of revenue collections for three years 2009, 2010 and three first months of 2011. The commitment of provincial government has been shown by the presence of the Governor or Deputy Governor accompanied by a large number of Ministers during various workshops in one hand and general citizen meetings in other hand and some important decisions taken in relation with the Participatory Budgeting process. We witnessed for example some memo addressed to DEs giving instruction to associate citizen during preparation of budget estimations for 2012 fiscal year and the letter addressed to Airtel asking a green number through which citizen can send and receive messages regarding their participation. Investment priorities emerged and voted during general citizen meetings are related to Water, Sanitation and Hygiene (WASH), Education, Health, Reforestation, Rehabilitation of small infrastructures and construction of offices for most neighborhoods. In terms of budget estimations, generally, DEs have been realistic in doing their estimations of 2012. Indeed, almost revenue estimations witnessed a reduction or deletion by experience of previous years.

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## About the Author

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Emmy MBERA holds a Master in Economic Policy Management from the Université d'Auvergne, Clermont Ferrand, France. He has more than 9 years working experience in the field of taxation in Rwanda. Currently, he is the Head of Audit Division, Small and Medium Taxpayer's Office. He conducted the feasibility study of the Participatory Budgeting in the South Kivu Province, and currently, along with another International expert in Participatory Budgeting, he is evaluating the said process on behalf of the World Bank Institute.



# The Largest Democracy (India) Poised for Electronic Government and Electronic Democracy

*Suggested Framework: Verifiable, Open, Transparent, Empathetic, Responsive and Sensitive (VOTERS) eDemocracy*

**Singara Rao Karna**

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**Abstract:** *Citizen-apathy towards governments is now turning into Citizen-Resentment, Citizen-Dissent and Citizen-Protest, a resonating concern that the oldest, the largest and the richest democracies are confronted with across the world (along with other democracies, authoritarian/ non-democratic forms of governments). During the year 2011, the Indian government has faced Non-violent Anti-Corruption ie India Against Corruption (IAC) Movement. Subsequently, eGovernment/ eDemocracy as a State Social Responsibility (SSR) (Karna 2010a) was embraced and some governmental business processes made electronic with certain concessions made to citizenry. By understanding IAC Civic Spontaneity of such Civic Organization, Civic Intelligence and Non-violent Protests, governments in general, in this case Indian governments (at federal and state levels) in particular, can draw first hand inferences from the very community they serve and stand for and then make use of Social Media and ICTs for consulting citizenry on best practice good governance. Verifiable, Open, Transparent, Empathetic, Responsive and Sensitive (VOTERS) electronic democracy is conceptualized and framework developed in this research. World's largest democracy is now poised to adopt VOTERS form of eDemocracy/ eGovernment, in response to civic protests that are disciplined, non-violent and strongly organized with a voice provided by mass media, social network media & ICTs. The information provided by Julian Assange, Wikileaks founder pertaining to India, particularly the black money stashed in overseas banks by Indian-origin politicians, businessmen and money launderers gave a major thrust to organization of virtual communities coinciding with the clarion call from a GANDHIAN - Anti-Corruption Crusader (Anna Hazare) for a non-violent protest. This research examines the spontaneous, self-organized, self-disciplined-cyber mob and consequent physical (world) mob protests for assessing the extent of mediating, facilitating and engaging role of Mass, Social Network Media and other ICTs on civic society's deliberation, participation and electronic word of mouse i.e. a word of mouth through electronic means.*

**Keywords:** Civic Spontaneity, State Social Responsibility (SSR), Citizen-Resent, Citizen - Dissent, Citizen-Protest, Self-organized Virtual and Civic Community, eWord of Mouse, Gandhian Hazare

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*The Government that governs the least is the best (Goethe, 1832, p1)*

**E**-Government is now more than a decade old and is advancing far and wide on its evolutionary path. Amongst various definitions of eGovernment and eDemocracy that are often used interchangeably, those definitions that have the spirit of democracy are considered for this research. EGovernment is defined as delivery of improved, quality and cost efficient government services electronically combined with a social dimension of participatory eDemocracy through social inclusion and eCommunity involvement (Seifert & Chung, 2009). Addressing and upholding the key aspects of democracy such as enhanced expression of democratic values, greater citizen inclusiveness and peoples' say in a state's governance and citizen empowerment under all conditions (Grozniak in Karna & Gupta, 2011) is the crux of eDemocracy. eGovernment used with an interchangeable sense of eDemocracy, Karna (2010) conceptualized that democracies should foster eGovernment (eDemocracy) as State Social Responsibility (SSR) with *skill and will* to share decision making power with citizen-customers and other stake holders (i.e. NGOs, NPOs and businesses), thereby gaining innovation in governance practice. Innovation in governance is a precursor to good governance. Governments (local/federal) encouraging networking of citizen groups and other stakeholders in a community enhance uptake of digital government services; thereby motivating citizens to actively participate in democratic processes of law making. This way citizenry can contribute to co-designing of innovative welfare measures goenance processes etc. After *Will* to embrace eGovernment/eDemocracy as SSR, the *Skill* sets are organised to initiate implementation and the projection of *Zeal* during the course of implementation ushers - in Innovation in harnessing community's capabilities in co-designing the democratisation of processes/technology prior to and after digitisation. Emphasising citizen empowerment, respecting civic society's diversity of opinions/knowledge that influence and affect public policy hastens eGovernment evolution into a genuine democracy. The onus now lies with democratically elected governments to not only brag about the so called Freedom of expression, but should also provide basic needs to their citizenry. This aspect is in the heart of fostering eGovernment/eDemocracy as State Social Responsibility by democracies (Karna 2010a; Williamson in Karna & Gupta, 2011). In this direction, Echo is a novel approach of turning eParticipation into a politically mature and active citizenship for bridging the gap between top down (G-C) and bottom-up (C-G) modes (Linhart & Papp in Karna & Gupta, 2011). Imperatively, Citizen has been given a stakeholder position i.e. Citizen Customer along with other stakeholders i.e. NGOs, NPOs and businesses (Lim et al; Wong et al in Karna, 2010). Further, United Nations elucidated practical framework and roadmap for citizen e-participation (2005, 2008, and 2010 in Karna & Gupta 2011), corroborating my concept of State Social Responsibility (Karna, 2010), as follow:

**E-Information:** Government websites provide information on policies and programs, budgets, laws and regulations; along with other briefs on key public interest. Tools for broadcasting of Information is available for timely access and use of public information, including web Forums, email lists, newsgroups, and chat rooms; **E-Consultation:** The government website explains ways and means of e-consultation and tools, while offering choice of public policy topics online for discussion with real time and archived access to audio and video of public meetings. The government encourages citizens to participate in discussions; **E-Decision-making:** The government

informs that it will take citizen input into decision-making, while undertaking to provide actual feedback on the outcome of specific issues.

Against the backdrop of above reviewed literature, it could be seen that various experts and scholars considered conclusively people's involvement in eGovernment process as pivotal with citizen as a key in eGovernment/eDemocracy evolution. Karna and Gupta (2011) conceptualized 'Centrality of Citizen' in the whole gamut of eGovernment/eDemocracy. Sharma (in Karna & Gupta, 2011) put forward a model of 'Four Global Forces' in the context of 'Holistic Globalization'. This model is quite relevant for understanding the 'centrality of citizen' in the context of eGovernment/eDemocracy as a State Social Responsibility (SSR) in the present context of social-up rise in various countries and in particular to the ongoing '2011 Indian Anti-Corruption Movement'. Sharma's model explains that Force of Market, Force of State, and Force of People and Force of Self are in a continuous dynamic interaction with one another and that synergy emerges only when these forces are in harmony. Accordingly, the citizen is a Primary Driver occupying four positions – Primary Stakeholder in context of Market; a Right full Owner in context of State, Primary Stakeholder in context of Community and Enlightened Individual in the context of 'Higher Self'; all elements of four forces interacting continuously with one another combined with conscious efforts/intentions put in to maintain equilibrium among all these forces and elements to generate synergy. I touched upon literature that vehemently puts citizen as the key player in eGovernment/eDemocracy and emphasizing the concept of eGovernment/eDemocracy as State Social Responsibility (SSR) combined with Centrality of Citizen.

My motivation for embarking on this research was to elicit and understand the explosive self organized, self disciplined Online and Physical Communities from a Civic Society that is evolutionary and hardly a revolutionary one, dovetailing their strengths spontaneously irrespective of their caste, creed, religion, region, language, life style, profession and political following. What more this non-violent social up-rise against political corruption has erupted spontaneously at a time when the middle eastern governments were facing violent wrath of their citizenry and crumbling in the face of unabated violent protests/rebel wars.

Thus, this research is timely with an exploratory research question: What role Mass, Social Network and ICT Media played in "Spontaneous, Organized Indian Civil Society's Up-Rise during 2011 (online/offline) against political corruption? What inferences the governments drew and lessons learnt at federal and state levels?

In my endeavor to explore the research question, a concept to rejuvenate the waning democratic spirit (among citizenry) and to neutralize the associated citizen apathy, 'VOTERS' eGovernment/eDemocracy (Verifiable, Open, Transparent, Empathetic, Responsive and Sensitive), is developed and framework discussed in this research. This research is divided into five sections. Section one provides a bird's eye view of civil society's up rise, the spontaneous organized mob taking to social media and coordinating the public fury against government through Social Media and ICTs; and IAC's plan to take forward the up rise in a planned, disciplined way. Section two deals with how Mass Media, Social Media and ICTs took the role of voicing protesters' views, gatherings and protests. The political power of these media is discussed against the backdrop of global political uprisings, showing the positives and negatives of these media in the presence of a strong disciplined civil society and the absence of such public sphere, respectively; leading to success or failure of achieving the goals of such protests. Section three touches upon Wikileaks and how the social media broadcasted the leaks to spark public anger and provided a discussion forum

for the IAC movement. Section Four analyses Gandhian Hazare joining social media (Twitter, Facebook) that prompted the Indian Prime Minister to join the same media (Twitter). Further, Gandhian's tactics to allow more time to the government for the main causes – Anti-Corruption Bill and Overseas Indian Black Money; while raising the immediate burning concerns of citizens of India to be redressed is discussed. This section also looks at the governments' appeasing of protesters' demands partially and the transition ushering in new (Citizen –Centric) political culture and legislations. Section five discusses and concludes answering research question.

The American Heritage® Dictionary of the English Language (2000) Meanings for V.O.T.E.R.S (relevant to our theme) are:

**Verifiable:** Authenticate; Certifiable; Possible to verify; Verifiable account of an incident. **Open:** Free of prejudice; Receptive to new ideas and arguments **Transparent:** Free from deceit or fraud; Frank; Easily detected or seen through; Obvious; Readily understood; Characterized by visibility or accessibility of information especially concerning business practices **Empathetic:** commiserative; compassionate; Sympathetic; Humane; Understanding and warm hearted **Responsive:** Responsive to the needs of customers - receivers of products and services **Sensitive:** Involving discretionary authority over important policy matters.

#### 'VOTERS' Electronic Government and Electronic Democracy (VOTERS EGED) - The Concept

In principle, Abraham Lincoln (1862) idealized democracy as for the people, by the people and of the people. As can be seen democracy is now perceived as for the politicians, by the politicians and of the politicians, from the experience of the oldest democracy (Greece), the largest democracy (India) and the richest democracy (USA). A government could move more towards a genuine democracy (and not settling for democracy as a better evil nor as the best of the worst political systems) with the proper application of Electronic Government and Electronic Democracy. Politicians need to do something rather than trying to be something. Verifiability, Openness, Transparency, Empathy, Responsiveness and Sensitivity could be built into eGovernment and eDemocracy once citizens individually and civic society as a whole (networking and stakeholder ship encouraged by eGovernments (Karna and Gupta, 2011) are part of every step of Government and the governance thereof. VOTERS framework provides insight to the public on how decisions are made and how elected officials or public servants are held accountable for their actions, while expecting the governments to be empathetic to citizen's unknown needs, (i.e. a high way that might be needed 10 years down the line, but citizens wouldn't be entirely clear about the necessity, feasibility and about other external factors). Verifiability as in case of Social Audits in India (State of Andhra Pradesh), where public works are verified by way of reading out works done, expenditure incurred, workers employed, wages paid etc, in front of a villagers' meeting and all genuine expenditures ratified while bogus payments/ghost workers (namesake) are detected and the guilty punished. Thus, public could become a direct and prominent influence in government legislation to a larger extent (Bhattacharya, 2011). Verifiability in form of "social audits" is turning welfare recipients into whistle blowers – Verifiability offers an unheralded cure for the corruption that plagues the country's national jobs and food subsidies programs. One state (Andhra Pradesh) has already proven that making welfare distributions in a public forum is effective in fighting graft. The modus operandi of social audits: i) A record of the accounts of the civil works is read out in public in the presence of beneficiaries of the scheme and the alleged perpetrators of corruption ii) This garners interest in the proceedings, and encourages villagers to question transactions –



breaking barriers of social hierarchy iii) The government takes action against those guilty of fraudulent payments/siphoning off funds.

This unique effort of Verifiability helps to ensure good governance. The federal government's rural development ministry shells out \$20 billion a year, about 8 percent of the government's budget. A hefty portion of those funds go to a national jobs program that guarantees at least 100 days of employment at the minimum wage to rural workers — one of the largest programs of its kind in the world. But the jobs scheme, like the infamous “public distribution system” for subsidized grain, is plagued by corruption — as middlemen keep payments for themselves, or stack the list with ghost workers, or demand a cut of wages in exchange for delivering them. Virtually every top-down effort to check this gross theft — which targets those least able to afford the loss, and least able to make noise about it — is plagued by corruption. But Rural Development Ministry is pushing to make so-called social audits as the monitoring system for major welfare schemes all over country. The state of Andhra Pradesh (Rice bowl of India) has already shown social-audits can be effective; The Andhra Pradesh model is undoubtedly a success, with more than 3,200 social audits and more than 38,000 disciplinary cases brought against officials involved with the jobs scheme. Hundreds have been suspended or punished. In the past three years, the drive has been able to recover almost a quarter of the \$24m of irregularities detected. For the first time, perhaps, this may actually be a working scheme to fight corruption — and it doesn't hinge on the good will of politicians, or even the mobilization of voters. Open is not just a fancy synonym for accountable. The Open in Open Government, Open Data, Open Information, and Open Innovation stands for the changing relation between citizens and authorities. Responsiveness in recognizing and foreseeing citizen's needs; taking preemptive actions based on citizens' personal experiences (i.e. Bushfire preventions in areas that are prone, but governments may lack one hundred percent knowledge of the problem, unless citizens are made to network among themselves and co-design the necessary services in consultation with local government employees). Sensitivity concerns honoring various regional, linguistic, religious sentiments in law making and respecting citizen's ingenuity through discreet use of authority. Goeth's (1832 ) opinion hat “The government that governs the least is the best” is the premise for Sensitivity. Many citizens no longer accept the passive stance representative democracy held for them. Citizens take an active approach in setting up better means of collaboration by ICTs. They demand and gain access to their historically grown collective knowledge stored in government data. Not just on a local level, they actively shape the political agenda. Open Government is to be seen in the context of citizens' rights: the right to actively participate in the process of agenda-setting and decision-making (Schuller, 2011). Verifiability, Openness, Transparent and Transparency, Empathy, Responsiveness and Sensitivity are best exemplified by Transparency International, a global watch dog on political corruption through the former United Nations High Commissioner for Human Rights:

*"There is no longer any doubt of the linkages between corruption, poverty and human rights abuses. An open and transparent state will provide for fuller realization of economic, social and political rights. There will be fewer secrets, less discrimination, and more equal access to public services like education and health care, as well as to fair treatment by the police and judiciary. Let us join together to fight corruption. It is a battle that can be won." (Robinson, Former UN High Commissioner for Human Rights, home page, Transparency International, 2012, p.1)*



The VOTERS framework pragmatically aligns with the application of Public Value concept to deliver 'citizen - customer value', (a term which is apt given that citizens play active role as customers in eGovernment now), i.e. to 'citizen - customers'. VOTERS framework also provides Civic Society a platform for collective reasoning (deliberation) on a large scale to find solutions as civic ends through civic means in active participatory mode of democracy; being active partner/stakeholder, decision maker and service receiver of electronically governing Governments leading to electronic Democracy (Karna, 2010a, Schuller, 2011). In sum, VOTERS EGovernment and EDemocracy is: authentic without any prejudice, deceit or fraud; recognizing, foreseeing and responding to citizenry needs by having receptivity to new ideas and arguments; possessing utmost visibility; being compassionate and humane with discrete exercise of authority. At the outset, the essence of VOTERS framework could be fully attained by eGovernment through democratization of technology and business processes which imperatively is eDemocracy - the need of the hour (Karna, 2010a; Bhattacharya, 2011).

## 1. Civil Society's Outcry & Deliberation on Mass, Social Network & ICT Media

Berners-Lee's original vision for the Web was "Humanity connected by Technology". Yet it is only comparatively recently that the true potential of the Web for connecting people has come to the fore (Sheridan & Novak, 2008, p.1)

With the communications landscape getting denser, increasingly complex, and participatory, the networked population is gaining increased access to information, more opportunities to engage in public speech, with an enhanced ability to undertake collective action (Shirky, 2011). A crucial prior requirement for establishment and sustainability of a common community is the synthesis of a fit between a shared purpose and a unifying community credo that all members of the community can subscribe to – and provide enough diversity/novelty of ideas and opinions within the community (Bruns 2008; Baym 2000 in Bruns, 2011). The purpose of such attempts should normally be to invite and enable 'self-determined, self directed and self motivated communities to manifest themselves' (Bruns 2011). More than a decade ago, on January 17, 2001, during the impeachment trial of Philippine President Joseph Estrada, loyalists in the Philippine Congress voted to set aside key evidence against him. Within two hours after the decision's announcement, thousands of Filipinos, angry that their corrupt president might escape the trial, gathered on Epifanio de los Santos Avenue (EDSA), an iconic crossroads in Manila. The protest was arranged, in part, by forwarded text messages reading, "Go 2 EDSA. Wear blk." The crowd soon swelled, and in the ensuing few days, over a million people arrived, choking traffic in downtown Manila. The civic society's ability to coordinate such a massive and rapid response -- close to seven million text messages were sent that week -- so alarmed the country's legislators that they reversed their decision favoring Estrada and allowed the evidence to be presented. Estrada was gone by January 20, 2001. The event marked the first time that social networking media and ICTs had helped force out a national leader. Estrada himself blamed "the text-messaging generation" for his downfall. After the rise of the Internet in the early 1990s, the world's networked population has grown from the low millions to the low billions. Over the same period, Social Networking Media have become a fact of life for civil society worldwide, involving many actors – regular citizens, activists, non-governmental organizations, telecommunications firms, software providers, governments (Shirky, 2011). This phenomenon has been clearly observed/repeated as shared grievance in social up-rise

of Indian Civil Society for “2011 India’s Anti-Corruption Movement”, with the only difference that Indian Government managed to stall mobile networks in certain parts of Bombay, during a hunger strike event of the Gandhian.

### 1.1. “India Against Corruption (IAC)” - A voluntary online community project:

IAC was founded in 2010, with a mission of creating corruption free India and has been a very effective self-organized civic online project to promote transparent corruption free democracy in India. The Hong Kong based Independent Commission Against Corruption inspired the leaders of the IAC to prepare Peoples Ombudsman Charter (<http://www.indiaagainstcorruption.org/index1.html>) to deal with corruption sternly. Currently, IAC has sites catering to major 21 Indian cities and one for expat Indians. IAC activities are quite vibrant both online and offline. For instance Bombay, the largest city and the commercial capital of India’s site administrators i.e. <http://iacmumbai.org/index.php> has organized an instant ballot poll on 26<sup>th</sup> January, 2011 (India’s republic day) for three hours near India Gate suburb to see as to which public personality gets majority votes in a limited time. Amongst major party politicians, the spirit behind IAC, GANDHIAN Hazare’s name appeared on a ballot paper. Out of a total of 5500 votes polled, 3500 were in favor of the GANDHIAN. IAC has been a vocal mouth piece of the “2011 India’s Anti-Corruption’ Movement”. IAC is seen as a future watch-dog organization as also suggested by Blumer and Coleman (in Bruns, 2011) for establishment of a Civic Commons as a public-held organization on BBC lines, in UK:

*“Our proposal for a civic commons in cyberspace aims to create an enduring structure which could realize more fully the democratic potential of the new interactive media. This would involve the establishment of an entirely new kind of public agency, designed to forge fresh links between communication and politics and to connect the voice of the people more meaningfully to the daily activities of democratic institutions. The organization would be publicly funded but be independent from government. It would be responsible for eliciting, gathering, and coordinating citizens' deliberations upon and reactions to problems faced and proposals issued by public bodies (ranging from local councils to parliaments and government departments), which would then be expected to react formally to whatever emerges from the public discussion. This should encourage politicians and officials to view the stimulation of increased participation not as mere ‘citizens' playgrounds' but as forums in which they must play a serious part”(Blumer and Coleman 2001, p. 15).*

The proposal for civic commons of 2001 was updated by Blumer and Coleman to Web 2.0 compatible model and thus the authors described this ‘Civic Commons 2.0’ as “a space of intersecting networks, pulled together through the agency of a democratically connecting institution”, (2009, p.182). This proposal aims at, development of means of citizen participation that are distributed – yet also coordinated – across the various Web 2.0 platforms which citizens are already using (as in the case of IAC, India), rather than in a centralized custom built environment wherein potential users are required first to sign up to (Bruns, 2011). Hitherto, it has been unclear as to how Civic Commons 2.0 spaces may be utilized for. However, acute events (Burgess in Bruns, 2011) “described as crises and other rapidly developing events which generate a substantial level of adhoc community engagement in online environments” and IAC, Indian movement is a clear example of an Acute Event rapidly gaining foothold and generating online responses within hours of a hunger strike call by an anti corruption crusader on 5<sup>th</sup> April, 2011, at Jantgar Mantar Square,

Delhi. This bypassed or leapfrogged, most organizational/administrative hurdles that may otherwise scuttle the establishment of online communities. As Bruns (2011) explained:

*“Such communities are largely self-organizing, exhibit substantial levels of participant engagement, and may generate significant outcomes in terms of ideas and information; their development can be understood as a process of rapid prototyping as various members of the community take the initiative to explore the use of new tools for gathering, compiling, processing, and sharing the information that is circulating within the community – those tools which are found to be useful to the greater community are retained and developed further, while those which do not meet significant acceptance are quietly discarded again” (Bruns, 2011).*

Evidently, the half a decade old proposal of Civic Commons is now taking a shape in India as IAC, although totally self funded and self-managed by civic society, but without any government funding. Against this backdrop, the ensuing discussion will examine two recent acute events: “2011 India’s Anti-Corruption’ Movement” and the “Wiki leaks” on Indians Stashing Black Money in Oversea Banks”, People’s unprecedented anger broke out against government for not disclosing names of such bank accounts nor taking steps to pressure such banks to return black money to India. These both Acute Events provided vast space for people to demand for Transparent and Responsive democracy that essentially ought to be an electronically administered participatory democracy i.e. eDemocracy. In the political parlance, the Phillippine (Manila) protests in January, 2011, demonstrated, these increased means of freedom could strengthen loosely coordinated public’s demand change. The Philippine strategy has been adopted many times since. In some cases, the protesters ultimately prevailed and succeeded, as in Spain in 2004, when demonstrations organized by text messaging led to the quick ouster of Spanish Prime Minister José María Aznar, who had mistakenly blamed the Madrid transit bombings on Basque separatists. During 2009, the Communist Party lost power in Moldova when massive protests coordinated in part by text message, Facebook, and Twitter broke out after an obviously rigged election. The Catholic Church faced lawsuits from around the world, over its harboring of child rapists, a process that started when The Boston Globe’s 2002 exposé of sexual abuse in the church went viral online in a matter of hours (Shirky, 2011).

## 2. The political power of social media & ICT’s

Success of ICTs and Social Media in effecting political change in Philippines, Egypt and Tunisia led individuals in other countries to pick up the conversation. It helped create discussion across the region as a shared grievance (Taylor, 2012). Just as Martin Luther adopted the newly invented practical printing press to protest against the Catholic Church, and the American revolutionaries synchronized their beliefs using the postal service that Benjamin Franklin had designed. Today’s dissident movements will use any means possible to frame their views and coordinate their actions. It would be impossible to describe the Moldovan Communist Party’s loss of Parliament after the 2009 elections without discussing the use of cell phones and online tools by its opponents to mobilize. Authoritarian governments stifle communication among their citizens because they fear, correctly, that a better-coordinated populace would constrain their ability to act without oversight (Shirky, 2011). In case of Estrada, Philippines, close to seven million text messages were enough to get him out of office. On 16 August 2001, Hazare was arrested four hours before his planned indefinite hunger strike in Indian capital Delhi. Hazare was arrested under a legal provision that bans public gatherings and protests at the park in Delhi venue of his hunger strike

(a frivolous reason). Police put conditions restricting length of the fast to three days and limiting number of protesters at site of hunger strike to 5,000. Later in the afternoon, Anna was produced before a magistrate who offered him bail but Anna Hazare refused to provide bail bond, resulting his judicial custody for seven days and was lodged in jail. Social media was abuzz with the GANDHIAN arrest and the whole nation was at standstill. After announcements by members of IAC team and various eminent citizens on various mass media, local television, and social media sites (including Twitter, Face book), spontaneous street marches (570 demonstrations and protests) of thousands of people took place around the nation through SMSs and Social Media postings. Along with Hazare, other key members of IAC movement were also detained from different locations. About 1,300 supporters courted arrest voluntarily in Delhi while instant, self-organized peaceful protesters courted arrests across India.

Immediately, the Gandhian was set free due to overwhelming spontaneous protests organized through Cell Phones and Social Media. Estrada's ouster in Philippines (in 2001) and Prime Minister Jose Maria Aznar's ouster in Spain (in 2004) happened when demonstrators organised text messaging along with Facebook and Twitter. These incidents lead us to observe that the power of mass protests to unseat governments with the potential of social media lies predominantly in their support of Civil Society and the Public Sphere. In Belarus during March 2006, arranged street protests part by email against President Aleksandr Lukashenko's alleged vote rigging swelled, then faltered, resulting in Lukashenko becoming more determined than ever to control social media. Red shirt uprising in Thailand during 2010 followed the same albeit quicker path to languish with dozens killed. The use of social media and ICT tools through texting, email, photo sharing, social networking and the like, donot have a single pre-determined outcome. Therefore, Social Media and ICTs per se are not the powerful ones, but the organized civic society and how they plan to use social media and ICTs is the deciding factor for these media to prove powerful.

### 2.1. IAC, smart mobs and eWord of mouse

Howard Rheingold coined the term smart mob in a book ([www.smartmobs.com/author/howard](http://www.smartmobs.com/author/howard)) by the same name. Smart mobs are a more inclusive form of digital technology-based mobilization. Rheingold uses the term to refer to a series of sharing, collaborative, performative engagements that they have emerged around the world, especially with young people using the Internet. Such people don't know each other, but through different peer to peer protocols, are able to share their resources towards a particular purpose. So it might be a group of friends who want to seek sharing their idle computing time or people using location based applications to meet each other in a café and form friendship. Smart mobs are essentially different from flash mobs because they have a specific agenda and are geared towards a longer, sustained and enduring practice of community belonging and building. Smart mobs have been instrumental in IACs movement. The demographics of Indian population are the strongest case of Smart Mobs and Smart Mob mobilization. India's current population is 1.22 Billion, representing almost 17.31% of the world's population, which means one out of six people on this planet live in India. More than 50% of India's current population is below the age of 25 and over 65% below the age of 35. Voting population is 750,000,000 which is more than the total number of voters across 50 countries in Europe and another 20 countires in South and Central America. India also has the complexities of those 70 countries rolled into one. About 72.2% of the population lives in some 638,000 villages and

remaining 27.8% in about 5,480 towns and urban agglomerations. India will be the youngest nation in the world by 2020, with single largest younger people (NSSO, 2011). Now, more people possess the tools and the information to not only make them heard, but also influence the turn of events. The latest ICT enabled mass customization of news gathering from the ground and news dispersion through to cater to niche groups and even on one to one, thanks to SM tools and the ease of use is one example. "This shift from an era of broadcast mass media to one of networked digital media has altered both information flows and the way news work during unplanned or critical world events such as the Tunisian and Egyptian uprisings. People turn to Twitter, both to learn from on-the-ground sources, and to rapidly distribute updates. Prominent activists and bloggers thus serve as vital information conduits. Top journalists tend to re-tweet other fellow writers (Jarvis, 2011). Unsurprisingly, the current IAC movement is fostered as "Second Indian Independence Movement" to set India free from corruption, corrupt politicians, and bureaucrats, unaccounted money stashed in undisclosed secret bank accounts oversea and electoral malpractices. The Mass Media in general and Social Media in particular have made this movement an instant buzzword for every Indian – literate, illiterate, young, old, rich, poor, urban, rural and expat. In recent years issues concerning corruption in India have become quite prominent, with ubiquitous availability of mass media – print and electronic news papers along with more than a hundred 24/7 Satellite Television Channels' non-stop coverage in all regional languages combined with Internet through Kiosks and access to various uncensored (hitherto) 21 Social Media. Specifically the mass media played a unique role by wide coverage of IAC movement at the cost of their usual entertainment, sensational news. What more nearly half of the Indian population (640 million) own GSM mobile phones now and texting at least ten other friends was the advice given by the Team GANDHIAN. What happens when a sizeable percentage of 1 billion+ population use social media to support an Acute Event a just cause, a GANDHIAN leader and a non-violent movement is a Virtual Social Revolution in the social media (across popular networking platforms such as Face book, Twitter, etc. including video-sharing sites such as YouTube, to various discussion areas and blogs) and mass media. The fervor went viral with physical world mobs taking a cue from instant updates from Social Media and rushing to protest venues all over India. While Twitter kept trending #annahazare and #isupportannahazare throughout the day, several celebrities and business pages went on ranting against the government when Anna Hazare was arrested by police for his non-violent and genuine protest. Figure 1 shows how #annahazare spread across Twitter universe as day progressed, on his arrest i.e. 16<sup>th</sup> August, 2011. The continuity of non-violent nature of these protests, have been made possible partly due to the Social Network and ICT (Mobile – SMSs) media, avoiding violence for collective problems; collective thinking/deliberation about the issues at hand have resulted in outcomes that are not at all catastrophic. By virtue of a Gandhian calling for such protests, protesters were self disciplined supported by these media. Thus, violence has been ruled out in IAC protests thereby greatly improving the capabilities of protesters building civic intelligence through ideal deliberation (Schuller, 2011).



Figure 1 #annahazare spread across Twitter as day progressed, on Hazare arrest i.e. 16<sup>th</sup> August, 2011. Source: ([www.iac.org.in](http://www.iac.org.in))

No **movement in India has ever had a Twitter handle, a Facebook page, an Orkut community, a LinkedIn group, an e-mail address, an Interactive Voice Responsive System (IVRS), a mobile app for Nokia and Android.** The movement led by “Anna” Hazare, India Against Corrupt personalities attracted experts such as a lawyer, a software engineer, a system analyst, a journalist, and others that are driven to keep this “worthwhile” cause alive. Most of them work round the clock, and do not expect anything in return. It wouldn’t be surprising to soon find a YouTube Channel of India Against Corruption (IAC). There is a video that is creating quite a buzz on YouTube with 114,392 views in 5 days that was shot and uploaded by a retired top rank retired first woman police officer supporting IAC. All those who need latest information on the movement follow the handle @janlokal and they get tweets directly from “Anna’s” representatives, so that no one is easily misled to believe false rumors going around. The word of mouth to electronic means i.e. electronic word of mouth has spread like wild fire enabling mass outcry.

### **"Ordinary" People forged extra-ordinary partnerships through Social Media**

Progress in deliberation has little meaning if citizens – ordinary and not-so-ordinary – are not central players. Yet such citizens are generally not in the forefront of the work of deliberation, nor is there much effort on the part of government. Hence, considered are a wide range of options to spread this work – and these ideas to travel far and wide – within the citizenry, within the country and overseas to expat Indians. Forming various partnerships has been the key. All these non-traditional approaches were deployed to popularize the Gadhian’s work without compromising the integrity and values of the deliberative community (Schuller, 2011). IAC Twitter page is handled by a journalist with a news paper, who also handles the Facebook page “India Against Corruption”. Apart from landing page, Discussions, Questions and Notes parts of the page are very active and surprisingly very well moderated. Facebook page “Like”s sum up to a total of 452,562 in few hours. The forum on the Orkut community seems very active with a lot of Orkut users shooting questions and answers very aggressively. The LinkedIn group is taken care of by a faceless individual in her/his own capacity. It is very much active. The email address: indiaagainstcorruption.2010@gmail.com is attended to by a 26-year-old Software Engineer and his friend. R K, the Legal Eagle in the “Team” has been associated with the movement since he got his degree in law from Delhi University in 2009. He is in charge of grass-root mobilization, coordinating, answers legal queries and educates citizens and netizens about Peoples Ombudsman Bill. AJ, Systems Designer quit his job in Bangalore to work full time for the movement. He is in charge of the IVRS (phone number: 9212123212). Since the IVRS has been active, the number has recorded calls from almost 15,000 people. Mr. J is also working on a new website for the movement since he believes that handling traffic on the present website is turning out to be a little “unmanageable”. A visit to the website, shows two Smartphone applications (one each for Nokia and Android platforms). The website header also provides a fixed-line number on which even if a missed call is given, it means support has been shown and you can stay connected. The website proudly boasts off a sum of 13 million missed calls as of August 15th, 2011. Downloads section of the website allows visitors to download copies of the Peoples Ombudsman Bill (IAC Draft), Government Ombudsman Bill, Detailed Analysis of the Bill in English & Hindi, a Power Point presentation on the Bill and a comparative study between Civil Bill and the Government Bill. The site can also be viewed in Hindi language, a majority spoken language in India. This Virtual Movement trend spawned to real time protests on ground with protesters spontaneously joining



sites of civic prominence in groups with local leaders elected spontaneously to lead local protests and address masses for devising a systematic programme of future action.

As of 18<sup>th</sup> August, 2011, the non official pages were not lagging behind. For instance, one page titled, 'Join Anna Hazare's Fast To Bring People Charter Ombudsman (Facebook.com/join anna), created by a Face book user and is followed/liked by more than 44,000 users. Similar momentum was seen on Twitter too. Thousands of tweets mentioned Anna Hazare and his fight against corruption. The hashtag #isupportannahazare is mentioned in over 15,000 tweets (As per topsy.com on 18-08-2011). The influential power of official Twitter account/handle of the movement (Twitter.com/Janlokpall) has notably jumped by six points in the just two days after arrest of GANDHIAN. The Klout score of @janlokpall went up from 68 on August 15 to 75.6 on August 18<sup>th</sup>. For the uninitiated, Klout.com determines the influential power of a Twitter handle. And for the first time, cyber activism is witnessing an unprecedented conversion into real time activism on the ground. The official Facebook page has over 370,000 users and Twitter page has almost 50,000 followers actively debating and updating the events regularly. Users are frequently updated on the location of the protest and the movements of their leader. A majority of posts are voicing the support for GANDHIAN and sharply criticizing and satirizing the establishment. Users are sharing their personal pictures and videos of the protest, caricatures of the Ministers and links via news websites. Prime Minister Office's contact number and email address are being circulated for users to demand an explanation from the government for the arrest of Hazare. The YouTube channel called "thekiranbedi2011" created on 18<sup>th</sup> August has video messages (in three parts) from Hazare videotaped by a team member has had over 50000 views till now. (IAC blogger, Wikipedia, 2011).

What's more, Indians abroad held protests supporting the movement with a buzz on Facebook. Pages like "Chicago erupts in support of Anna Hazare" and "India Against Corruption Boston USA" invited people to march with Indian flags, banners and placards '#anna', '#lokpall', '#janlokpall', '#isupportannahazare', '#babudom' are the top Twitter trending topics today. One of IAC team members held a live video conference at hunger strike venue with expat Indians in USA and Canada. According to Topsy.com, in one day, about 37000 tweets with mention of 'Anna' were on Twitter as depicted in Figure 2. The mood across social media was of enthusiasm, rebellion, national fervor and curiosity. An expat Indian user on Facebook page 'India Against Corruption' wrote, "I heartily support this strategy, though tough, since it is the only way left to make the perpetrators of India's bad governance submit before the common man".

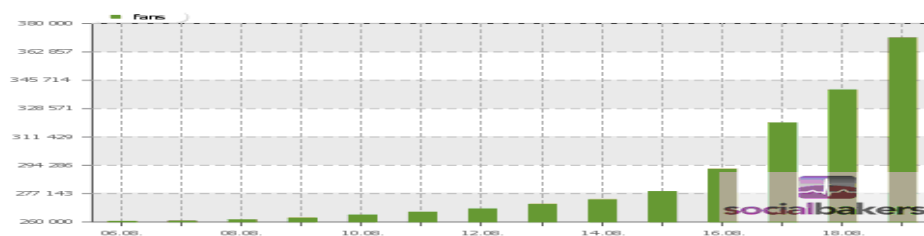


Figure 2 Facebook Page fan growth: India Against Corruption (as on 19 August, 2011)  
(Source: Statistics and chart by socialbakers.com)

Growth speed of Fans was 103, 491 in 7 days; 112, 076 by 14 days and 119, 424 by 1 month. There are hundreds of Face book pages showing support garnered over 200,000 likes in just couple of days after GANDHIAN arrest i.e. 18-08-2011; it has jumped to 500,000 as on 28-08-2011.

### 3. Wikileaks in mass / social media fuelled anger against corruption

*Julian Assange revealed that black money in overseas banks mainly comes from Indians* (Times of India, 2011), emphasizing that there could be Indian names in the data that WikiLeaks would publish. During the course of his interview, Assange appealed to Indians to absolutely not lose hope, but that names of those with secret Swiss accounts will come out at one point in future. Hinting that Wikileaks might work with specialized agencies before releasing the Swiss bank data and he pulled up the Indian government for not being aggressive like Germany in going after the list of Indian account holders. In fact he said India should be more aggressive because India seems like it is losing per capita more tax money than anyone else. Assange added that Indian government's reaction to the leaks were the worst (simply ignoring or brushing aside) compared to other governments that are party to leaks. Hence, IAC's demanded for disclosing names of such accounts and put efforts for getting back black money to India (Times Now, April 26, 2011).

### 4. GANDHIAN Hazare joins social network media against corruption

The GANDHIAN has taken to blogging and tweeting and also launched a Facebook profile on 30th September, 2011 to connect with his supporters, and to quell "misunderstanding and malicious gossip" about him and the movement. His very first blog clarified he was not close to any politician and did not end his fast due to any politician and that this movement is not for any regime change, unlike the recent Middle East revolutions. He would soon "embark" on a journey across India in order to "address" problems faced by the people. He ended the blog by thanking and commending Nobel laureate Aung San Suu Kyi, who has been fighting for democracy in Myanmar. Anna will not be writing the blogs himself but will be written by two of his aides - former journalists. Before the GANDHIAN came himself on Facebook and Twitter, support of other users through Khalid Abol Naza, an Egyptian actor-turned social activist during Egypt's revolution. To a little extent, IAC movement is similar to Egypt's peaceful protests consisting of celebrities and social activists from various walks of life in Tahir square. Hazare decided that he would not allow any politician to sit with him in his hunger strike. Although certain politicians from opposition parties tried to participate and cash in on this mass movement, they were not allowed. As foreseen there was a stage managed "Black out of mobile networks in Bombay" during the latest hunger strike by the GANDHIAN on December 27<sup>th</sup>, 2011 in Bombay and hence GANDHIAN on Social Media has been motivating youth with this movement in real-time. Although political corruption has been the main plank on which IAC and Gandhian have catapulted into public lime light during 2011, who has also been a crusader of good governance, balanced, sustainable development. Political corruption and recall of black money from overseas banks are issues that would take 1-2 years to come to fruition. As a spin-off effect, issues that are bothering common man have assumed importance as well. After a year of IAC protests as listed below and some of them are addressed by federal and state level governments at. Barely a year later, Gandhian has become watchdog for good governance with fresh demands: Protection for whistleblowers; Provision of Basic Necessities (drinking water, power and shelter) to all Citizens; People's participation in framing laws; Government Services to be delivered electronically with in



a Stipulated Time. Hazare and IAC team issued SMS cards to citizens to call back on a mobile phone number for the latest on protests. IAC is thus emerging as Watchdog of Good Governance and not just the Bill.

#### 4.1. Prime Minister of India - Dr Man Mohan Singh Joins Social Media,

Sensing the trend of Indian Youth attracted towards Gandhian Hazare on social media, Prime Minister Dr Manmohan Singh joined *Twitter* on 24<sup>th</sup> January, 2011, to capture the attention of young Indians and communicate about the work done by his office through 140 characters on the popular microblogging site. The account attracted 10,000 followers within hours of being set up. Thanks to Gandhian Hazare and IAC movement, Manmohan Singh joined the elite club of world leaders on Twitter: i) US President Barrack Obama was among the first to use the micro-blogging service to communicate with his electorate in 2008. His Twitter account @BarackObama, is among the most followed of all world-leader accounts, with more than 12 million followers. ii) Australian prime minister @JuliaGillard, iii) New Zealand Prime Minister @JohnKeyPM, iv) Israel's prime minister Benjamin @Netanyahu, v) UAE Prime Minister Sheikh Mohammed Al Maktoum. The account immediately invited a barrage of reactions from people. *"The #PMOIndia twitter account is a brilliant attempt to tweet silence in 140 characters," said @RoflIndian. Another tweeter said @rajennair: "Now our PM will speak through tweets, no one can blame him anymore of silence." "The #PMOIndia twitter account is a brilliant attempt to tweet silence in 140 characters," said @RoflIndian. Tweeter @i1\_2ramble commented: "So #PMOIndia is a brilliant example of ventriloquism if I am not wrong?"* Tweets and re-tweets and other means of sharing and spreading information provided social media with a *social capital* to guide and direct the Anti-corruption supporters all over India. This phenomenon was also observed by Bruns (2011) in the case of Queensland Floods crisis during 2010-2011.

### 5. Discussion and Conclusion

Inevitably, citizens should be considered as center of all forces and hence 'Centrality of Citizen' (Karna & Gupta 2011) combined with eGovernment/eDemocracy fostered as State Social Responsibility has been fast tracking eDemocracy evolution in the oldest (Greece), the richest (USA) and the largest (India) democracies in particular and all democratic nations in general. Clearly, social media and ICTs have played coordinating role in almost all the worlds' political movements, including the one of Indian non-violent movement against political corruption, in 2011. Mass media that hypes entertainment and sports and sensationalizes trivial issues for the first time took IAC message to the doorstep of the most unreachable citizens to the most elite. However, the change occurring in India needs to be measured in years and decades rather than in weeks or months (Shirky, 2011). Nevertheless, the writing on the wall has been clearly understood by the government and the Prime Minister himself joining the Social Media i.e. Twitter is a clear proof that Social Media have a greater role to play in times to come. Social Media along with mainstream mass media jumped into the bandwagon of highlighting a 74 year old retired army soldier crusading for a corrupt free India. Twitter caused Jitters in the Federal/State governments' Rank and File. However, the result is intangible so far, since the purpose of these protests is not intended to overthrow the incumbent government, but to force it to tackle political corruption and black money by framing laws that have teeth and workable in a speedier manner. Technically and organizationally the IAC has been looked upon by the whole of India and significantly the aspiring

opposition political parties as having capabilities to create chaos and unseat the incumbent government, when the Gandhian team sat on a day's hunger strike recently on 7<sup>th</sup> March 2012 at Delhi. The strong conviction of a Gandhian non-violent protest is the solid foundation that keeps this movement as not revolutionary but as resolutionary. IAC consolidated its position as an apolitical agency to fight for just and citizen-centric governments at all levels. The initiation and sequence of events is similar to Philippine protests of 2001; modus operandi of word of mouth and involvement of people of all walks of life irrespective of gender, caste, class, region, religion and clan is similar to Middle East protests but without an iota of violence. Although the final result is yet to be witnessed in full proportions, there are some positive developments from the federal government worthy of mention such as declaring, citizens have the right to assemble and protest peacefully and can file First Information Police Report (FIR) Online from 23<sup>rd</sup> March 2012; is a significant step forward for protesting citizens to take any act of persecution to the notice of judiciary. Yet there is no doubt the youth power of India i.e. more than 65 per cent of 1.22 billion population with software engineering skills in combination with social engineering skills of the Gandhian, will make this movement much more distributed for deliberation and participation for other reforms to come as good governance. The results are already seen with some ministers under cloud of corruption resigning and the Prime Minister joining the Twitter on the 24<sup>th</sup> January, 2011 tweeting about government programs and a senior minister failing to curb Social Media turning around to state that government seeks a mediating role from Social Media to communicate with citizens. The spirit of collaboration and shared problem solving (Schuler, in Parycek and Kripps, 2011), shown in this crisis will last until the Peoples' Anti Corruption Bill is enacted in its totality. However, for other demands that the Gandhian team has been fighting for, remains to be seen if the same spirit is endured as an ongoing freedom struggle for corrupt free India, as there are people sacrificing their lives for performing the role of whistleblowers as was the case in Independence Movement against imperial British monarchy. The Draft Peoples Charter Ombudsman bill was finally put to vote and passed in lower house during December, 2011, but pending before upper house. Hazare, who has fought many a war with the same government and achieved results in people's interest, will find it more convenient to ask for other demands to be fulfilled towards good governance, as he has put a long deadline of 2014 for the Ombudsman bill to be passed in both houses of parliament. With increasingly penetrating mobile phones in the soon to be adopted regional language format, smart phones combined with more than a hundred 24/7 television channels, the social media and ICTs are providing the critical mass to this movement. An astonishing fact that 185 million GSM mobiles sold during year 2011 alone is a testimony to the speed of penetration of mobile communication tools among Indian populace. Internet freedom has come to be acknowledged as synonymous with democratic freedom after initial efforts by the government to curb social media. However, a note of caution, the use of Social Media tools – by emails, texts, social networking and video postings, does not necessarily mean that there is a pre-determined positive outcome, unless and until the civic society is strong, disciplined and organized to thwart any insidious move by the ruling governments to use force, persecute and silence the protests. The IAC movement is different from all the political movements that have been witnessed since Estrada's ouster (2001) till the ongoing Syria's uprising, in that the IAC protests are following Gandhi's Non-Violent, peaceful and self disciplined model. The use of force would only work detrimental to the government, since the preceding year's thoughtless use of force on protesters and attempts to control Social Media & ICTs have clearly failed and backfired. Ultimately, the government appears to have learnt a lesson that it has to be sub-servant

one and not a master; should be a protector of freedom of expression not a persecutor as aptly put forward by Abraham Lincoln (1862) “As I would not be a slave, so I would not be a master. This expresses my idea of democracy”.

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Major Karna has been involved with eGovernment research since year 2000. His first stint was 'Business Analyst' with Whittlesea City Council, Melbourne, Australia. His Research on Local eGovernment and City E-Readiness formed a part of his PhD thesis covering Local eGovernment efforts in Australia, New Zealand, Germany, Norway and Austria. He taught at Temple University, Japan campus, Deakin University, Melbourne and University of Tasmania, Hobart, Australia as adjunct faculty. Residing in Melbourne she works as a Visiting Professor teaching Marketing, International Business, Information systems and eGovernance at several MBA/Public Administration Schools around the globe.





# A Preliminary Study On A Dual Vote and Prêt à Voter Hybrid System

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***Abstract:** Two issues which have significantly impeded the widespread adoption and acceptance of modern e-voting solutions are the lack of an intuitive user interface and the inability to verify the results. In recent years there have been efforts made in the development of cryptographic verifiability mechanisms which allow the voter to remove an encrypted receipt of their vote from the polling station. The Prêt à Voter system is a recognized example of this approach. This paper introduces a highly usable user interface termed Dual Vote with the Prêt à Voter backend. We present both a generic and novel eVoting system whose instantiation is relatively simple and achieves a high usability score.*

**Keywords:** Usability, Verifiability, User Study.

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**T**his paper presents a novel e-voting system which we have called Dual Vote. With Dual Vote, a voter's preference is simultaneously recorded on both electronic and paper media. The Dual Vote system allows a user to cast a vote using a pen and paper interface and simultaneously records the vote electronically using an optical sensor array and a capacitive-based electronic pen. This novel user interface (UI) addresses the crucial issues of usability and verifiability, which are now widely recognized as deficiencies in many modern e-voting systems. Usability is a commonly used metric for electronic-voting systems. The issue of providing an effective and intuitive UI has proved a significant challenge for modern e-voting solutions. A recent study compared the usability of six prominent e-Voting machine interfaces and identified a number of weaknesses (Conrad, et al., 2009). The problems ranged from increasing the effort required to vote to interfering with the voter's ability to vote as intended. The study showed that voters preferred a short and quick voting experience with a clear inverse relationship between effort and satisfaction. The study also found that paper ballot interfaces required the least amount of actions to vote when compared with other types of voting system. In addition, after the 2008 Finnish Municipal elections, usability problems were blamed for 232 out of 12,234 voters not completing their voting session. The decision by the designers to use two different screens, one for firstly casting the vote

and another for validating it, was cited as the cause of the problem by usability experts (Whitmore, 2008). This clearly highlights the ongoing need for improved e-voting interfaces. Increasing emphasis is also being placed on the ability to verify the results of an electronic voting system. For example, it is now a requirement in over thirty states in the US that e-voting systems contain some form of paper audit trail. The Mercuri method is one method used to achieve such verifiability, where a printed version of the electronic ballot is displayed behind a transparent screen. When the voter has verified that the printed and electronic vote match, the printed receipt is dropped into the ballot box by the voting machine (Mercuri, 2002). Extensions of such verifiability are end-to-end mechanisms which allow the individual verification of the single vote and universal verification that all votes have been counted correctly. Typically this individual and universal verification takes place on a web bulletin board. Prêt à Voter implements both universal and individual verifiability by allowing the voter to retain an encrypted receipt of the vote. Prêt à Voter thus allows the voter to verify that their vote was included in the final voting tally without revealing how the voter has voted. In this paper we "plug-in" a generic Dual Vote frontend to a Prêt à Voter backend and evaluate the subjective usability of the system in a field trial. We demonstrate that this novel and generic interface simplifies the Prêt à Voter voting process and results in a high usability score. We put forward the Dual Vote interface as a tool for delivering high usability with Prêt à Voter. While we acknowledge that there are many security trade-offs in demonstrating our implementation, (and we make reference to some of these concerns), we are focused on the theme of usability and do not attempt a comprehensive security analysis. Likewise, we regretfully cannot extend our interface to persons with disabilities as this is outside the scope of our research. Section 2 describes the current state-of-the-art in electronic voting systems. Section 3 provides an introduction to the concept of Dual Vote and Prêt à Voter respectively. Section 4 outlines the Dual Vote Interface Protocol, Section 5 describes the hybrid Dual Vote / Prêt à Voter system and presents a detailed evaluation of its usability. Finally Section 6 concludes and outlines future directions of research.

## 1. Related Work

End-to-end verifiability in e-voting terms means that a voter can verify that their vote was included in the election result and that the correctness of that result is based on all the votes cast. Systems which aspire to achieve end-to-end verifiability are generally based on the use of encrypted ballot papers and, usually, part of the ballot paper is removed in order to complete the encryption. The removed part of the ballot can either be retained as a receipt or used to generate a printed receipt. Anonymous voting schemes originate with Chaum's mix net approach which originally had an application in untraceable electronic mail (Chaum, 1981). Punch scan was later developed as an end-to-end verifiable system for e-voting which evolved into 'Scantegrity' and most recently 'Scantegrity II'. All three schemes are designed to work with optical scanning technology present in most polling stations in the US. Each of the three schemes uses a type of ballot paper encryption where each candidate on the ballot paper is assigned a unique symbol. The assignment of the symbol to the candidate is different on each ballot paper. Additionally, all three schemes contain a ballot paper with a removable section and this section contains a human readable code (Chaum, et al., 2008)(Chaum, et al., 2007)(Herrnson, et al., 2006). Rivest (2007) developed an alternative method called 'Three Ballot'. The method uses a 'Multi Ballot' consisting of three separate ballot papers. Each ballot paper is identical except for a serial number. Rivest



proposed Three Ballot as a means of achieving end-to-end verifiability but without using cryptography. Rivest describes the outcome of Three Ballot as “partially successful” in that the end goal of three ballot is achievable but only through reducing the usability of the system.

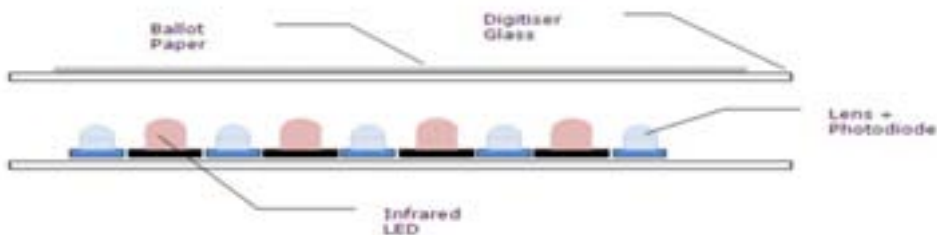
In terms of e-voting usability, subjective usability is frequently measured using the System Usability Scale (SUS) (Brooke, 1996). The SUS has been used for many years for global assessment of systems usability and is not unique to e-Voting. SUS uses ten 5-point Likert scales to produce an overall mean usability score. A higher score denotes higher perceived usability. The reason for research into eVoting systems usability has been demonstrated in several studies (Byrne, et al., 2007),(Herrnson, et al., 2006), (Everett, et al., 2006) which have shown that poor usability in e-voting can lead to a complete misinterpretation of the voters intentions leading to a vote for the wrong candidate. In addition, over complex end-to-end verifiability methods when applied to existing e-voting user interfaces can produce the same result. Our Dual Vote interface addresses verifiability and usability issues through one combined interface. In this paper we build on previous work reporting on the usability of the Dual Vote interface (MacNamara et al., 2010). We are interested if our proposed implementation results in a usable system which encompasses the benefits of end-to-end verifiability and show that our implementation, using a generic user interface, may provide a useful tool for enhancing Prêt à Voter usability.

## 2. Overview Of DualVote and Prêt à Voter

### 2.1. DualVote

Dual Vote is a prototype eVoting system which allows the voter to cast an electronic vote and a paper vote simultaneously. Recent moves toward introducing paper audit trails to eVoting systems have focused on the integration of a scanner and/or printer. The interfaces of these systems (touch-screen, push button etc) may not be instantly familiar to the voter. The Dual Vote system addresses this issue by allowing a voter to cast a vote using a pen and paper. DualVote is intended for use in jurisdictions where voting by pen and paper is the norm or the traditional method of casting a vote. As such, the Dual Vote interface should already be familiar to the electorate.

We report on the Dual Vote interface termed the optical sensor array reader (OSAR), depicted in Figure 1. The OSAR consists of an optical array of light emitting diodes (LED's) and infrared receivers. A hybrid ink / electronic pen is connected to a transparent digitizer which is laid on top of the sensor array. The optical interface works with a ballot paper which has optical markers' attached to the underside (Figure 2). These optical markers are simply printed directly onto the ballot paper allowing us to construct a ballot paper which can be easily separated in two along a perforation (as is required by our Prêt à Voter implementation).





**Figure 1: DualVote Optical Sensor Interface**

When the voter wishes to cast their vote, they place their ballot paper on the digitizer glass and simply mark their preference with the hybrid ink / electronic pen. The system records all the pen stroke coordinates and cross references them with the coordinates of the ballot paper as detected by the optical sensor array. By superimposing both coordinates, the system can determine where the voter has placed their mark on the ballot sheet and hence, for whom the voter has voted. Each ballot paper is also affixed with a Radio Frequency Identification (RFID) tag. The RFID tag contains a value which is unique to each ballot paper. The tag value is stored with the pen and ballot paper coordinates. If necessary, an electronic vote can be tracked to the ballot paper, which is useful when resolving inconsistencies and spoiled votes. The RFID tag does not contain any vote data or data which can be used to identify the voter. When the voter places the ballot paper into the ballot box, an embedded RFID reader detects the ballot paper. When the ballot paper is successfully detected, the voting session is complete. If the electronic vote has no corresponding ballot paper then the vote is not counted.

**Figure 2: Dual Vote Optical Markers**

## 2.2. Prêt à Voter

Prêt à Voter was developed as a means of achieving end-to-end verifiability in Voting systems (Chaum, et al., 2004). Prêt à Voter is ideally designed to work with existing optical scan voting systems with little or no modification of the actual voting machine. Similar to the other end-to-end verifiability mechanisms, Prêt à Voter consists of a ballot paper with a removable section which may be retained by the voter as a receipt. In the case of Prêt à Voter, this receipt incorporates the right-hand-side of the ballot paper containing the preference boxes and a human readable code called an 'onion'. The key innovation of the Prêt à Voter scheme is to encode the vote using a randomized order of the candidate list (assuming that the randomization is done honestly). This randomized order is encoded cryptographically in the onion. Buried within the onion are a number of 'germs' each hidden behind a layer of encryption. To decrypt the onion, a key is intended to be distributed between a number of tellers who must work together in order to decrypt each layer of the onion and hence determine the original ordering of the candidates on the ballot.

### 2.2.1. Principle of Operation

Depending on the implementation, the voter either chooses a random ballot paper (Figure 3) sealed in an envelope or the ballot paper is printed on demand. We assume an implementation

where a random ballot paper is given to the voter and the first-past-the-post vote counting rules are in effect.

Candidate B	
Candidate A	X
Candidate C	
Candidate D	
	240480777

Figure 3: Example Prêt à Voter Ballot

In the polling booth, the voter extracts his ballot form from the envelope and selects his preference by placing an 'X' in the right hand column against the candidate of choice.

X
240480777

Figure 4: Example Prêt à VoterBallot RHS Showing Voter Preference and Ballot Onion

The voter then separates the left and right hand strips along the provided perforation and destroys the left hand strip. The voter presents the right hand strip (Figure 4) to the poll-worker who optically scans it and issues the voter with a printed receipt. This printed receipt becomes the voters' receipt. The receipt can be stamped and digitally signed before being returned to the voter. The random order of the candidates on each ballot paper ensures that the receipt does not reveal how the voter has voted and as a consequence also removes any bias towards the top candidate that could occur if the candidate list were fixed. After the election, a voter or a person nominated by the voter, can visit the online bulletin board and confirm the onion value printed on their receipt appears correctly.

3. Dual Vote Interface Protocol

Having outlined the individual Dual Vote and Prêt à Voter systems in the previous section, we now outline the interface protocol which allows these systems to come together. In this implementation, we considered (for the first time) the engineering requirement that our design be 'generic'. Our claims for a generic design are justified by showing a "clean" separation between the interface and the back end. Based on our current design the Dual Vote/ Prêt à Voter backend is divided into 3 components:



**Figure 5: Components of the Dual Vote / Prêt à Voter**

The Dual Vote Interface, (including the ballot box) sends the following Raw Interface Data to the Analysis System:

- Authentication data, confirming connectivity;
- Session Identification data (derived from the RFID tag);
- Time stamped OSAR data (the coordinates of the ballot paper);
- Time stamped digitizer/hybrid pen data (the coordinates of the handwritten data);
- RFID tag value via the ballot box (closes the voting session).

In our previous prototypes, the analysis system and the backend are on the same machine. Within the interface, a data acquisition unit (DAQ) interprets the signals from each optical sensor and converts these to digital format which are interpreted as coordinates by the analysis system. A similar process is conducted for the digital pen and digitizer. The analysis system overlays both sets of coordinates and stores them in a database (indexed by the RFID tag). At this phase, the backend analyses each set of coordinate data in the database in order to form an image of the ballot paper with the corresponding pen marks, (there can be many hundreds of such images per voting session). When this analysis is complete, the backend software should have enough data to determine the vote. For uncertain data, the vote is marked for attention by a poll worker.

For a third-party backend configuration, the interface must return only which preference boxes have written preferences. This data is in an acceptable format for counting as the backend is only required to count the preferences for each candidate. When connecting to a third-party backend, our interface sends the following data to the back end:

- Authentication data, confirming connectivity [Auth];
- Voting Session Identification data (derived from the RFID tag) [sID];
- An array of the preference box ID's where the voter has made their mark [Pref].

This resulting data packet results in the Dual Vote Interface protocol (Auth, sID, Pref), which is output to the Prêt à Voter backend. The backend software can look-up the Session Identification data [sID] and find its corresponding onion value (each sID is related to a ballot onion in the backend database). The onion is then decrypted to apply the correct cyclic shift to the candidate ordering allowing the vote to be counted correctly.

### 3.1. Meeting the Pluggability Requirement

In order to see how well we meet the generic design ("plugability") requirement we retrospectively analyze the DualVote/ Prêt à Voter prototype by asking the following questions of our system:

- How close did we get to independent/parallel development of front and backends?  
As no modification to the Dual Vote and/or Analysis system was required in order to implement the Prêt à Voter backend and considering that all communication between the frontend and backend is one way; independent / parallel development of both systems was achieved.
- Did the front-end have to change much in order to facilitate Prêt à Voter ballots?  
From an analysis of the Dual Vote raw interface Data we see that it is completely independent of the election rules. The Analysis system is only interested in the unique identification of the ballot, its orientation and the pen coordinates made by the voter. With specific reference to the Prêt à Voter voting process; the interface could accurately determine the raw data without hardware or software modification while the onion value, could be determined from the attached RFID tag.
- Could we change the front-end technology without having to change the back-end?  
We expect that the front-end technology can be changed or upgraded (to produce a higher resolution for example) without having to change the back-end configuration. Our protocol is only interested in returning preference box identifiers and a ballot ID and such data is abstracted away from individual sensor values.
- Can we extend the protocol (eg. to incorporate user feedback) without having to make major changes to front/back ends?  
Currently the communication from the Dual Vote Interface/Analysis System to the backend is one-way (hence anonymity is fully preserved). In order to give feedback to the voter (via a graphical user interface for example) we need to apply some election rules (pertaining to what constitutes a valid/spoiled vote) to our vote data. We can provide for this feedback while maintaining adherence to our generic design requirement. We put forward two potential approaches:
  1. Process the election rules in the backend and connect the backend directly to the voter feedback device. This would require connectivity to the backend through out the election, which could introduce substantial security concerns (such as a potential breach of anonymity). However the current Dual Vote interface protocol is unchanged and one-way communication between the front and back ends is preserved.
  2. Process the election rules in the Dual Vote Interface / Analysis System by connecting to a data storage device which contains the election rules. This will increase the number of potential outputs from the Interface / Analysis System; an output to the graphical user interface and an input/output to the data storage device (and hence potentially increase coupling). Using this approach requires a minor modification to the Interface Protocol to include a value relating to the spoiled/unspoiled nature of the vote and reduces the risk of weakening voter anonymity.

From our analysis we found that independent and parallel development of the front and backends was facilitated due to the low coupling between the two systems. The Dual Vote raw interface data shows that the interface is 'blind' to the election rules making modification to the interface software

and/or hardware unnecessary. Our analysis of the Dual Vote protocol shows an abstraction away from any technology dependant variables (we only return preference box identifiers). Finally we found that future enhancements to the system pertaining to voter feedback would require only minor changes to our protocol.

## 4. Dual Vote + Prêt à Voter Hybrid System

We created a hybrid Dual Vote / Prêt à Voter system for the purpose of our study. The Dual Vote element consists of the following two components: (i) Dual Vote Interface and (ii) Administration Computer. The Dual Vote Interface allows the voter to cast their vote using the hybrid-pen and optical sensor array. The Administration Computer stores and translates the ballot and pen coordinate data for each vote and allows the poll-worker to activate the interface. The administration computer was not connected to the back end and cannot decrypt the ballot onions. The Prêt à Voter element consists of the following two components: (i) Prêt à Voter Back End and (ii) Ballot Checking Station. The Prêt à Voter back end is responsible for generating the ballot onions and counting of the votes. As we are interested only in the usability of the system we do not report on the cryptographic methods involved in the generation of these onions. The ballot checker consists of an RFID antenna and a visual display unit. This Ballot Checking Station allows any voter to verify a ballot paper by confirming that the onion value relates to the correct ordering of candidates. When the voter places a randomly chosen sample ballot paper on the RFID antenna, the ballot RFID tag is read and its corresponding onion value is retrieved from the checker database. This onion value is then sent to the back end and decrypted so that the correct ordering of the candidates can be displayed on the visual display unit together with the onion value.

### 4.1. Unique Aspects of our Prêt à Voter Implementation

- **Passive Scanning of the Complete Ballot Paper.** In our hybrid system, the ballot paper is passively scanned by the optical sensor grid when the entire ballot paper is placed on the Dual Vote writing surface. Traditionally, Prêt à Voter implementations scan only the right-hand-side of the ballot so that the voting machine cannot learn the original candidate ordering. The Dual Vote interface is only able to determine the optical markers on the underside of the ballot paper and the pen markings made by the voter. The onion value cannot be detected and so it is possible that the entire ballot paper can be placed on the writing surface/sensor grid. In optical pen-based systems which also use optical markers encoded on the ballot paper, it may be possible for the ordering of the candidates to be encoded in some way within the pattern. The Dual Vote optical pattern is visible to the human-eye and so a visual inspection would reveal a fraudulent ballot paper as every optical pattern should be identical regardless of the printed candidate ordering. We acknowledge that considering the uniqueness of our optical pattern, relying on voters to accurately inspect and identify a fraudulent pattern may be impractical. Making such an inspection part of the voting process may introduce further complication unless a simpler way of identifying the pattern (or indeed using a simpler pattern) is investigated.
- **Depositing the Left-Hand-Side of the Ballot into the Ballot Box.** All existing Prêt à Voter implementations require the left-hand-side or candidate side of the ballot paper to be destroyed after separation. This is to ensure that no voter can leave the polling station with the entire ballot paper. The left-hand-side of our ballot paper contains an RFID tag which is detected by the ballot box. If an entire ballot paper is removed from the polling station no RFID value will have

been detected in the ballot box and the vote is not included in the final tally (likewise the vote will not be counted if a voter places the ballot into the ballot box without casting the vote electronically). We acknowledge that the depositing of the left hand side of the ballot, while novel, presents potential issues with regards to compromising the identity of the voter. By simple observation, it is theoretically possible that a fraudulent poll-worker could catch a glimpse of the ballot onion and use this knowledge later on to determine how the voter has voted. Conversely, negating the need for the poll-worker to scan the ballot and return a printed copy to the voter may present some security benefits in this regard. Depending on the construction of the ballot box, it may be possible for a voter to cause the embedded RFID reader to scan the RFD tag and still allow them to remove the ballot paper. In a future design it may be beneficial to use a larger ballot box where the RFID reader is placed deeper within the housing, forcing the voter to deposit the ballot fully before the RFID tag value can be read. Alternatively, the ballot box could be constructed using a shielding material, however this would prevent a transparent design.

- Use of RFID Tags. There has been much recent discussion regarding the use of RFID tags in voting systems (Oren, 2010). In many contexts, RFID tags can introduce significant security concerns and their use in elections should be heavily scrutinized. While we are looking at this implementation of Prêt à Voter purely from a usability perspective, we are aware of the potential security concerns that RFID tags introduce. In retrospective analysis we identified the possibility that a fraudulent poll-worker, using relatively simple technology, could intercept the RFID tag on a voters ballot paper. Later, after the close of the election, the poll-worker could compromise the identity of the voter by locating his RFID tag within the voting database. As a potential solution to this problem, we could implement a special mylar privacy folder (in essence an RF-shielded folder) to prevent such an interception. Additionally we could introduce a mix-net within the software that separates the link between the RFID tag and the vote data. As an alternative to the RFID approach, a QR-code solution may provide extra security as the voter only has to protect this code from being read.
- Lack of Receipt Issuing. In our experiment we purposely wanted to remove the need for printing and scanning (even by the poll-worker) as this adds a further step to the voting process and so increases complexity. We acknowledge however that the need to issue a voter with an official receipt of their vote is of paramount importance in an actual election. We kept the voting process as straightforward as possible while retaining the core functionality of the system to achieve end-to-end verifiability. However further work is merited and is discussed in the conclusions.

## 5. Usability Study

The field study consisted of 88 participants who voted using the Hybrid System. Of these participants 84 completed an SUS and demographic survey after they had voted. Regarding gender; 72.6% of respondents were male, 27.4% were female. The age demographic was: 21.4% of respondents were aged 15-24, 36.9% were 25-44, 35.% were 45-64 and 6% were 65+. The education demographic was; 33.3% had completed second level, 35.7% had a degree, 27.4% had a masters degree and 3.6% had a PhD. Additionally the participants were asked to rate their computer experience on a Likert scale of 1 to 10, a higher value reflected more experience. The average self assessed rating was 6.94.

The ballot paper was a single A4 sheet whose underside is encoded with an optical marker so that the orientation of the ballot paper can be detected by the optical interface. The candidate side of the ballot paper (the left side on Figure 3) has an affixed RFID tag, while the preference box side of the ballot paper (right hand side on Figure 3) contained the ballot onion. A choice from four countries could be selected and the voter was instructed to place an "X" in one of the preference boxes to indicate their favorite country. We acknowledge that the ballot paper was not suitable for a large candidate list. Improvements to Prêt à Voter aiming to address this and other issues have been discussed in other research, for example (Xia et al., 2008).

Before the election four different orderings of the candidate list were determined using a cyclic shift of an original candidate ordering. A database was created on the back end and ballot checking station linking each RFID tag to a particular onion value (relating to a particular ordering of candidates). When the vote data was received from the polling station at the end of the election, the RFID value for each vote was looked up in this database so the corresponding onion value could be decrypted revealing the ordering of the candidates. Neither the administration computer nor the Dual Vote interface at the polling station knew the assignment of RFID tags to onion values or could decrypt the onions. The voting process is described as follows:

- The voter presented a student identity card or drivers license in order to be issued with a randomly selected ballot paper.
- The ballot paper was passed over a contactless RFID reader which made the voting machine ready for use.
- The voter was instructed to place the ballot paper on the Dual Vote writing surface and cast their vote with the electronic pen.
- The voter placed their ballot paper on the writing surface and marked their preference using the hybrid ink/electronic pen. After the voter had completed voting, they separated the ballot paper into two halves of equal size by tearing along the perforation. This separated the candidate list from the preference boxes.
- The voter deposited the candidate side of the ballot paper into the Dual Vote ballot box. The RFID reader within the ballot box detected the RFID tag on the ballot paper and closes the voting session. If the voter did not complete this step, their vote is not counted.
- At the end of the election, the voter could check that their ballot onion had appeared on the web bulletin board (the RFID value is not displayed).

When the voter placed his ballot paper on the writing surface, a binary image of the ballot paper was generated based on the position of the optical markers. All pen strokes made by the hybrid pen and digitizer were overlaid on this image. Therefore for each voting session the following data was recorded: (i) Pen coordinates, (ii) Paper orientation coordinates and (iii) RFID tag value. In the event that the RFID reader within the ballot failed to read the RFID tag on the ballot paper, we required that each ballot paper is manually passed over the contactless RFID reader by the poll-worker at the end of the election. In retrospect, it may have been beneficial to provide a feedback mechanism to the voter informing them that their ballot paper was successfully read).

The SUS survey produced a mean result for the Hybrid Dual Vote / Prêt à Voter system of 84.85 which indicates that the usability of the system is relatively high for e-Voting Systems. (Everett, et al., 2008) (Winckler, et al., 2009). An earlier Dual Vote usability study showed an SUS score of 86.1



which is only slightly higher than the Dual Vote / Prêt à Voter hybrid. From a usability perspective, the only difference between the earlier study and the hybrid study was the requirement that the voter separate the ballot paper after voting and deposit the candidate portion of the ballot paper into the ballot box. The action of depositing a ballot paper into a ballot box is also likely to be familiar to our participants, as this action is also required when voting in real elections. The action of separating the ballot paper along the perforation after voting is completely unfamiliar to our participants in the context of voting. This unfamiliar action, which is at the core of the Prêt à Voter voting procedure seemed to result in only a minimal change to our previous SUS score.

## 6. Conclusions and Future Work

In this paper we present a subjective usability evaluation of a hybrid Dual Vote/Prêt à Voter system which achieves a high SUS score for eVoting systems. We also demonstrate the generic nature of our interface through the definition of an interface protocol. Our hybrid system differed from previous Prêt à Voter implementations by negating the need to actively scan the ballot paper through the use of our novel optical sensor array. Additionally the voter was required to deposit the candidate side of the ballot paper into a ballot box containing an RFID reader which detected the corresponding RFID tag on the ballot. This change negated the need for the poll-worker or voter to shred the ballot. These two adjustments to the traditional Prêt à Voter procedure would appear to simplify the process for both the voter and poll-worker. By comparison to the traditional method of casting a vote on pen and paper, the only new action to be performed by the voter is the separation of the ballot paper along the perforation. The 'separation' action caused only a minimal decrease in the SUS score of the system when compared to an earlier Dual Vote usability study. We showed that the Dual Vote system is generic in nature which is capable of being used in any election type where the candidate list is fixed. We successfully demonstrate how the Dual Vote front end was not modified in any way in order to plug into the Prêt à Voter back end. This is a significant finding because we were able to demonstrate that a generic system, whose instantiation is relatively simple, achieves a resulting usability which is similar to the previous implementation. Additionally, we demonstrate that with only little extra development (to plug together front and back ends) we were able to "guarantee" similar usability. A limitation of our study was that the voter did not receive feedback as to the state of their vote (spoiled/unspoiled), however we demonstrate that voter feedback may be implemented with only minor changes to our protocol. Additionally, the voter was not issued with a printed receipt of their vote and simply retained the right-side of the ballot paper. In theory, a fraudulent voter could create a fraudulent receipt by retaining the same ballot onion but changing the candidate selection. The ballot checking station presents a further issue due to the sensitive nature of the data travelling from the checker to the backend. Future work needs to address these issues and include the facilitation of a signed or stamped receipt.



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# E-Participation

(peer-reviewed)





# eParticipation that works

*Evidence from the old Europe*

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**Abstract:** *This paper collects some evidence from a running EU-funded project, aimed at the localisation and institutionalisation of two eParticipatory tools, DEMOS-Plan and the Electronic Town Meeting, within real public administration processes. The independent or combined usage of the two tools has been tested in several regions of Europe, from Ulster (UK) to Sicily (Italy), from Turku (Finland) to Larnaca (Cyprus). Deployment may lead to a number of interesting applications for the European public authorities, such as: i) building up a cost effective ICT infrastructure that enables the permanent or occasional consultation of remotely and sparsely located citizens and stakeholders, ii) gradually migrating the whole administrative system related to spatial planning towards full digitalisation of the “compulsory” exchanges between government agencies, local stakeholders and the general public, and iii) making the two above applications practically interoperable to each other and across different EU Member States.*

**Keywords:** eParticipation, Spatial Planning, Strategic Environmental Assessment, Electronic Town Meeting, DEMOS-Plan

**Acknowledgement:** This paper has been prepared in the context of a EU-funded project (PARTERRE - [www.parterre-project.eu](http://www.parterre-project.eu)), belonging to the CIP (ICT-PSP) eParticipation cluster. However, none of the statements made here involve or commit any European institution.

**A**mong the many lessons learnt from the eParticipation Preparatory Action projects funded by the European Commission in 2007-2009 one is particularly relevant, referring to the long-term sustainability of the trials undergone: namely, a permanent adoption of electronic tools for civic participation by the public sector organisations involved in testbeds or showcases is more likely to occur when there is a convincing business model showing up financial savings or at least organisational advantages in a clear way. For instance, the MOMENTUM Coordination Action, commenting on the first two project “waves”, concluded its White Paper by highlighting “that the eParticipation research field would need some coordinated steering, so that the same experiments are not revisited, sometimes overlooking developments in relevant projects. This also involves the synchronised interaction with stakeholders at various levels (local councils, national or European Parliaments), so that a coherent message is conveyed to the decision makers but also to the final users” (Charalabidis et al., 2008). Very few examples exist at the moment – mostly from the UK (Ferro and Molinari 2009, p. 7) – where the support of “business case builders” helps governments decide whether to undertake investments on eParticipation solutions or not. This paper makes the point that a necessary precondition for any business model to “square” is the formal integration of (non electronic)

participation in the legal or regulatory framework the targeted organisation belongs to (Colombo et al., 2011). This is particularly the case of environmental assessment (at strategic level) and spatial planning (at operational level), where EU Directives and/or National legislations exist that establish participation as a compulsory requirement for a great deal of policy processes and administrative procedures – mostly involving Regional and City councils (Concilio and Molinari, 2011). The following picture, taken from the MOMENTUM website, testifies how 9 out of the 20 Preparatory Action projects actually dealt with the topic of environment as their core discussion theme.

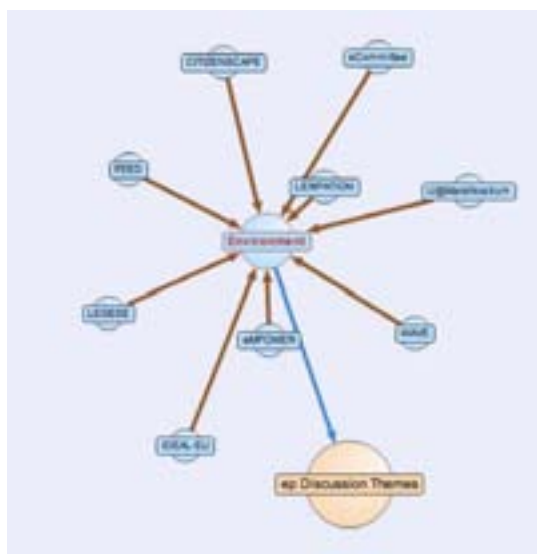


Figure 1: Environment as an eParticipation Discussion Theme (from: <http://www.ep-momentum.eu>)

The structure of this paper is the following: Section 1 explores the commonalities of the EU and Member States legal framework under the perspective of spatial planning and participation, including the Territorial Agenda, the ESDP (European Spatial Development Perspective) and the SEA (Strategic Environmental Assessment) vision and key principles. Section 2 examines two successful antecedents of participation in Germany and in Italy, while Section 3 briefly describes the two technology tools that have been deployed in PARTERRE – a EU funded project belonging to the CIP (ICT-PSP) eParticipation cluster. Section 4 presents some evidence from the pilots held between June 2011 and March 2012 in six EU regions, including Tuscany (IT), Hamburg (DE), Ulster (UK), Sicily (IT), Turku (FI) and Larnaca (CY). Section 5 concludes the paper by drawing some preliminary lessons from the work done so far.

## 1. Legal Framework

In all EU countries, participation in spatial planning is a compulsory legal requirement. Most laws on regional and urban planning require some degree of civic consultation prior to final decisions, because all spatial plans concern and possibly affect a variety of stakeholders, who often hold conflicting interests. These include for instance, other administrative units of the same government

entity or different public sector agencies that have to be mandatorily consulted, whenever key aspects like nature conservation, protection of historical monuments, or the supply of services of economic interest – such as utilities and transport – are concerned. Quite often, representatives of the civil society (such as environmental NGOs) have to be consulted as well. Finally, most laws on regional and urban planning provide for consultation of the general public too. At some stage of the process, citizens must be formally invited to formulate their concerns or objections to the spatial plans, and the deliberative council is obliged to consider these arguments and discuss them in public meetings. In the case of rejection, there are additional rights of appeal to the administrative courts. On the other hand, if some urban planning decisions are taken without these formal stages of participation, courts may annul them.

These common traits are preserved across the five categories of European planning systems that were first identified by Newman and Thornley (1996) as a reflection of country level differences in political and social histories, economic conditions, traditions of law and governance, land tenure, resource endowments etc. (see next Table).

Table 1: Legal Frameworks of Spatial Planning in Europe

	British Family (CY; IE; MT; UK...)	Napoleonic Family (BE; FR; IT; LU; NE; PT; SP...)	Germanic Family (AT; CH; DE; SL...)	East European Family (CZ; HU; PL; SK...)	Scandinavian Family (DK; FI; IS; NO; SE...)
National Tier	Framework Legislation on Spatial Planning Reception of EU Directives (for MS) SEA on big projects				
	Direction of local planning	(FR: Direction of local planning)			
Regional Tier		Legislation (not FR)	Legislation	Planning and/or Development	
	Development	Planning	Planning		Planning
Local Tier	Master Plan Deliberation / Amendment / Implementation SEA on small projects				
	Development				

Another important arena for cooperation between governments and stakeholders in the area of spatial planning is the *Territorial Agenda of the European Union*, as agreed on the occasion of the Informal Meeting on Urban Development and Territorial Cohesion held in Leipzig on 24-25 May 2007, during the German Presidency of the EU. The Territorial Agenda is a policy framework set forth by the Ministers responsible for spatial planning and development, jointly with the European Commission. It aims to support the implementation of the Lisbon and the Gothenburg strategies (now integrated into the DAE, Digital Agenda for Europe) as complementary ways to approach the construction of a truly original European model of sustainable development and social progress, based on strengthening the territorial cohesion of EU cities and regions.

The concept of territorial cohesion builds upon the ESDP – *European Spatial Development Perspective* – which was agreed at the informal Ministerial meeting of Potsdam, on 10-11 May 1999, as well as the Guiding Principles for Sustainable Spatial Development of the European Continent,



approved at the 12<sup>th</sup> session of the European Conference of Ministers Responsible for Regional Planning, held in Hannover, on 7-8 September 2000. These policy documents add to the concept of economic and social cohesion by translating the fundamental EU goal of a balanced and sustainable development into a territorial setting.

The logic of territorial development policies is that economic growth is partly based on the organisation of space. This in turn is shaped by a range of policies at all levels of government, as well as by a number of social trends, technological developments and market forces. Some of the mainstream “vertical” (economic or sectorial) policies may have unintended spatial impacts, which can compromise territorial development. Policies with a territorial focus, not only counteract these effects, but most crucially add more value by integrating the economic, social and environmental dimensions at cross-sectorial (“horizontal”, or transversal) and “place-based” levels (Barca, 2009).

Another important element in the EU Territorial Agenda is the cooperation of various sectors of activity and levels of governance, such as public private partnerships and stakeholders from civil society and third sector organisations, which taken together, play an important role in growth and development processes. Thus, territorial development policies are also an important instrument for strengthening the social capital of targeted communities.

In practical terms, this means:

- To focus regional and national development policies on better exploiting the potential of Europe’s geographical and cultural diversity as social capital;
- To promote trans-European synergies, cooperation and clusters of competitive and innovative activities, also respecting the conservation of natural and environmental assets;
- To support the coherence of EU policies having a territorial impact (e.g. transport corridors, natural interest zones etc.);
- And – most important for our considerations – to introduce or reinforce participatory processes at all levels of planning.

As its main instruments, the ESDP identified two tools, both in the active sphere of the ERDF – the European Regional Development Fund. The first is ESPON, the European Spatial Planning Observation Network ([www.espon.eu](http://www.espon.eu)), which mainly connects clusters of University Planning Departments at Member State level and has established the link between the ESDP and national planning priorities. ESPON is, however, a mere Observatory; it does not intervene in planning decisions. The second tool was the INTERREG III programme (2000-2006), which has been in large part utilised to create a link between the EU-wide principles expressed in the ESDP and the actual planning instruments and procedures that take place on the regional level downwards. Here, significant work and exchange of experience has taken place that directly influenced the planning processes throughout Europe.

As the range of experiences in INTERREG III projects demonstrated, a number of planning tools and instruments can be used as entry points for the introduction of ICT-based services to improve the efficiency and effectiveness of the participatory processes. One instrument however stands out as particularly appropriate for experimentation: the *Strategic Environmental Assessment* (SEA). This was introduced through the EU Directive 2003/35/EC and has by now been adopted by all Member States. The ultimate goal of that Directive is crystallized in the preamble, which states: *“Effective public participation in the taking of decisions enables the public to express, and the decision maker to take account of, opinions and concerns which may be relevant to those decisions, thereby increasing the*

*accountability and transparency of the decision making process and contributing to public awareness of environmental issues and support for the decisions taken".* The SEA was originally conceived of as (and still often is) a broadening of the EIA (Environmental Impact Assessment), but the simple fact that it is "strategic" broadens its scope into the territorial and spatial dimension. The SEA has therefore become *de facto* means to introduce participatory processes into normal planning procedures, since all plans are subject to it. The SEA then becomes the evaluation function that transforms traditional planning into iterative and interactive processes, as well as making a procedural and methodological link with the other kinds of issues for which it is mandatory, such as approving a power plant or a wind farm.

## 2. Successful Antecedents

An interesting implementation of the SEA participatory approach, showing its advantages for local territorial development, comes from the Region of Tuscany. The village of Montaione is located in the heart of picturesque Tuscany, close to the historical cities of Florence, Siena and Pisa. In 2007, the German multinational company TUI AG bought a plot of land of eleven square kilometres on which there are several old buildings, a medieval castle, a hotel, an 18-hole golf course as well as a few agricultural areas. "Tenuta di Castelfalfi S.p.A.", a limited company in which TUI had a shareholding of 85% and the previous Italian owner 15%, was established to put into effect the biggest tourism project in Tuscany as well as in the company's history. As the project could provide significant development and employment opportunities to the territory but at the same time had a strong impact on landscape, the Municipality of Montaione decided, before approving any type of urban, spatial and building modification, to launch a broad consultation allowing all interested citizens to express their views on the initiative. The feasibility study needed to prepare the debate was funded by TUI AG, which also contributed financially to the consultation sessions, involving the citizens and stakeholder representatives of the local community as well as some domain experts (architects and planners). As a result of the public debate, several original arguments for change were raised, which contributed to improving the environmental sustainability and also the economic feasibility of the proposed project and were handed out to the company for completion and integration of its initial business plan.

Another set of advantages comes from the migration from traditional to electronic management of spatial planning activities, particularly at local level (Luehrs et al., 2009). Usually, the workload for public officials is very high in every planning process. In the City of Hamburg, for example, the average length of a planning process is 2.3 years and more than 6,000 sheets of paper are sent out to the involved parties for each consultation round required. Comments sent from public agencies and citizens reach the government in many different formats (such as letters, e-mail, telephone calls, etc.) and it is a mandatory task to organise this fragmented flow of information for further evaluation by elected representatives. Use of electronic tools can drastically improve the efficiency and effectiveness of spatial planning, by reducing paperwork and bringing consistency into the various streams of information. The Hamburg case showed that, even though this was an early attempt and the involved parties had to get used to the system, the costs for public administration were considerably reduced. In addition to the gains in efficiency, the quality of information that is provided to and by the participants can be made considerably higher using electronic tools. In particular, the possibility of incorporating GIS solutions into the system enables participants to

better view the likely implications of new/amended plans and to link geographical data with the comments to be sent.

The two examples presented above have been furthered in the pilots of PARTERRE to support the “embryo” of a business model that is being validated for a pan-European service envisaged by the combination of two eParticipatory tools:

1. The Town Meeting, a method of structured involvement in local government practised in the U.S. region of New England since colonial times. Then, an entire civic community was invited by government officials to gather in a public place to formulate suggestions or provide feedback on specific policy issues. In its modern version – the Electronic Town Meeting (Molinari 2010, Garramone and Aicardi 2011) – that has been methodologically refined and technically developed by the Italian Region of Tuscany, the adoption of ICT enables citizens to discuss and formulate informed judgements to impact on strategic or controversial issues in a way that is immediately intelligible to policy makers;
2. DEMOS-Plan, designed and first implemented in the German City of Hamburg, with the aim to encourage a shared management of the spatial planning process amongst all the competent authorities and a huge reduction in the amount of time and money implied by the request, collection and handling of formal and informal comments and observations to the published plan draft.

The project moves on from the consideration that spatial planning and strategic environmental assessment are in the position to achieve a paradigm shift in the way electronic participation and social capacity building are currently practised in Europe. This for at least three good reasons:

- a. Their legal framework is completely defined at EU level, based on a reasonable distribution of competences across Member States, Regional and local institutions and on a sustainable combination of compulsory and optional participation procedures;
- b. The migration from “offline” to “online” participation can be supported by a sound business model, showing up the efficiency and quality advantages usually advocated by supporters of electronic democracy for other key processes of public administration;
- c. A multitude of successful trials exist in this domain – most of which are funded by the EC under the ICT Framework Programmes, INTERREG III or the eParticipation Preparatory Action – which have demonstrated the above advantages, not only on the political side, but also from a financial perspective.

While some issues remain unsolved, such as the one of building up a single data infrastructure for accessing, exchanging, sharing, and using interoperable quality data across the various tiers of EU public administration, the above scenario seems mature enough to justify the deployment of a pan-European service, which would be the first one reaching financial sustainability, in support of the formal and informal participation requirements of spatial planning, strategic programming and environmental assessment.

### 3. Technologies deployed

This section briefly describes the tools utilised within the PARTERRE project trials.

### 3.1. DEMOS-Plan

DEMOS-Plan is an ICT tool for running online consultations on spatial planning. It was originally developed by TuTech Innovation GmbH within the City of Hamburg to realise efficiency savings in conducting consultations on local plans, where Regional stakeholders and the public have to be involved as set down by the Baugesetzbuch, the federal planning law. By largely avoiding the use of paper documents, the system saves on the printing, postage and administrative costs incurred through when inputting a large volume of information into a computer system.

Participants in a consultation can submit their comments on any particular paragraph within the electronic document describing the plan and also link their comments to a particular location on a map of the affected area, which can be overlaid with a cartographic representation of the plan. To enable them to make submissions more effectively, users can also overlay their own mapping material for reference. The consultation results into a table containing all the submissions that participants made in the course of a consultation. The table is then used by the planning authority for all following processes and decisions concerning the plan. This is also a significant advantage when adopting DEMOS-Plan, because it automates the process of collating submissions, enabling them to be printed and displayed for future internal use.

DEMOS-Plan is based on the DEMOS eParticipation platform, which TuTech developed after an FP5 ICT R&D project to carry out public consultations – some of which were done in the spatial planning domain within the scope of the LexiPation Preparatory Action project (in 2007). Then the platform was further developed to take benefit from its capacity of embedding geodata sets and spatial maps, as well as integrating online stakeholders consultation in the planning process. These consultations are normally conducted by sending printed copies of the proposed plan in text and cartographic form by post and inviting comments from public stakeholder organisations. The contributions are also sent by post, which implies that they then have to be collated and entered manually into a computer system.

The resulting eParticipatory process can be described as in the next Figure:



Figure 2: Flow chart showing the DEMOS-Plan process (from: PARTERRE Deliverable D3.1)

Recently, the Federal State of Schleswig-Holstein conducted a pilot consultation in Bad Oldesloe with DEMOS-Plan and subsequently decided to roll it out across the whole region in order to realise the inherent efficiency savings. The experience of Eimsbüttel and Lokstedt, two Hamburg districts, showed that using the system can cut printing and management costs up to fifty per cent.

### 3.2. Electronic Town Meeting

The Town Meeting was “invented” about four hundred years ago in what is now the United States of America, as an expression of direct democracy, or a way to involve citizens in a wide debate on the community’s needs and policies through the organization of public meetings. In the last thirty years, this type of events, currently recognized as standard practice of deliberative democracy, has evolved into the electronic Town Meeting (e-TM) using a combination of innovative technologies, which make it possible to bring together many people during a single day into a given venue and ensure that they may express themselves on problems of general interest.

The e-TM involves a series of activities, which develop in parallel but are closely linked with one another. The overall organisation of the event is entrusted to a central facilitator, who tells the participants what steps they have to follow and indicates when guests may intervene to break the discussion. Participants debate in small groups at round tables, each with a local facilitator, whose task it is to monitor the discussion and guarantee that it takes place in a smooth and democratic manner. On every table there is a laptop computer connected to a central server, so that all the participants’ comments can be instantly recorded during the discussion. The observations entered in the computers are sent, through a wireless connection, to the Theme Team, a group of persons playing the sensitive task of reading through all the comments arriving from the various tables, identifying the common themes as well as the most stimulating intuitions and minority opinions, and finally condensing them all in a summary text. The summaries produced by the Theme Team are presented to the whole assembly, accompanied by direct quotations from the participants. This material forms the basis for the formulation of questions (or policy propositions) to be submitted to the public’s attention, on which the participants can express themselves individually by voting in real time on polling keypads. At the end of the day, an instant report is drawn up, which every participant can bring home to ensure the impossibility of subsequent manipulation. It summarizes the aims of participation, the process undertaken and the main results of the debate, including a ranking of policy priorities as resulted from the voting sessions.



Figure 3: Electronic Town Meeting: Information Workflow (from: PARTERRE Deliverable D3.1)

The e-TM combines the live aspects of small-scale discussion with the benefits of ICT, in two main respects: it allows management and transmission of the table discussion minutes to the plenary assembly for a complete feedback and a fast survey of individual participants' opinions by means of the instant polling system, the results of which are immediately intelligible to policy makers. Moreover, the v-TM or "virtual Town Meeting" upgrade (Sielman, 2010) allows reaching out and integrating into the live discussion an additional number of users, remotely connected by a special audio/video conference system.

In the e-TM, there are four principal work phases, all aimed at supporting and enlarging the people's focus and involvement in the topics under discussion:

- A phase of information and in-depth investigation, enabling the participants to gain confidence with the discussion themes, by consulting a specific "Discussion Guide";
- A phase of free debate in small groups (tables), allowing reciprocal listening and comparison of the different opinions, without the need to come up to shared or majority standpoints;
- A reflection phase, during which the results of group work (collected through the minutes and aggregated by the Theme Team) are sent back to the whole assembly in summarised form;
- A survey phase, in which the participants are asked to vote individually in response to various questions generated after the key points emerged from the debate.

The e-TM can be effectively used every time it is important to actively involve a large number of citizens in the analysis of a certain issue, or whenever one needs to investigate the public's opinion on the possible solutions to a given problem, or measure the acceptance of alternative strategies to be worked out in the public interest. A well-known example is the use of this technique during the "Listening to the City" process, held in New York City in July 2002, which involved about 43,000 people into a live discussion about the future of the Lower Manhattan area, after the 9/11 event. However, there many more examples of the use of this technique on a lower scale - both in the United States and in Italy - which have helped the identification of shared priorities in (e.g.) health and social care policies, socio-economic development, urban security, and other domains.

#### 4. Evidence from eParticipatory Pilots

During the PARTERRE project, the two tools outlined above have been tested - either jointly or separately - in the following regions/countries of Europe.

**Table 2: Overview of the PARTERRE pilots**

Pilot Location	Thematic Content	Tools adopted
Regional Government of Tuscany, Florence (Italy)	(Jun & Dec 2011) Integration of the Regional stakeholders and a representation of citizens in the design of Regional policies within the following domains: a) Sustainable and competitive tourism (90 participants) b) Solid waste management, storage and differentiation (70 participants)	Electronic Town Meeting
The Bergedorf District in the City of Hamburg (Germany)	(Aug-Sep 2011) Distributed management of a spatial plan amendment session involving 72 stakeholders. Outcomes: a) 35 comments received (48,61%), of which - 23 online (65,71%) - 10 by email (28,57%)	DEMOS-Plan (integrated into the Hamburg IT infrastructure and geodata)

	<ul style="list-style-type: none"> <li>- 2 by post (5,71%)</li> <li>b) 122 hits on the home page of the pilot</li> <li>c) Positive feedback from the external users</li> <li>d) Predominantly positive feedback of the town planner</li> <li>e) Support in the processing of comments/contributions</li> <li>f) Potential savings from dematerialisation:               <ul style="list-style-type: none"> <li>- For 115 plans DIN A0 and 11.500 copies DIN A4</li> <li>- Printing costs: 1.500 €</li> <li>- Plus sorting and postage costs</li> </ul> </li> </ul>	
University of Ulster, Belfast (UK)	(Aug 2011-Jan 2012) Four consecutive trials on the following topics: <ul style="list-style-type: none"> <li>a) Provision of a roadmap for the AHP health and social well-being policies in Northern Ireland (90 participants)</li> <li>b) Development of a Regional response to the UK Cabinet Office's consultation on Open Data (50 participants)</li> <li>c) Exploration of how local businesses can be supported in their innovation activities using partnerships models with academic and government stakeholders including universities and development bodies (60 participants)</li> <li>d) Engagement of stakeholders in North Belfast in a civic debate on how to address issues related to unemployment in local community (80 participants)</li> </ul>	Electronic Town Meeting
ANETEL (Larnaca District Development Agency) and the Voroklini Community Council (Cyprus)	(Sep 2011-Feb 2012) Two consecutive trials on the following topics: <ul style="list-style-type: none"> <li>a) Stakeholders consultation on the Draft Rural Development Plan for the District of Larnaca (20 comments in DEMOS-Plan)</li> <li>b) Public debate on the open planning issues for the communitarian progress of the Voroklini Community Council (50 participants)</li> </ul>	DEMOS-Plan & Electronic Town Meeting
University of Palermo (Italy)	(Jun 2011-Feb 2012) A shared vision of development for the heritage site known as "Maredolce Castle" and the whole second district (of "Brancaccio") in the City of Palermo (80 participants)	Electronic Town Meeting
Turku University of Applied Sciences (Finland)	(Jan 2011-Mar 2012) Three trials on the following topics: <ul style="list-style-type: none"> <li>a) Spatial planning for a Business Studies Academy to be located in the Salo campus of the Turku University of Applied Sciences (30 participants)</li> <li>b) Actions to improve efficiency in the people's use of energy in the Hakastaro building (46 participants, including DEMOS-Plan)</li> <li>c) Development and Transport policies in the Turku Archipelago (Korpo and Houtskär communities, 50 participants)</li> </ul>	DEMOS-Plan & Electronic Town Meeting

Each pilot within its specificity has mobilised a full scope of relevant actors (mostly between 50 and 100 people), both directly as attendees and indirectly through local partnerships, including politicians, citizens, civil society groups and the business sector. Contentwise, the eParticipatory trials were characterised by their adherence to the legal and/or policy framework in a variety of (spatial and non spatial) planning domains, ranging from energy and solid waste management to public health and well being, from rural development to public transport, etc. In every case the discussion topic was negotiated upfront by the local partner in charge of the PARTERRE project with one or more public sector authorities holding the legal competence to take decisions on that matter. This because it was felt impractical to run eParticipatory exercises in a community without the prior consensus of the policy makers involved. Given the experimental nature of the trials, which were run for the first time in all regions but Tuscany and Hamburg and the emphasis given to technology rather than content evaluation, it has to be seen as a very positive outcome that most thematic domains actually made reference to an official proceeding (for example, the formation or



revision of a spatial planning or regional programming act). Another sign of positive impact has been the extremely high satisfaction rates of the e-TM attendees, collected by means of appropriate questionnaires – ranging between 70% and 90% of the participants in all trials. This adds value to the political reputation of the government agency (directly or indirectly) responsible for the trial.

Overall, the PARTERRE pilots have proven successful in winning the attention of decision-makers for their capacity to deal with the following (totally or partly) unfulfilled needs of the European public sector:

- Identification/Prioritisation of policy issues and “crowdsourcing” of topics/contributions from the general public (Surowiecki, 2004);
- Assessment of policy/legislative acts compliance with citizens and stakeholders priorities, upon deliberation of new plans, laws or regulations (Innes and Booher, 2004; Cap Gemini and TNO, 2004);
- Voluntary or compulsory consultations in the context of environmental assessment, strategic planning, operational implementations or amendments of existing plans (as outlined above);
- Dematerialisation of maps/texts in order to reduce workload, save money/time etc. (as shown in Section 3 for the German case).

The following table articulates the four groups of needs and matches them with the appropriate pilots as described above.

**Table 3: Needs analysis of the PARTERRE pilots**

Envisaged needs	Issues identification and prioritisation	Policy/legislative assessment	Citizens/Stakeholders consultation	Dematerialisation of supporting evidence
<i>Political impulse</i>	Discretionary	Depending on the legal framework	Mandatory	Depending on the costs/benefits
<i>No. of required participants</i>	Medium	Medium	High	Low
<i>Nature of G2C collaboration</i>	Informal	Informal	Formal	Formal
<i>Supplementary aim(s)</i>	Provide tailored documentation to support an informed debate within the public opinion	Pre-test the feasibility of policy/legislative decisions with a representative sample of the population	- “No citizen left behind” (universal consultation) - Interactivity with stakeholders / civil society organisations	Speedy and handy management of proposed and approved changes in norms, rules, regulations
<i>Tools used to the purpose</i>	- Electronic Town Meeting	- Electronic Town Meeting	- DEMOS-Plan <b>and/or</b> - Electronic Town Meeting	- DEMOS-Plan
<i>Reusability of results</i>	Medium (depending on political will)	High	High	High (immediate)
<i>Examples of PARTERRE pilot locations</i>	Ulster, UK Sicily, IT Larnaca, CY Turku, FI	Ulster, UK Tuscany, IT	Hamburg, DE Larnaca, CY Turku, FI	Hamburg, DE Larnaca, CY



Most of the above pilots have been declined at Regional and local (City or Municipality) level, reflecting the current EU27 Member State scenario of spatial and socio-economic planning, which is characterised by two clear trends:

- Devolution of planning power from the State level to the “2<sup>nd</sup> tier” of public administration (i.e. Regions, Counties or Districts), particularly as far as the framework instruments are concerned;
- Devolution of regulatory autonomy from the Regional/County/District level to the “1<sup>st</sup> tier” of public administration (City or Municipality), in compliance with the framework instruments established.

## 5. Discussion and Conclusions

With the global crisis now forcing national and local governments towards unpopular budget decisions, consultation (even, participation) of citizens and stakeholders is even less practised as a policy support tool than it recently used to. This may lead to dissipating a patrimony of knowledge deriving from a decade of more or less successful eParticipation experiments, none of which has yet shown practical continuity over time. Yet the ending age of one-off showcases may do benefit to direct democracy prospects, leaving room to a more reasoned (and reasonable) approach that is weighing the financial costs against the efficiency (and reputational) gains of ICT integration in public decision making.

In order to test this approach, a number of Regional pilots have been established in the context of the PARTERRE project. While a broader and more encompassing evaluation effort is now still under way, some preliminary evidence can be collected and presented hereafter.

### 5.1. It’s a long way to institutionalising local eParticipation

With a few exceptions — limited to the Regional Government of Tuscany and the City of Hamburg — the other public authorities involved in the pilots were using the proposed eParticipatory tool(s) for the first time. This led to several known and unexpected issues emerged during trial design, and only partly offset by the external funding brought into by the project itself, for instance:

- Delays in the selection/definition of the most suitable topics of discussion;
- Slow-paced formation of the local communities of interest;
- Repeated stops & go’s to the overall process, in dependence of local “political” conditions;
- Limited attendance of public (despite the high satisfaction rates) to the specific pilot events;
- Difficulty in identifying the “perimeter” of eParticipation impact.

These results are coherent with those of a similar study by Andrzejewska et al. (2007), referring to a geo-discussion panel in Poland, whereby a new legal framework requiring public discussions to be held on spatial (and strategic) plans does not recommend specific methods and tools to facilitate these consultations, which makes decision-makers reluctant or unwilling to organise them. Again, our results seem to call for a legislative intervention, to be held at pan-European level, as the most appropriate means to institutionalise ICT innovation in participation (Molinari 2011), or to enforce existing and partly overlooked EC directives in the spatial domain (Concilio and Molinari 2011).

## 5.2. Living Labs as eParticipation intermediaries

In this context, an important task has been performed by some local “intermediary organisations”, represented in the context of PARTERRE by territorial Living Labs (Marsh 2008), which have not only ensured a unitary guide and consistency to the whole pilot deployment process but also helped in both creating the necessary framework of collaboration and identifying the most agreed-upon (and politically correct) discussion topics. As a matter of fact, all partners in the consortium were active members of the European Network of Living Labs (ENoLL, [www.openlivinglabs.eu](http://www.openlivinglabs.eu)).

With few exceptions, these Living Labs were not necessarily owners of (or even experts in) the technological and/or methodological tools implied by the project aims. Thus, a preliminary stage of training was needed to ensure proper elicitation and alignment of technical competencies. On the other hand, the capacity of Living Labs to mobilise citizens and stakeholders has proven to be successful in minimising the organisational burden of the PARTERRE pilots. Moreover, in some cases, the tool(s) implementation has been so rewarding for the Living Lab’s staff and managers, that they will be permanently added to their service offer, knowledge, and skills.

Finally, during the pilot assessment stage, it turned out that these intermediary organisations could also become the “local allies” needed to transform the current experiments into a really pan-European business, given their relative ease in approaching the potential customers of DEMOS-Plan and the e-TM.

## 5.3. Preliminary assessment of efficiency and performance

Delivered as pre-configured services, the PARTERRE tools must be evaluated against other generic participation instruments, both electronic (such as forums and social networks) and non-electronic (such as public meetings etc.), like the next table demonstrates. Unexpectedly, the e-TM (also by its virtual upgrade, the v-TM) looks better suited to cases where the public sector authority wishes to address a huge number of citizens and stakeholders, a strategy that is also viable to some extent by using DEMOS-Plan, if one keeps in mind the compulsory nature of the underlying consultation. In any case, compared to other instruments of civic participation, both tools look more or at least as efficient in terms of time-lag to start-up of operations and time-lag to receiving structured feedback from the attendees. Also, as a result of the higher or comparable number of active participants, the average costs of setup and management of these solutions seems lower or much lower.

**Table 4: Comparative performance of various participation instruments**

Instruments <i>Envisaged goals</i>	Non-electronic participation tools	Generic forums and social networks	DEMOS-Plan	e-TM (v-TM)
<i>Viability at “1<sup>st</sup> tier” PA (City level)</i>	Medium	Low	High	Medium
<i>Viability at “2<sup>nd</sup> tier” PA (Region)</i>	Low	Low	Medium	High
<i>Number of reached stakeholders</i>	Medium (Low)	Medium (Low)	High	High
<i>Number of reached citizens</i>	Low	Medium	Low	High
<i>Lag time to start-up of participation</i>	Medium	Low	Low	Medium

<i>Possibility to select target users</i>	Medium	Low	Low	High
<i>Political gains and visibility</i>	Medium	Low	Medium	High
<i>Cost of activation (per user)</i>	High	Low	Medium	Medium
<i>Cost of management (per user)</i>	Medium	Low (Very Low)	Medium	Low (Very Low)
<i>Lag time before structured feedback</i>	High	High	Medium	Low

In conclusion, the independent or combined usage of the two PARTERRE tools may lead European public authorities to: i) building up a cost effective ICT infrastructure that enables the permanent or occasional consultation of remotely and sparsely located citizens and stakeholders, ii) gradually migrating the spatial planning system towards full digitalisation of the “compulsory” exchanges between government agencies, local stakeholders and the general public, and iii) making the two above applications practically interoperable to each other and across different EU Member States.

#### 5.4. Analysis of integration potential

Although independent, both PARTERRE tools are compliant with open data exchange standards and could be integrated in terms of:

- Working with a common user community;
- Belonging to the same spatial planning or strategic assessment context and process(es);
- Exchanging common sources of content, e.g. reports, summaries, results;
- Taking mutual benefit from the use of specific clients like the WebGIS interface.

Further to that, a “conceptual integration” is required to switch from one tool to the other, e.g. to apply the e-TM as instrument in a DEMOS-Plan governed interactive process. To this purpose, a “workflow management layer” has been created within the Hamburg City pilot, which enables to define when and where the most appropriate tools can be used in a given participatory process.

#### 5.5. Further harmonisation requirements

However, the provision of a pan-European service to planning authorities is also prevented by the lack of a common infrastructure between and within Member States. In fact, the EU scenario of spatial information management is far from being homogeneous at the moment. The situation sees high fragmentation of infrastructures, gaps in availability of geographical information, duplicate collection efforts and problems in identifying, accessing or using the data that is available – both at national and sub-national level. As a result of these issues, there is very little incentive to migrate land use design towards an effective dematerialisation, as well as the related participation actions.

In 2007, the European Commission’s INSPIRE Directive, laid down general as well as technical rules to set up a pan-European dimension for the management of spatial information. INSPIRE is based on an approach, fully compliant with national eGovernment plans, to support the creation of a common information basin and a dynamic and shared toolset of implementation rules, right in

the fields of environmental protection and spatial planning, which are adopted through a technical committee representing all EU countries. This framework should ensure a higher integration level of spatial data than that of the national information systems, based on the infrastructures for spatial information established and operated by Member States, so as to make this information available for the formulation, implementation and evaluation of EU wide policies.

It is an open question whether this ongoing harmonisation process may find room for including electronic participation tools such as the ones deployed in PARTERRE, which might be then show their full potential in the design, monitoring and assessment of strategic policies that take into account the spatial dimension.

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Francesco Molinari is an independent research and project manager working for several public and private organizations in Europe, since 2009 as Associate to the London based 21C Consultancy Firm. In his career he has been involved in the coordination of (or participation in) about twenty ICT-related projects at European, national and regional level — many of them on the topics of eParticipation and eGovernance. For the European Commission, among others, he wrote in 2008 a study for the assessment of the Living Labs approach in the EU innovation and Future Internet scenario. For the Italian Government, he is now leading a State Region Working Group aimed at the establishment of PCP (Pre Commercial Procurement) in the local public administration practice.

# Real Name Policy in E-Participation

*The case of Gütersloh's second participatory budget*

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**Abstract:** *Based on a case study of the second participatory budget of Gütersloh, this paper relates the current debate about real name policy on social networking platforms and online forums to online moderated consultation processes in the area of e-participation. Regarding the case of Gütersloh, it identifies three major rationales for real name policy and request for personal data in e-participatory projects, namely the possibility to restrict access to citizens, the prevention of offensive communication, and the strengthening of a transparent democracy. The five major objections identified are the distraction from issue-related dialogue, the violation of privacy rights, administrative problems causing high expenditure of time and costs, negative media and public attention, and finally usability problems that may result in a low rate of participation. By pointing out some preliminary observations regarding the Gütersloh case, the paper provides evidence which indicates that the negative consequences of real name policy and request for personal data outweigh the positive ones. The paper suggests directions of further research on the question of real name policy in e-participation.*

**Keywords:** e-participation, participatory budget, real name policy, anonymity, pseudonymity

**F**acebook has it, Google+ is abandoning it, Hans-Peter Friedrich - German Federal Minister of the Interior - wants it, the online community is divided about it: Real name policy, i.e. the obligation of users to register on an online platform with their real name, often connected with a request for personal data, has triggered intensive debate. The pros and cons are manifold, and the discussion comes in waves, often triggered by a recent event such as the introduction of real name policy by Google+, which has already been softened due to extensive protests about it. However, so far the question of online anonymity has almost exclusively centred on social networks and unmoderated online forums. The area of e-participation has to date remained largely unexplored in connection with anonymity and real name policy. Therefore, the present paper sets out to relate the 'anonymity debate' explicitly to e-participation, i.e. "the participation of individuals and legal entities (including groups thereof) in political and administrative decision-making processes by means of information and communication technology (ICT)" (Albrecht et al., 2008, p. 4). Drawing on the case of the participatory budget<sup>1</sup> in Gütersloh which introduced real name policy in 2011, the paper discusses major advantages and limitations of real name policy and request for personal

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<sup>1</sup> In Germany, participatory budgeting is implemented in the form of consultation processes in which citizens can voice suggestions on how to allocate a municipal or public budget (Märker & Wehner, 2011).

data regarding e-participatory projects. Although the case study does not allow for generalizations, it provides some strong indications that real name policy should be avoided in e-participation projects and that negative effects of anonymity can be sufficiently accounted for by the use of pseudonyms and moderation.

The paper is written from the position of practitioners with longstanding experience in the field of e-participation.<sup>2</sup> In Gütersloh, Zebralog ([www.zebralog.de](http://www.zebralog.de)) provided the platform and advised the city on its online consultation process. In a first section, the debate about real name policy in social networks and unmoderated forums will briefly be outlined. Second will be an examination of the differences between such spaces compared to online moderated consultation platforms as in the case of e-participation. After a description of the Gütersloh case, the core positions on real name policy from administration, politics, citizens and practitioners will be introduced. Preliminary observations and lessons learnt will be discussed. Overall, the paper is both a plea for anonymity in e-participation, and a call for further research on the topic.

## 1. The Debate about Anonymity and Real Name Policy on the Web

What some see as a newly gained freedom is seen by others as dangerous and harmful; anonymity on the Web has been subject of controversial debate. Of course, anonymity has existed much longer than the Internet; as a sub-category of anonymity, pseudonyms, i.e. ‘false names’ have always been used in the course of history, be it by authors, artists or whistle-blowers. However, the Internet has made it much easier to communicate messages without revealing one’s name or personal attributes. The introduction of real name policy by many forums and social networks and the merging of several platforms into a universal account can be read as signs for a trend towards identification with one’s real name (Herbold, 2011). In the following, the core lines of argument of the different positions will be outlined. It should be kept in mind that these positions are not related to e-participation procedures but mostly focus on social networks and online forums.

### 1.1. Arguments in favour of real name policy

One of the strongest and most persistent arguments of the proponents of real name policy is the negative effect of anonymity on the quality of discourse, subsequently called the *self-control argument*. This is also the official explanation of Google+ and Facebook for their real name policy (Beuth, 2011)<sup>3</sup>. Such arguments are often backed up by experimental research in the field of social psychology (e.g. Döring, 1998; Joinson, McKenna, Postmes & Reips, 2009) and by content analyses of online forums in the field of media studies (e.g. Wilhelm, 2000; Gerstenfeld, Grant & Chiang, 2003). It shall suffice here to note that there is strong evidence for the thesis that anonymous communication tends to cause more offensive communication; real name policy in turn facilitates civilized communication. Being identifiable by others seems to encourage self-control, decrease personal defamation and thus facilitate the creation of “communities of trust” (Fake, 2011).

Closely related to the self-control argument is the *legal argument* which stresses the problematic use of anonymity to protect criminal acts, ranging from personal defamation to watching child

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<sup>2</sup> See [www.aachen-rechnet-mit-ihnen.de](http://www.aachen-rechnet-mit-ihnen.de) (Aachen), [www.ffm.de](http://www.ffm.de) (Frankfurt am Main), [www.solingen-spart.de](http://www.solingen-spart.de) (Sulingen), [www.ezuerich.ch](http://www.ezuerich.ch) (Zürich), or [www.koeln-aktiv-gegen-laerm.de](http://www.koeln-aktiv-gegen-laerm.de) (Cologne).

<sup>3</sup> Beuth (2011) however suggests that the unofficial explanation is that making money with advertisement is only possible when people can be identified.



pornography (Palme & Berglund, 2004). As Cho (2011) explains, the South Korean policy goal of the Real Name Verification Law, introduced in 2007, was “to prevent widespread online abuse in postings and comments that can seriously cause privacy invasion and personal defamation by legal enforcement and penalties” (p. 3). Proponents of real name policy thus point to the importance of identifiable profiles to be able to hold Internet users legally accountable.

A third major argument advanced by proponents of real name policy is the *online=offline argument*: If we are accountable with our real names offline<sup>4</sup>, why should we not have the same rule online? This line of argument was supported by German Federal Minister of the Interior Hans-Peter Friedrich, even though he later admitted that anonymity in online spaces may sometimes be necessary (Sueddeutsche.de, 2011). In fact, two implicit presumptions of the online=offline argument can be discerned: First, the belief that the Internet is so closely interwoven with our offline world that the virtual and the analogue are one (see e.g. Raphael, 2011). Second is the supposition that humans have or should have one single identity rather than multiple identities (Moreira, Möller, Gerhardt & Ladner, 2009). Overall, Newton’s (2011) comment sums up well the opinion of many anonymity opponents: “Anonymous commenting in civic forums encourages our worst instincts. It weakens all fact-based brands. And allowing it is just unethical.”

## 1.2. Arguments against real name policy

However, opponents of real name policy point to several problems that come along when having to register with one’s real name. It should be noted that opponents of real name policy are by no means necessarily in favour of complete anonymity. There are various ‘compromises’ between complete anonymity and real name policy, ranging from no registration at all over registration with pseudonyms, registration with real but unverified name or registration with hidden real name plus pseudonym, to registration with verified name and possibly also personal data. For this paper, pseudonymity is understood as a sub-category of anonymity.

One of the strongest arguments against real name policy is what we shall refer to as the *open participation argument*, namely the belief that forcing users to provide their real name will exclude many from participating in the forum or social network. This case is probably most clear when looking at authoritarian regimes. For example, for reasons of security, Chinese journalist Jing Zhao has been fighting for his right to use the name ‘Michael Anti’ on Facebook (Biermann, 2011). However, the argument does not stop at authoritarian regimes and political activists. Based on a survey of Australian blogger Skud (2011) who asked Google+ users for their reasons why they do not want to register with their real name, Internet researcher Danah Boyd (2011) discovered that real names are mainly a barrier for vulnerable groups of society such as victims of crime and abuse, homosexuals, women and young people. These groups usually feel more secure when using a pseudonym. In general, anonymity and pseudonymity are seen to provide more open and equal participation as they do not reveal information such as gender, and put the message rather than the person at the centre.

Second is the *freedom argument* which maintains that users are able to speak more freely and less self-censored and coloured by groupthink or ‘the tyranny of the masses’, when not having to reveal their real identity (York, 2011). As ‘the other side’ of the self-control argument, the argument

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<sup>4</sup> The terms ‘offline’ is problematic as it implies a dichotomy to ‘online’ and often associated with ‘temporarily not being online’. However, in lack of more appropriate terms, it will be used nevertheless.



demonstrates that more freedom through anonymity may lead to increased defamation and offensiveness just as well as to more honesty due to reduced fear of speaking-up. Proponents of this line of argument stress that “pseudonyms are not in themselves harmful” and that “in the vast majority of cases there is no harm done” (Fake, 2011). As opposed to the online=offline argument, the freedom argument values the newly gained possibilities of the Internet as distinct from the offline world. According to this view, the Internet provides a space for people to live the multiple identities they have, giving them the chance to creatively explore different roles (Enno Park cited in Fischermann, 2011). There is even some evidence that the quality of pseudonymous comments is higher than comments by completely anonymous users or users with real names (Knoke, 2012).

Next is the *privacy argument*, which is advanced for example by the German Pirate Party who claims privacy and by extension anonymity to be a basic digital human right in a democracy (Sueddeutsche.de, 2011). This position draws attention to problems of data privacy with regard to real name policy and the request for personal data. In fact, there is a considerable amount of literature today which suggests ways how to google one’s neighbour or job candidate (e.g. Goldman & Borchewski, 2008). Technological innovations such as automatic face recognition on photos make it even easier to find data about persons who appear online under their real name. According to the privacy argument, Internet users must have the right to decide if certain political or other opinions are to be openly accessible.

Last but not least is the argument that real name policy is in practice not feasible due to immense logistical, costly and time-consuming consequences. This *practicability argument* has been advanced as a response to Hans-Peter Friedrich’s offline=online argument (Sueddeutsche.de, 2011). Also stressed by the practicability argument are registration problems such as in the case of author Ahmed Rushdie whose Facebook account was blocked because he had used his second name, instead of his first name (Beuth, 2011). Moreover, at least when not using time-intensive verification methods like the German PostIdent, real name policy may increase the risk of identity theft, i.e. of users registering under an existing name that is not theirs (Moreira et al., 2009).

## 2. Anonymity and Real Name Policy in E-Participation

As mentioned above, the debate about real name policy and the request for personal data has so far predominantly centred on social networks and online forums. From time to time, blogs are mentioned, too. However, apart from rare exceptions such as a study on the South Korean Real Name Verification Law (Cho, 2011), there is a striking lack of research on this topic in the area of e-participation, even though the question of real name policy is almost always a topic when a city, ministry or public institution introduces e-participatory projects (Märker, 2006). While most of these projects to date still allow for anonymous participation, at least in Germany, some platforms that explicitly seek to promote e-participation, such as [www.e-democracy.org](http://www.e-democracy.org) have made real names compulsory in their forums. Their argument in short: “Real people, real debate, real democracy” (Newton, 2011). However, other projects such as the UK Online Parliamentary Inquiry into Domestic Violence explicitly cite anonymity as a reason for the project’s success (OECD, 2003). Acknowledging the distinct characteristics of online moderated consultations, the lack of scholarly research in this area cannot be compensated by debates on social networks and online forums.

One core difference between online social networks and online moderated consultation platforms is their *purpose*. While the main function of social networks is to facilitate the connection between friends, the purpose of online moderated consultation platforms is (or at least should be)

to seek the expertise and ideas of citizens and to obtain a picture of the general opinion – or at least of those who are affected by planning and decision processes – regarding certain policies (Albrecht et al., 2008). While *persons* are the centre of social networks, *messages* are at the heart of e-participatory projects. Secondly, another key difference of online moderated consultation platforms as opposed to social networks is their explicit *call for expression of opinion on political topics*. On Facebook or Google+, users can choose to only use private messaging for content they do not want others to read. On online consultation platforms, the sole way of participating is usually through public commenting or voting. A third unique characteristic of online consultation platforms is their *limited time period*. Most participatory platforms are only open for participation for three to five weeks. This in turn has important consequences in that it is possible (and common) to provide moderation on the platform, ensuring that comments do not violate the platform's netiquette (Albrecht, 2008). The limited time span of consultation processes also means that some users will only visit the site once, while social networks and un-moderated forums are often used more regularly. Having demonstrated the necessity to distinguish between different kinds of online spaces in the debate on real name policy, the next section will introduce the online moderated consultation process for Gütersloh's participatory budget 2012.

### 3. Gütersloh's second Internet-supported Participatory Budget

#### 3.1. The participatory process of Gütersloh's online consultation 2011

The German city of Gütersloh introduced its first participatory budget in 2011 (<http://2011.buergerhaushalt.guetersloh.de>). For the first time, citizens could make their voice heard online regarding the allocation of the public budget of 2011. While the first consultation allowed citizens to participate anonymously, Gütersloh made real names and personal data compulsory for the participatory budget 2012 ([www.buergerhaushalt.guetersloh.de](http://www.buergerhaushalt.guetersloh.de)). In both of Gütersloh's participatory budgets, Zebralog provided political consultation as well as the online platform, developed in cooperation with the Fraunhofer Institute. The online platform was the central medium of the online-moderated consultation process.

The consultation process for the participatory budget 2012 was divided into two online phases. In the first phase (September 9 to 25, 2011) citizens were invited to comment on proposals made by the city or by citizens, and to submit their own proposals. Unlike in the first participatory budget, the option to vote for proposals was not available in this first phase. Subsequently, the city's administration department submitted its advisory opinion regarding the proposals to the Budget Committee (Hauptausschuss) which selected the most interesting proposals for the second phase (November 7 to 25, 2011) in which citizens could vote for proposals. From the 111 proposals submitted in the first phase, 44 proposals were selected by the Budget Committee (Bürgerhaushalt Gütersloh, 2011). For all other proposals, short explanations of why they were not considered for the participatory budget 2012 were published. All proposals of the second phase together with the voting results were also to be considered by the city council (Rat) and its commissions (Ausschüsse) in spring 2012 when they decide on the budget 2012.

Compared to Gütersloh's first participatory budget as well as participatory budgets in other cities, the second participatory budget only attracted a very limited, rather disappointing number of participants, with 4,918 visitors on the site, 418 registered users, 5,232 votes, and 264 commentaries (as on November 25, 2011, Bürgerhaushalt Gütersloh, 2011). The second consultation process had already been heavily criticized in the run-up to the online consultation,

and received further criticism during and afterwards (Kosbab, 2011; Demokratie Wagen, 2011a). One heavily debated difference compared to the first participatory budget has been Gütersloh's real name policy and its request for personal data.

### 3.2. Technical specifications and registration procedure

Due to pressure from the side of the citizen initiative Demokratie Wagen, the concerns of the Data Protection Officer of North Rhine-Westphalia and the strong recommendation by Zebralog and the administrative department to abandon the quest for real names, Gütersloh agreed on some compromises to their original plan of complete visibility of real names and the compulsory request for personal data including passport numbers (Stadt Gütersloh, 2011a & 2011b). The ultimate technical specifications and registration procedure looked as following: In order to register, citizens had to provide their real name and surname, a valid e-mail address, telephone number, place and date of birth. With the help of software provided by Infokom Gütersloh which linked the platform with data from the Gütersloh registration office, name and personal data were subject to a validity check (Stadt Gütersloh, 2011c). The administrative department contacted citizens in cases where no correlation could be established. For evaluation, the data were anonymized. One of the major compromises that Gütersloh agreed on was the possibility for citizens to choose an invented pseudonym under which proposals and comments were visible for non-registered Internet users. Registered users, however, could identify the citizen's real name by accessing his or her profile. This feature enabled registered users to find out who the originator of a proposal or comment was, but it prevented citizens' real names from appearing on search engines such as google. Unlike commenting and submission of proposals, the voting feature was kept anonymous (Bürgerhaushalt Gütersloh, 2011).

## 4. Lessons from the Gütersloh Case: A Plea against Real Name Policy

In order to shed light on the advantages and limitations of real name policy in the case of Gütersloh's second participatory budget, this section will first outline the rationales for and objections to real name policy and the request for personal data. Subsequently, the Gütersloh online consultation will be analysed according to the different arguments and preliminary observations pointed out.

### 4.1. The rationale for real name policy in Gütersloh's second participatory budget

The decision to make registration with real names and personal data compulsory was taken in the Budget Committee (Hauptausschuss), despite intense debate preceding the decision. While the citizen initiative Demokratie Wagen, the administration department and the external consultants Zebralog all strongly advised to abstain from real name policy and the compulsory indication of personal data, the majority of the political parties voted in favour of it (Stadt Gütersloh, 2011c). The official reasons, as can be extracted from the protocol of the meeting (Stadt Gütersloh, 2011d) as well as from various discussions prior to the meeting between Zebralog, the administration and the political representatives are the following:

The probably most-used argument by political representatives in favour of real name policy was that it would ensure that only citizens from Gütersloh participate in the consultation process. According to Wolfgang Büscher (FDP), the pressure to act, which stems from citizens' proposals, could only be justified if those proposals were submitted by citizens from Gütersloh. The

participatory budget would lose its legitimacy if it includes opinions from non-Gütersloh citizens. According to this *legitimacy argument*, real name policy ensures representativeness on the one hand because only citizens of Gütersloh participate and on the other hand because manipulations of the results such as multiple registrations of one user under different names are no longer possible.

***Rationale 1:** Real name policy and request for personal data ensure that only citizens from Gütersloh participate, thereby enhancing representativeness and in turn legitimacy.*

Secondly, another widely used argument concerned the quality of the discourse that could arguably be enhanced due to real name policy. Heiner Kollmeyer (CDU), for example, underlined the fact that citizens' discussions in the first participatory budget had been too heated and offensive in the eyes of many, notably regarding the topic of municipal fire brigades. Real name policy in the second online consultation process would ensure that citizens feel responsible for their words and cannot hide behind a pseudonym. This argument very much resembles the above outlined *self-control argument*. Interestingly, the legal argument regarding the possibility of sanctioning was hardly mentioned.

***Rationale 2:** Real name policy and request for personal data ensure a high quality of dialogue by preventing offensive comments from anonymous citizens.*

In the context of e-participation, the self-control argument is often brought forward in connection with the argument that democracy is strengthened due to transparent communication with real names. This *democracy argument* has also been stressed in the case of Gütersloh, among others by Peter Kalley (UWG). Dr. Thomas Foerster (CDU) also suggested that real names will lead to "more clarity", a statement that is closely related to the strong wish of political representatives in Gütersloh to be able to talk to the citizens 'eye to eye' and to know who they are talking to. In a sense, this argument also relates to the above mentioned online=offline argument; the lack of control in the online media logic is not appreciated. According to this position, politicians should know who they are representing, and if politicians have to account for their words and deeds with their real name, there is no reason why citizens should be granted the right to hide. This line of argumentation is also similar to blogger Michael Spreng's (2011) opinion that in free and democratic societies, anonymity is only for cowardly persons.

***Rationale 3:** Real name policy and request for personal data ensure transparent communication, thereby strengthening democracy.*

#### 4.2. Objections against real name policy in Gütersloh's second participatory budget

However, not everyone shared the enthusiasm for real names and personal data. Zebralog, the administrative department and the citizen initiative Demokratie Wagen pointed out serious objections against these plans and stressed the likelihood of such verified registration procedures to discredit the whole participation process.

First of all, closely related to the freedom argument, Marco Mantovanelli (Grüne) and Christine Lang from the administrative department underlined the fact that the core purpose of participatory budgeting is supposed to be *issue-related* dialogue with the content at the centre. Real names, they feared, would distract from a content-based discussion. The opponents thus raised concerns that real names may not enhance but *degrade* the quality of discourse due to biased perception of the messages and obstacles to free speech. Knopp (2011b) gave the example of someone wanting to raise dog licence fees who would probably not dare to speak up if his/her dog-owning neighbours can identify him. Pointing to sites like WikiLeaks, she stressed that

“freedom implies courage, anonymity implies freedom” (Demokratie Wagen, 2011b). According to the administrative department, anonymity would be an “important signal to the participants” that the most crucial is their argumentation and their voice, not the person and their political affiliation (Stadt Gütersloh, 2011b). Thomas Ostermann (SPD) furthermore pointed out that by far the majority of online discussions during the first participatory budget were factual and peaceful.

***Objection 1:** Real name policy and request for personal data distract from issue-related dialogue and thus degrade the quality of discourse due to biased, person-focused perception of messages.*

Moreover, attention was called to *legal problems*, notably to clashes with data privacy (Datenschutz) and the German Telemedia Act. Prior to the consultation, the Data Protection Officer of North Rhine-Westphalia critiqued the request for passport numbers but saw the request for other personal data as unproblematic, given that users would be asked to agree to these terms and conditions. Nevertheless, Manfred Reese (DIE LINKE) took up the privacy argument and stressed that everyone should have the right to decide whether to provide one’s real name or not. There is a reason why elections are generally anonymous, and there is also a reason why anonymous feedback boxes are widely used across companies and organisations. Knopp (2011a) stressed that anonymity is a fundamental right of citizens as only anonymity can ensure that critique can be expressed without fear.

***Objection 2:** Real name policy and request for personal data violate citizens’ right to privacy.*

Besides objections related to data privacy, ZebraLog and the administrative department also raised concerns regarding considerable *administrative problems*. Acknowledging that conscious, criminal abuse – such as in the case of identity theft – is very difficult to detect, both because it may have been an unintended incorrect entry and because the real owner of the name needs to get in touch with the administration and prove his/her identity, it is likely that some abuses will not be detected or that some unintended incorrect entries will be falsely labelled as abuse. Sanctioning in the form of blocking comments or proposals brings about the risk of being accused of censorship. Moreover, the likelihood of problems with registration and unintended incorrect entries (for example in the case of spelling mistakes or incoherency between used names and names in the passport) is likely to have considerable consequences for the time and efforts that have to be invested by the administration. The high expenditure of time combined with the necessity for more complex technology results in higher costs for the consultation process.

***Objection 3:** Real name policy and request for personal data cause time and cost-intensive administrative problems.*

Taken together, legal, administrative and usability problems may have considerable *negative consequences on media attention*, and by extension also on public perception. ZebraLog pointed out the risk that the media will focus solely on abuses or missed detections of abuse, losing sight of the actual content of the dialogue. Systematic attacks and media campaigns that uncover abuse, failure to detect abuse, or falsely labelled abuse make it easy to publicly discredit the consultation process.

***Objection 4:** Legal, administrative and usability problems caused by real name policy and request for personal data result in negative media attention and negative public perception.*

Finally, and probably biggest objection was that negative media combined with *usability problems* on the side of citizens can be expected to make citizens less likely to participate. On the one hand, usability problems occur when citizens are not prepared to reveal their real name and personal data to the administration and political decision-makers, and even less so to other registered users. The reasons for a rejection to participate with clear identification can range from

fear of economic or political disadvantages to avoidance of discrimination or stalking (see e.g. York, 2011). On the other hand, even if citizens are not explicitly unwilling to share their personal identity, they may be unable to cope with the more difficult registration process. Hence, Maria Unger (SPD), major of Gütersloh stressed, similar to the open participation argument, that the request for real names and personal data is likely to be a barrier for participation and thereby lead to a drastic reduction of participants. As citizens' participation is the core of every e-participation project, a decline in participation may lead to the failure of the whole consultation process.

*Objection 5: Real name policy and request for personal data cause usability problems which act as a barrier to participation and thus lead to a decline in participation.*

### 4.3. Advantages and limitations: Observations and directions for further research

The following section will provide some preliminary observations made after the consultation process was completed. Besides technical data, speeches and press articles, interviews were conducted with Anke Knopp from Demokratie Wagen and Norbert Monscheidt<sup>5</sup> from the administrative department.<sup>6</sup> It should be noted that the prevalent opinion of citizens regarding the decision to prohibit anonymous participation is not known. Although the online platform contained a feedback site and a poll on the question of anonymity, the lack of critique against real names, and the poll result in favour of real names are hardly meaningful since there was no possibility for non-registered citizens to raise their critique without providing their real name. It should also be kept in mind that the following assessment is neither representative nor can it provide detailed evidence for all rationales or objections. The intention is rather to prepare the ground for subsequent research by highlighting questions and areas that deserve more attention in further studies. The evidence given by the case of Gütersloh is nothing more than an indication.

#### 4.3.1. Observations regarding rationale 1

*Real name policy and request for personal data ensure that only citizens from Gütersloh participate, thereby enhancing representativeness and in turn legitimacy.*

Despite real name policy, the difficulty to detect abuse made it impossible to prove that all participants were citizens of Gütersloh. However, it is unlikely that many citizens from other municipalities will have made the effort to participate under false name. The contents of the online discussions also do not allude to the presence of non-Gütersloh citizens. However, the question that remains is whether the exclusive participation of Gütersloh citizens truly enhances representativeness and legitimacy. For one, regarding the low rate of participation in the second consultation process, it is questionable whether the results can really be seen as more representative compared to the first, anonymous consultation process. Moreover, it should be kept in mind that representativeness has actually never been the aim of such participatory projects.

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<sup>5</sup> Norbert Monscheidt preferred only to talk about factual information and not about subjective evaluations.

<sup>6</sup> Unfortunately, although several attempts were made, it was not possible to arrange an interview with Markus Kottmann (CDU), political representative and proponent of real name policy.



#### 4.3.2. Observations regarding rationale 2

*Real name policy and request for personal data ensure a high quality of dialogue by preventing offensive comments from anonymous citizens.*

Although no quantitative data regarding the number of offensive comments in the second online consultation in comparison to the first one could be obtained, the low number of comments allowed for simple qualitative screening which revealed a rather civilized dialogue with few interventions by moderators. Unfortunately, however, it would have gone beyond the scope of this paper to analyse the quality of comments in the first, anonymous consultation process, and to compare how much of a difference real names make. In this context, Knopp (2011a) remarks that many politicians saw a large number of comments in the first consultation process as offensive and defaming. Knopp, by contrast, saw most of these comments rather as the proof of emotional dedication to the topic. Similar to scholars like Mouffe (2005), she also stressed the importance of emotions and voicing straightforward critique for the political culture.

#### 4.3.3. Observations regarding rationale 3

*Real name policy and request for personal data ensure transparent communication, thereby strengthening democracy.*

This claim is difficult to assess empirically, both because it is at its core a question of one's conception of democracy, and because the strengthening of democracy can hardly be measured. Interestingly, the proposed resolution of the administrative department uncovers a fundamental but flawed presumption of such kind of argumentation: Anonymity is not only a characteristic of online communication but widely spread in the political sphere and conventional democratic participation processes such as elections or demonstrations (Stadt Gütersloh, 2011b). Moreover, Demokratie Wagen (2011c) pointed out a discrepancy between this kind of argumentation in favour of transparency, and the anonymous political decision-making procedures exercised over proposals. Knopp (2011a) even goes as far as suggesting that the real reason for the proclaimed importance of clearly identifiable persons stems from the experience of the first consultation process in which topics were brought up that were not part of the politicians' agenda, fostering the wish of politicians to keep things firmly in hand and to know who they are talking to.

#### 4.3.4. Observations regarding objection 1:

*Real name policy and request for personal data distract from issue-related dialogue and thus degrade the quality of discourse due to biased, person-focused perception of messages.*

In order to assess this objection, it would be necessary to empirically analyze and compare the quality of the comments on the platform in both Gütersloh's first and second consultation processes, for example with the help of content analysis. Such an analysis would be a valuable undertaking for subsequent research. Of course, an empirical analysis of the second consultation process in Gütersloh would be limited, not least because of the low number of comments. In order to make generalizable claims, such a study would have to look beyond the case of Gütersloh.

#### 4.3.5. Observations regarding objection 2:

*Real name policy and request for personal data violate citizens' right to privacy.*

Interestingly, while this objection seemed to be invalidated before the start of the consultation process due to the approval by the Data Protection Officer of North Rhine-Westphalia, a letter of

the Data Protection Officer in the aftermath of the online consultation process suggests a very different evaluation (Knopp, 2011a). In this letter, the Data Protection Officer raises serious concerns over the compulsory request for publicly viewable real names. In fact, he remarks that he had not been informed about this course of action prior to the online consultation and thus had presumed that real names and personal data would remain anonymous to unregistered as well as registered users on the platform. He states that registration with compulsory real names and personal data as a measure to verify citizens of Gütersloh is as such not problematic in terms of Data Protection Law, but that users must have the right to protect their privacy by appearing publicly under a pseudonym (LDI NRW, 2011; Knopp, 2011c). Further research on the citizens' perception of anonymity would surely be valuable in this regard.

#### 4.3.6. Observations regarding objection 3

*Real name policy and request for personal data cause time and cost-intensive administrative problems.*

In the interview with Norbert Monscheidt (2011) from the administrative department of Gütersloh, he explained that the expected higher expenditure of time and efforts due to citizens' problems with the registration procedure or due to the sanctioning of abuse did not occur. There were only a few requests by users who needed help with the registration process. However, this observation does not invalidate the argument that real name policy may have consequences on the amount of time. It is natural that the very low rate of participation kept administrative efforts at a reasonable amount. Moreover, no cases of abuse were detected; hence no sanctioning had to take place. It remains open whether the fear of abuse was unnecessary or whether abuse took place without being detected. While this question is surely not easy to answer by subsequent research, it may be valuable to keep the objection in mind when conducting other participatory consultations.

#### 4.3.7. Observations regarding objection 4

*Legal, administrative and usability problems caused by real name policy and request for personal data result in negative media attention and negative public perception.*

In the case of the second participatory budget of Gütersloh, there was only little media resonance. At first sight, this could lead one to suggest that the fear of negative media attention due to real name policy was without cause. However, as Knopp (2011a) remarks, there was not just no negative media or public attention, but there was hardly *any* media or public attention. According to her, the whole consultation process was just too unattractive for both citizens and the media. Of course, these are just speculations, thus further research such as a review of relevant media and interviews with citizens may help shed more light on the question.

#### 4.3.8. Observations regarding objection 5

*Real name policy and request for personal data cause usability problems which act as a barrier to participation and thus lead to a decline in participation.*

This objection had been the most serious one in the run-up to the second participatory budget, as a high rate of participation is one of the major success criteria of e-participation projects (Kubicek, Lippa & Koop, 2011). 1.7 percent of the population of Gütersloh participated in the first participatory budget. Compared to other online consultations such as in Lichtenberg or Cologne, this is a rather high rate. By contrast, only 0.4 percent participated in the second participatory



budget consultation. Consequently, it was labeled as a 'failure' by Demokratie Wagen, the media, the administrative department and political representatives alike (Demokratie Wagen, 2011d). As mentioned above, many factors may have contributed to the drastic decline in participation. Lack of transparency and missing responsiveness may have been amongst them (Knopp, 2011a). Other factors such as a lack of resources or too little publicity seem not to be that relevant in Gütersloh, as they did not differ much from the first, successful participatory budget (Monscheidt, 2011). From the political and administrative side, lack of interest by the citizens in politics and finances of Gütersloh was seen as one of the major reasons for the failure of the second participatory budget (Christine Lang in Demokratie Wagen, 2011d). Noting that on site participation events also did not attract more participants, they suggested that the reason cannot be found in the online format or real name policy (Guetersloh.tv, 2011).

On the other hand, the media, Demokratie Wagen and ZebraLog have suggested that real name policy and the request for personal data had a negative influence on the rate of participation (Kosbab, 2011). Interestingly, an evaluation of the server log files revealed some valuable information. It showed that 38 percent of all citizens who accessed the registration site left the site without registering.<sup>7</sup> This compares to a bounce rate of 20 percent in the participatory budget in Frankfurt, where real names and personal data were requested but not verified, and a bounce rate of only 13 percent in both Aachen and Essen, where neither real names nor personal data were required for registration. The comparison is a strong indicator for the suggestion that the more data are compulsory for the registration process, the higher the barrier is for participation. Again, in order to make valid claims about the reasons for non-participation, interviews with citizens would help shed more light on this question. Unfortunately, rather than trying to find out why citizens did not participate, political representatives and the administrative department of Gütersloh have been inferring lack of interest and raised serious doubts as to whether at all to organize a participatory budget 2013 (Guetersloh.tv, 2011). Interestingly, and very unexpectedly, in March 2012, the Budget Committee decided in favor of a third participatory budget (Neue Westfälische, 2012). The strong criticism against real name policy, notably by the Data Protection Officer, brought about another surprising decision: For Gütersloh's participatory budget 2013, anonymous participation will be possible again.

## 5. Conclusion

This paper has set out to link the current debate about real name policy and request for personal data on social networks and online forums to the area of e-participation. Using the example of Gütersloh's second participatory budget, major rationales and objections regarding real name policy and request for personal data were identified for the special case of online moderated consultation processes. The preliminary observations that were made based on the Gütersloh case provide evidence for the suggestion that the negative consequences of real name policy in e-participation outweigh the positive ones. The positive consequences, notably restriction to citizens from Gütersloh, more civilized and more transparent communication, lose their relevance in the light of negative consequences such as a low rate of participation, restricted diversity of opinions, person-focused dialog and violation of privacy rights. Moreover, the use of moderation and pseudonyms can account for some of the problems associated with anonymity. Of course, these

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<sup>7</sup> It should be noted that this bounce rate does not count in citizens with a script.

observations cannot be treated as representative, both because they are limited to the case of Gütersloh and because they lack comprehensive empirical analyses such as interviews with citizens. Besides some practical observations, one of the most important insights of this paper is probably that many of the arguments in favour or against real name policy in the area of e-participation are based on beliefs. While some of these beliefs are hard to measure (e.g. the strengthening of democracy), others such as the quality of comments, citizens' attitude or usability problems, can and should be treated as hypotheses and tested empirically. On a more theoretical level, the paper has highlighted the necessity to distinguish between different online spaces when talking about real name policy and request for personal data. Lastly, the relevance of this paper is underlined by the fact that discussions about real name policy in e-participatory projects are not limited to Gütersloh. Interestingly, the district (Kreis) Gütersloh decided to allow anonymous participation in its e-participatory budget project (Kreis Gütersloh, 2011). Now has the time to back up such decisions with empirically tested arguments. It remains to be seen if these efforts will revoke tendencies towards real name policy in e-participation.

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# Bringing Citizens' Opinions to Members of Parliament

*The Newspaper Story*

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**Abstract:** *We describe a method whereby a governmental policy maker can discover where their policy statements are discussed, and we show some example results for a case study validating our approach. Our strategy is to find news articles pertaining to the policy statements, then to perform internet searches for references to the news articles' headlines and URLs. We have created a software tool that schedules repeating Google searches for the news articles and collects the results in a database, enabling the user to aggregate and analyse them to produce ranked tables of sites that reference the news articles. Using data mining techniques we can analyse data so that resultant ranking reflects an overall aggregate score, taking into account multiple datasets. We can also examine differences between datasets, for example how the sites where the article is discussed change over time.*

**Keywords:** e-participation, e-government, social networking sites, news articles, news stories, political engagement, citizens' opinions, dialogue

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**T**he work reported here has been done within the context of the WeGov IST FP7 project. The project's primary remit is to enable effective dialogue and engagement between e-governments and citizens, and a key feature of the project is that it uses social networking sites (SNS) as the primary communication channel. Before the project, there were a number of efforts to engage citizens with governmental policy, mainly using bespoke websites whose main drawback was that they were rarely used (see Hansard Society, 2009 for an example). WeGov is aiming to address this drawback by using tools the citizens already use: social networking sites, blogs, forums, etc.

The project supports its target audience of governmental policy makers with tools to enrich the two-way dialogue with citizens on SNS. The project's philosophy has been to develop a set of tools enabling the user to find and analyse SNS postings, and to make responses into SNS; along with a dashboard-based environment where the tools can be used individually or together.

We have adopted a methodical approach for the development process of the software with frequent and iterative end user engagement so as to get requirements and feedback on development progress. As part of user engagement, a number of use cases were designed showing how the WeGov analysis tools could provide a two-way dialogue with citizens (see Addis et al, 2010), and the work reported here develops one of these use cases.

An important aspect of the work in WeGov is to protect the rights and privacy of citizens and policy makers. To address this, a legal and ethical analysis was conducted to provide us with an understanding of data protection issues and give an insight into transparency. This work has influenced the design and use of all parts of the toolbox, and has been reported elsewhere (Wilson & Fletcher, 2010).

We already have tools in the WeGov toolbox to enable us to collect publicly-accessible comments and related data from social networks and other web sites; and also to analyse the comments to summarise their subject matter and the opinions expressed in them. A description of one of our analyses can be found in Sizov (2010), which describes the discovery of “latent topics” from a collection of social network postings, which form a summary of the debate, together with the highlighting of key posts and the opinions represented in the posts.

We need to provide a starting point for data collections, and for this we need to determine upon which sites the discussion is taking place. The work described here addresses this, motivated by a use case from external end users, namely to be able to find out where a news article is being discussed. This use case is discussed in detail in the next section, which also sets out the research questions we aimed to answer. Following this, we describe our strategy to answer the research questions. We then describe the results for an example case study showing and how it may be used to benefit by its target audience.

## 1. Background & Problem Statement

During initial meetings with external end users, a particular need of WeGov’s target users, governmental policy makers, was requested. This is the gathering of citizens’ opinions as feedback to a particular statement by a politician. The first WeGov prototype covered this scenario as a basic use case. Here, the policy maker posts a statement into a social network, collects the citizens’ feedback (where it is publicly available) and runs the analysis components on the feedback. The result is a summary of the key themes and opinions over the sum total of the citizens’ comments (Wandhoefer et al, 2010).

The initial toolbox was presented to 29 office employees working for a parliamentarian of the German Bundestag with the aim of gathering feedback for the further development process (WeGov, 2011). During discussions with them, the consensus was that parliamentarians’ posts are unlikely to solicit a large amount of feedback, unless the politician is high-profile: “ordinary” parliamentarians’ posts typically generate below 100 comments. They confirmed that the requirement to test citizens’ reactions to politicians’ statements is important, but they need more comments to provide a statistically significant sample of opinions. A modification of the original use case was proposed by the Bundestag employees, where politicians’ statements are covered on the internet through news articles, which are in turn disseminated and discussed by citizens. Figure 1 outlines “The Newspaper Story” which capitalises on the effect of “indirect injections” (Joshi et al, 2010) – this means the politician’s statement is disseminated by citizens rather than the



politician. For example, a news article is written around the statement, and this is discussed over many different locations by citizens.

In the example in Figure 1, [www.bbc.co.uk](http://www.bbc.co.uk) published a news article with the headline “State multiculturalism has failed, says David Cameron”<sup>1</sup>. Internet news sites provide the opportunity for readers to share and discuss news articles over diverse internet locations, and thus the story may be propagated and discussed in many places on the internet by citizens. This news article was shared 31,309 times on Facebook and 1,922 times on Twitter.

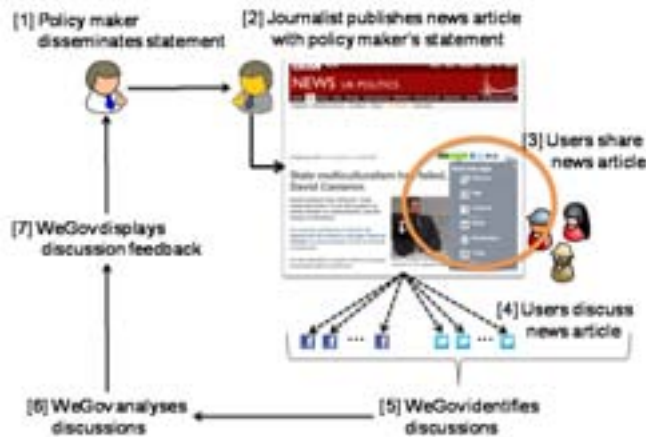


Figure 1: The Newspaper Story

There is thus a vast amount of discussion on this news article, but the challenge is determining *where* it is being discussed. Addressing this challenge (step 5 in Figure 1) is the core of the work described in this paper: to identify the websites where a news article is disseminated, to give the WeGov analysis tools the opportunity to get more user comments as input, which should improve their accuracy. Once we had a good idea of the core problem to be addressed, and began to consider its implications, a number of related challenges presented themselves. These are discussed next, and determine our requirements.

Once people start sharing the news article, discussion spreads out over different sites. This adds a new dimension to the requirements – it would be most helpful to the policy maker to track where the discussion on an article occurs over time from initial publication of the article.

News events are not usually covered with a single news article on one website – it is more likely that there are multiple articles written from different perspectives in different newspapers and on different websites, and each generates their own set of comments from the citizens that read them. In addition, news events develop and multiple articles are written, adding new developments and analysis. This adds a further requirement: to be able to track reactions to multiple articles, and to group them into sets, so they can be presented to analysis in logical groups.

<sup>1</sup>BBC news website. News article “State multiculturalism has failed, says David Cameron”, 2011. URL: <http://www.bbc.co.uk/news/uk-politics-12371994> (Retrieved 20 Nov 2011).



It is also probable that the policy maker does not know the exact news articles they wish to track, or they only know of a subset of articles, so a related requirement is to enable searching for news articles to “bootstrap” the tracking of reactions to them.

Finally, policy makers are often specialists in, or are responsible for, a certain discipline or topic area, and it would be most helpful to them to determine key sites that are worth monitoring for general discussion and ideas around this topic.

Given the problem statement and the requirements above, a number of research questions arose:

1. How can we find out where a news article is being discussed?
3. How do the discussions’ locations change over time?
4. How can we track a news story containing many news articles?
5. How can we find news articles related to a press release or an MP’s statement?
6. Which are the important places a policy maker needs to monitor for discussion of items relevant to them?

## 2. Strategy

This section begins by outlining briefly how we addressed the research questions. After this, details pertaining to specific challenges for each question and their solutions are discussed.

- To address research question 1 (how to find where a news article was being discussed on the internet), we proposed a strategy whereby we perform internet searches for references to the news article and store the results in a database. The assumption underlying this strategy is that if the news story is referenced in a web page (i.e. it is returned as a hit in an internet search for the news article), then that web site has at least some relation to the news story.
- To track how the discussions’ locations changed over time (research question 2), we proposed to repeatedly (automatically) execute the same search on a regular basis, and store these results along with the original results in the database.
- Tracking a news story containing multiple articles (research question 3) is a matter of grouping searches and results together into a set for the story. This is simply a question of management of the searches and results; and maintaining links between sets of results, searches, news articles and news stories. We proposed to utilise relational database patterns to maintain these links - databases are well suited for this task.
- If we do not know the URL of the news articles we want to track, we will need to find the articles themselves (research question 4). For this we have proposed that we search selected newspapers’ websites for keywords from the press release or MP’s statement. The result set should be links to articles about the press release etc. Once we have this set of articles, they can be used as input to the strategies above.
- Finally, in order to determine useful sites for general monitoring (research question 5), we have proposed that we analyse groups of search results, to determine which web domains are most frequently featured, and how they are ranked.
- We also determined that we should be able to select arbitrary sets of search results for this analysis, so that we can determine the best sites given any set of results, from one single set to all sets. This enables maximum flexibility to “data mine” the search results. We should be able to

determine their own groups – for example multiple stories may be related because they are about a similar subject area. Grouping the results from these and analysing them produces a set of web domains pertinent for that subject area.

## 2.1. Searches

There are two main types of search. The first type is a search for comments and references to news articles. This is the major form of search (addressing research question 1, to find where news articles are being discussed), and returns result sets containing ordered hits for references to the news article. The second search type is a search for news articles given the text or keywords of an MP's statement. This is used when the news articles are not known, and the results can feed into the search for comments and references to news articles. This addresses research question 4.

### 2.1.1. Searches for Comments and References to News Articles

The basic strategy we chose for this search was to automate data collection based on Google searches for places where the news article occurs, and to store the search results (hits) in a database. The same searches can be repeated periodically over time, and differences in where the news item is discussed can be highlighted.

The first thing we did was determine how to search the internet, and the solution was straightforward: we chose to use Google because it is the most popular search engine in the West. It has by far the largest market share of the search engines<sup>2</sup>, and appears to be the de facto choice for most users of the internet. As such, it is very likely to be used by many people who may want to comment on a news article – if someone wants to comment on a news article, they are likely to either:

- comment directly on the news site itself;
- comment on a website / SNS / forum / blog they already know about; or
- Google search for the news article to find places where it is being discussed.

Therefore using Google, we will find pages with comments from people who do any of these actions. We chose to perform two Google searches for each news article: firstly the article's headline and secondly the news article's web page URL. This enabled us to capture references to the news article (when the URL is quoted in a referring text), and the more general search for the headline, which uses natural language processing such as stemming, removal of stop words and fuzzy matching.

Google searching returns references to web pages (hits), ranked by Google's proprietary algorithm. The Google ranking gives us a measure of how useful a hit will be. Google's ranking of a search hit is important to us, as it determines the "popularity" of a site in response to the search, and we wish to find the most likely sites where people will go to make comments. Therefore our goal is in line with Google's, to find the "best" sites for the search. We do not know the exact details of Google's search algorithm as it is proprietary, but we do know it is founded upon citations – links to a web page behave as "votes" to increase its rank. What the algorithm contains

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<sup>2</sup> See for example Netmarketshare: <http://www.netmarketshare.com/>

is not important to us, but that it is used and relied upon by a vast user base, is. Google has a vested interest in returning useful hits to its users, and its market share indicates that it is doing just this.

To perform the actual searching, we used a Google Custom Search Engine (CSE) with automated control to repeatedly execute searches. The frequency of searching is configurable, and our initial configuration is that we search at the same time every other day. We created a relational database to hold the search results. For each hit in a search result set, we record the URL of a hit, its domain and the Google rank, as well as the search information such as the search query and the date of searching. This enables us to perform analyses of how the ranking can change over time as well as aggregate analyses to determine the best sites given arbitrary sets of search results.

An example of search results for a news article, collected over a time period, is shown in Figure 2. The figure illustrates the relationship between the news article and repeated searches for its headline and URL, and also illustrates how we can address research question 2 (tracking the changes of discussion location for the news article over time).

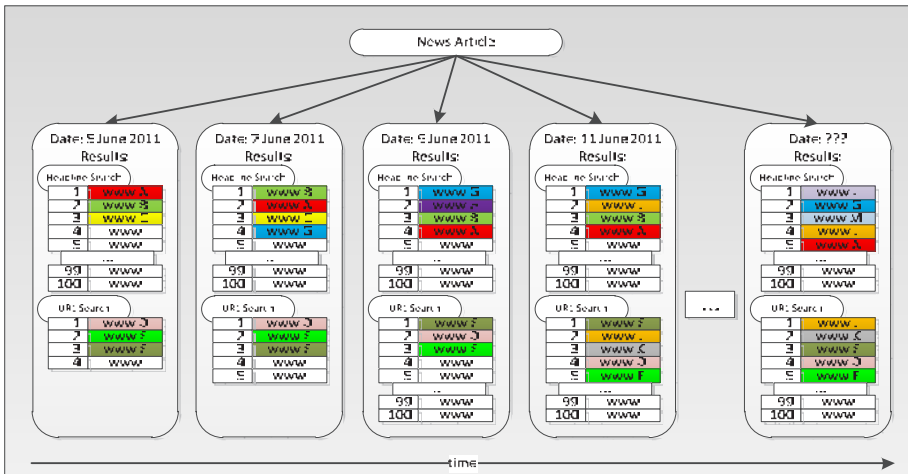


Figure 2: Example News Article, Associated Searches & Results

The sets of hits in the search results above are analogous to the music charts denoting which records are the most popular at a given time. Our “hit parade” is of the top 100 web sites where the news article is discussed. The charts are updated periodically and web sites move up and down the chart according to their popularity. We also get new entrants to the chart and other web sites drop out of the top 100. Figure 2 illustrates this by showing the progress of some example websites –we can see the progress of domain A over time – it starts off at the top, and then drops down the list. Domain G is another example – it does not feature until the second search, but then rises to the top before tailing off. Figure 2 also illustrates that we may not get a full set of hits early on in the search, especially for a fresh news article. This is particularly true for the URL search, as it is highly specific and the search engine cannot use any natural language or fuzzy matching techniques to widen the result set. This is a desirable property for our purposes, as it means we are getting exact matches for the URL, and we can see its propagation.

### 2.1.2. Searching for News Articles

The second search type, where news articles themselves are found (research question 4), is only required when the news articles are not known, or the user wants to see newspaper reports of a particular policy statement. This search also uses Google, but requires that a limited section of the internet is searched – we only want news websites to be searched here. We created a second Custom Search Engine (named here the “Newspaper CSE”), that only searched a sample of UK news and newspaper sites (for example [www.bbc.co.uk/news](http://www.bbc.co.uk/news), [www.telegraph.co.uk](http://www.telegraph.co.uk), etc).

The Newspaper CSE can be searched using keywords from a government press release or an MP’s statement, and because it is configured only to search newspaper and news sites, the results will be news articles. These news articles can then be used as inputs to the other search type (references and comments) to see where the articles are discussed on the wider internet.

The choice of news sites is customisable – the Newspaper CSE can be altered at any time, so additional news sites can be included. The Newspaper CSE could also be targeted to a specific purpose, for example a subject area, or geographical location (the Newspaper CSE searches could be local newspapers rather than national ones).

## 2.2. Data Analysis

By utilising different criteria to group the search results, we can answer research questions 3 (tracking the discussion locations for multiple news articles related to a news story) and 5 (a general aggregated analysis showing useful sites given multiple different data sets).

The grouping process may be thought of as a form of data mining known as an OLAP cube<sup>3</sup>. This allows data to be grouped and analysed along different dimensions. The dimensions we can utilise are: story names / keywords / subject areas, web domains, dates and article titles.

An example OLAP cube for a complete story is shown in Figure 3, alongside an analogous set of searches for news articles. Here we are comparing news articles against dates, and showing the ranked set of domains for each article and date.

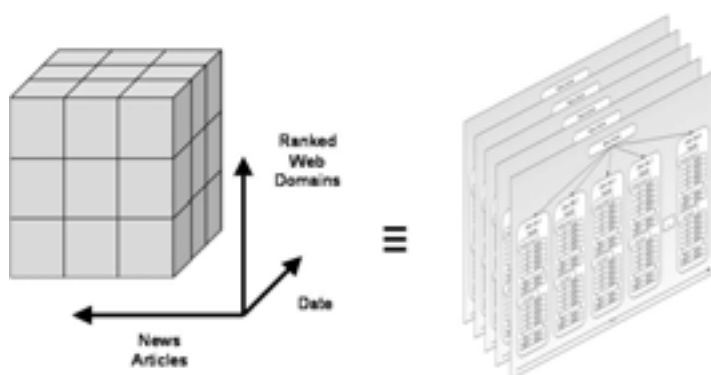


Figure 3: Example OLAP cube

<sup>3</sup>[http://en.wikipedia.org/wiki/OLAP\\_cube](http://en.wikipedia.org/wiki/OLAP_cube) (Retrieved 29 November 2011).

We can use slices from the OLAP cube as well – this means we only interested in one value in a particular dimension. For example, if we are only considering one story keyword, we only have a single value on that dimension.

In OLAP-style analysis we often want to aggregate values in a particular axis so we can examine the effect of other axes on the overall result. For example we may wish to investigate the aggregated ranking of all news articles in our story and how it changes over time.

In the right hand side of Figure 3, this is collapsing the five layers into one and finding aggregated rankings in all the hit parades – taking into account all layers. This provides us with an overview of the top sites where the discussions on all our news articles are taking place over time, regardless of the articles.

We thus needed a means of aggregating the rankings, and we attempted different methods of determining the aggregated ranking. We originally attempted simple averaging, e.g. we took all the ranks for a particular web domain and computed their average. The major problem with this method was that it was highly sensitive to the number of records for that domain. If, for example, domain A had a single record at position 1, this would have an average value of 1, because there is only a single record. If domain B had ten records, and nine were at position 1 and the remaining record was at position 2, the average value would be 1.1. Given that the lower the average the better in this example, this means that the consistent high performer, domain B, with 9 top positions, was apparently outperformed by domain A, who only appeared once.

Next, we looked at different weighting algorithms, so as to give more importance to the higher positions, but these suffered similar problems to the straightforward average. It was therefore decided that we needed to take account of the number of occurrences a domain has, as well as its position in each occurrence. What we wanted to find was consistent good performers (e.g. domain B above), rather than ones with few high positions but no other records (who could be considered “lucky” without further evidence).

The Bayesian Average method<sup>45</sup> is purpose-built for this task. It reduces the effect of anomalous values by considering the average number of occurrences for each domain as well as the average value per occurrence. It does this by calculating a corrected ranking that takes the number of occurrences a domain has into account using the two following principles: the more occurrences a domain has, the closer its corrected ranking value is to its uncorrected value; and the fewer occurrences a domain has, the closer its corrected ranking is to the average ranking value of all domains. Thus, the more times a domain appears in search results, the more “believable” its scores are.

After the data slicing, aggregation and Bayesian averaging, we have ranked tables of “chart positions” for each domain that take into account the way we have sliced the data, the chart positions and the number of votes for each chart position. Using this aggregation and the OLAP cube technique, we can show the aggregated ranking of multiple search results, for example:

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<sup>4</sup>[http://en.wikipedia.org/wiki/Bayesian\\_average](http://en.wikipedia.org/wiki/Bayesian_average) (Retrieved 30 November 2011).

<sup>5</sup><http://leedumond.com/blog/the-wisdom-of-crowds-implementing-a-smart-ranking-algorithm/> (Retrieved 30 November 2011).

- A single story (e.g. all the searches over time to date for the story)
- The time development of a single story (e.g. where discussions for all news articles in the story change over time)
- Multiple stories (e.g. the user can select related stories to find out where people are talking about them)
- One day (e.g. all searches on one single day independent of story)
- Everything (e.g. all results for all stories to date).

### 3. Results & Initial Evaluation

We implemented a software tool to perform the searches and analyses described above. We show here an example of its output for a case study of a news article. The main UI of the software tool with the article and its searches displayed is shown in Figure 4.

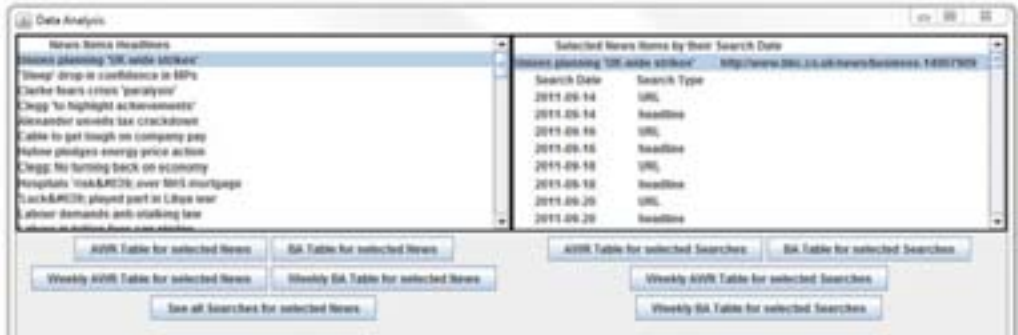


Figure 4: News Story Tracking

The example is based on a single news story, from the BBC news website. This concerned a story about plans for a national public-sector strike, published on 14 September 2011<sup>6</sup>. Figure 5 shows a results page, showing the Bayesian Average ranking, position, and number of occurrences for different domains over all times the news article is searched for (14 September 2011 to 30 November 2011).

Index	Domain	Bayesian Average	Occurrences	Category
1	www.bbc.co.uk	14.713437	153.0	
124	www.perspectice.com	14.859603	36.0	
103	www.thefraser.ie	17.062579	26.0	
109	www.turkeystanet.com	18.706395	32.0	
126	newstrump.com	18.997095	38.0	
113	www7.politicalcycling.com	20.487166	38.0	
389	www.thepharma.co.uk	20.55015	32.0	
130	twitter.com	21.482155	110.0	
181	cdgg.com	21.542494	23.0	
172	www.facebook.com	22.486534	165.0	
116	unisonactive.blogspot.com	23.10122	39.0	
36	www.equalitylaw.co.uk	23.361109	27.0	
378	unitedland.mylife.com	24.26886	20.0	
244	www.rootschat.com	24.94291	14.0	

Figure 5: Bayesian Average Overall Rankings

<sup>6</sup>Available at: <http://www.bbc.co.uk/news/business-14907909> (Retrieved on 1 December 2011).

The “category” column allows the user to mark some sites as known good sites, or sites that are not useful. The policy maker can mark a site as “uninteresting” in the “category” column, and it is ignored in this and all other result tables. The data from ignored sites is still collected and analysed, and the blacklist of uninteresting sites can be edited at any time to return the blacklisted sites to the analysis results.

[illegible]

<sup>8</sup>Do you support the union strikes? <http://forums.digitalspy.co.uk/showthread.php?t=1534436> (Retrieved 8 December 2011).



accompanying the poll contained 522 posts, the first was made on 14 September 2011, and the last was made on 19 September 2011. The bulk of the posts were made over 15-18 September.

The pattern is common – an event occurs, and there is a flurry of activity concerning it, which peaks and then tails off. Given that there may be a lag in Google's indexing of the Digital Spy forums, the activity on the forum and the rankings in the table give a reasonable match. The important point is there is genuine and useful debate in this forum. Other forums with debate on this topic were also highlighted by the results table.

This initial evaluation has demonstrated that the approach works, but it is worthwhile assessing the positive and negative aspects of the approach.

- Positive aspects. Firstly, our approach uses Google, the most popular search engine in the western world – its performance is attested by the fact that millions of people use it daily. Secondly, the Bayesian average approach to aggregating search scores has the advantage that it reduces the effect of infrequent anomalous values, resulting in a score supported by the bulk of the data points. Finally, the approach allows the user to see the changes over time in the rankings of the sites discussing the article.
- Negative aspects. The major drawback with our approach is that the ranking of the results are determined by a proprietary and unknown algorithm. However, we can easily adopt another search engine without adjustment of our technique. Another drawback is that in order to see where discussion of a story changes over time, the story has to be tracked from its beginning. Automation can assist here – the user can specify queries to find news stories as they happen, and these can be tracked automatically. A further drawback is that our approach is based on a numerical aggregation of rankings to determine the relevance or popularity of a site pertaining to a particular query – no account is taken of the actual postings on the sites. The lexical analysis of postings is addressed in other aspects of the WeGov project (see for example Sizov, 2010), and this work provides starting points for searches that can provide input to these analyses.

## 4. Conclusions

This paper has described a method whereby a governmental policy maker can discover where policy statements are discussed, and we have shown some example results validating our approach. Our strategy was to assume that news articles are written about the policy statements, and these are discussed over the internet. To enable us to find these discussions, we automatically scheduled and repeated Google searches for references to news articles' headlines and URLs. We collected the results in a database, enabling us to aggregate and analyse them to produce ranked tables of sites that reference each news article. Using data mining techniques such as the OLAP cube, we can group data so that the result reflects an overall aggregate score, taking into account multiple datasets, averaging out individual differences. We can also examine the differences between datasets, for example how the sites where the article is discussed change over time.

There are two major elements of further work. Firstly, having conducted our initial evaluation, we need to present the work to policy makers, so that they can make comments on the search results, and how the results are presented. Secondly, we need to integrate the software tool with the rest of the WeGov toolkit, so that the results of this work can be fed into more detailed searches and analyses to find out what people are saying.



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# Speaking Danish in Japan

*How Japan can learn from Danish best practice*

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**Abstract:** *Many countries are facing similar challenges regarding their eGovernment efforts, notably how to successfully increase government efficiency and effectiveness? To answer this question, this paper compares Japanese and Danish approaches - i.e. an approach taken by a nation struggling to benefit from technology use in government with that of the leading country in successful eGovernment implementation. The paper first analyzes the background and key differences (section 1), then highlights a number of exemplary Danish initiatives (sections 2-4). The Danish approach to improving efficiency and effectiveness include, among others, joint development of key components (2.1); re-use of components and content (2.2), participatory design and user-testing (3.1); personalisation and user-centric services (3.2); and governance for those processes (4).*

**Keywords:** Digitisation, eGovernment, eGovernance, efficiency, effectiveness, good practice, ICT, citizen-centric, innovation, participatory design, [borger.dk](http://borger.dk), Japan and Denmark.

**Disclaimer:** The views expressed in this paper/article are those of the authors and do not necessarily reflect the official views of their respective employers the Danish Agency for Digitisation or Center for Global Communication, International University of Japan on the subject.

**A**round the world a central question is being asked: What role can ICT and eGovernment play in successfully assisting governments' response to the challenges arising from the current state of the economy and public services in general?

To help answer this question, this paper compares Danish and Japanese approaches to eGovernment, and highlights some of the Danish practices that Japan should follow from the comparative perspective.

The two countries in many cases represent contrasts. Japan has a well-developed broadband infrastructure with 86.5% of households having fiber-to-home access (OECD, 2009a), but insufficient level of broadband take-up. ICT utilization is low despite being a policy priority, 13.2% of Japanese have accessed a government website or used an online service, and a mere 11.7% of companies have used a government eService (at the national level) (Goto & Sudo, 2008). An example of the severity of the problem, a recent study showed that a service for changing

addresses related to pensions handled a mere 0.0000021% of requests electronically (MIC, 2012), leaving the vast majority made by traditional paper-based processes. More importantly, this sorry state of affairs is not a result of lack of awareness. Japanese government has been emphasizing the strategic importance of eGovernment as a part of its national IT strategies since early 2000's (Sekiguchi, 2010) (Cabinet Secretariat, IT Strategy Headquarters, 2010)

Denmark is a world leader in ICT use, consistently scoring high in international ICT- and eGovernment-related rankings such as the Networked Readiness Index by the World Economic Forum (Meyerhoff Nielsen, 2011).

That said, 2010 data shows that a mere 14% of Danish households have FTTH access, but that 86% of households have internet access, 92% of enterprises and 72% of citizens use the internet to either find government information, or use online services (Eurostat, 2011). Similarly, 40-60% of all Danish address changes in 2011 were carried out online (Borger.dk, 2012) – depending on the municipality in question.

What makes Japan and Denmark so different when it comes to the successful use of ICT and citizens use of eGovernment services? And how does one learn to “*speak Danish in Japan*”? Presenting topical Danish examples, this think-paper highlights their relevance and lessons to be learned in a Japanese context.

“Speaking Danish in Japan”, in simple terms, is to exploit the enabling character of ICT by considering three aspects of creating a convenient and attractive service: deployment of common component such as digital ID system, so that different services could be interconnected seamlessly; focusing on user’s perspectives when designing service; and to establish governance model facilitating intra-government cooperation. Japan’s peculiar problem has a lot to do with the fact that eGovernment services are not useful, and that dictates where the lessons could be found in Danish practices.

For many governments around the world, it would be useful to think of these lessons from a slightly different perspective: they are about efficiency of government operations and spending, effectiveness of the services, and governance to ensure successful eGovernment initiatives.

First, to increase efficiency by focusing on existing processes and short-term cash flows. Second, by focusing on increasing the effectiveness of service delivery –the original aim of eGovernment innovation– by incorporating users’ perspectives. The aim is to achieve a more efficient and effective public sector providing high quality and user-centric services. Both objectives are important elements which must be taken into account and be applied with consideration and skill. It is important to keep in mind the trade-off between two objectives – excessive focus on the former will result in lost opportunities for longer-term gains and qualitative benefits.

## 1. Background and differences

### 1.1. Basic statistics

Japan's broadband infrastructure is the best in the world in terms of speed, price, and quality. Japan ranks first in terms of FTTH coverage with 86.5%, network infrastructure is highly stable and the price per 1 Mbps among the lowest in the world (OECD, 2009a). It can be argued that Japan is the most advanced country in terms of broadband infrastructure.

Denmark's broadband infrastructure is by no means as good as that of Japan. The country still ranks first and second in the EU in terms of fixed and mobile broadband respectively (Eurostat, 2010). However, the country clearly lags behind Japan in terms of speed and price affordability.

**Table 1 A Comparison of Infrastructure and ICT Usage between Denmark and Japan**

Category Subcategory	Denmark (ranking)	Japan (ranking)	Source		
Infrastructure					
FTTH/B availability (%)	14 (a)	4	86.5	1	OECD 2009a
Fiber connections in total broadband (%)	13	6	61	1	OECD 2011 (b)
Fastest advertised connection offered by the incumbent operator	51 Mbps	-	1Gbps	-	OECD 2011 (b) MIC 2009
Avg. advertised broadband download speed (Kbit/s)	25,771	18	80,612	3	OECD 2011 (b/c)
Median price per 1mbps (USD)	2.27	10	0.39	1	OECD 2011 (b/d)
3G coverage (%)	97	6	100	1	OECD 2011 (b)
ICT usage					
Estimated internet users per 100 inhabitants (%)	82	6	75.4	16	ITU 2008
Online availability of gov't services (% , individuals)	75	-	52	-	Eurostat 2010
Online availability of gov't services (% , businesses)	100	-		-	Cabinet Secretariat 2010a
Public Certification Service for Individuals (%)	24	-	1	-	MIC 2010b
Basic data					
Population (million)	5.5	-	126.5	-	United Nations 2010
GDP per capita (US\$)	55,986	6	42,783	17	IMF 2010

(a) 86% of Danish households had internet access in 2010 (Eurostat, 2011)

(b) These OECD datasets are taken from its Broadband Portal (OECD, 2011a). The titles of datasets are, in the order of appearance, Fixed and wireless broadband subscriptions per 100 inhabitants (June 2011); Percentage of fiber connections in total broadband (June 2011); Fastest advertised connection offered by the incumbent operator (September 2010); Average advertised download speeds, by country (September 2010); Price ranges, Mbit/s (October 2009); 3G coverage (until 2009).

(c) Japan's median advertised broadband download speed is 100,000 Kbit/s, the highest in the world.

(d) Japan's median price per 1 Mbps is the lowest, and the mean price per 1 Mbps is the third in the world.

The relative position of the two countries is reversed when it comes to ICT usage. ICT usage by government, businesses, and individuals is well-balanced in Denmark, while Japan lags behind on government use of ICTs. It is said in Japanese ICT policy circle that Japan is not successful not only within-government-entity (withinG) and government-to-government (G2G) ICT usage, but also in government-to-business (G2B) and government-to-citizen (G2C) ICT usage. While having the world's best infrastructure, Japan is slow in adopting ICT and is unable to take advantage of such infrastructure in the field of public services whose purposes include increased convenience and efficiency in society (Igari, To be published in 2012).

## 1.2. Key differences between Japan and Denmark

Japan's Ministry of Internal Affairs and Communication (MIC, 2009) found, comparing successful ICT use in seven developed countries, Denmark and Japan were at opposite ends of their scale. Among the most noteworthy was the level of concerns on online security. The level of such concerns held by Japanese was relatively high, while their experienced level of security incidents was low.

Since the 2009, one of the authors for this paper conducted a number of study tours and interviews in Denmark to discuss and identify key differences between the two countries. Based on the firsthand experience of this research and other available studies, this paper suggests some additional qualitative aspects as well. Table 2 compares and summarizes some of the key differences between the two countries in a number of categories. While it is not the aim of this paper to discuss all the contrasts, some would serve as a good basis to identify Danish practices that Japanese government should imitate:

- **Basic technological infrastructure:** Some technological infrastructure enables efficient coordination of eGovernment services. Japan has neither unique identifiers for individuals, businesses, property, nor any national one-stop-shops for services. This is in contrast to Danish ID systems and digital signature systems such as CPR, CVR and BBR enabling the creation of user-centric web services on thematic portals, for example *Borger.dk*, *Virk.dk* or *Sundhed.dk* (respectively national portals for citizens, businesses and health).
- **Standardisation and sharing of common elements:** In more general terms, the level of standardisation among government services, and resulting sharing /reuse of common components and contents is something quite noteworthy. This avoids duplication of investment, efficiency in spending and operation.
- **User-centricity:** The development and improvement of user-centric services is one of the most basic and important point of view in promoting eGovernment (OECD, 2009b). In Japan, the government has been making numerous failures in placing users first when designing services and their user interfaces. The fact that a system was handling only 3 out of 1,431,231 address change request related to pension payment in a year is a telling example, and this is hardly an isolated incident (MIC, 2012). In Denmark, user-centric approach is the foremost principle in the e-Government Strategy and is an essential approach to improving the usage rate of electronic government services. Danish national initiatives have focused on creating a common look and feel between third party government services linked to from portals such as *borger.dk* and *virke.dk* and government sites to ensure that users do not get confused by different institutions visual identity. The Danish government adopt the participatory design (PD) approach to develop e-government service
- **Governance model:** Japan's IT Strategic Headquarters is a cross-agency, cross-staffed organisation (under the Cabinet Secretariat) but its political influence, agenda setting role, budget and leadership are all weaker compared to the Danish counterpart, the STS, and the Danish Agency for Digitisation within the Ministry of Finance. STS creates horizontal connections across the central government agencies as well as vertical connections among the central government, regions, and municipalities. Joint initiatives and cooperation between public authorities at all levels of government gives citizens and businesses a sense of government and institutions speaking with a "single voice".

- Security concerns: There is a perceived lack of security of online government information and services, although the records do not justify the level of concern. Japan ranks the lowest of 12 countries in the perceived security associated with government ICT usage (Symatec, 2009) (MIC, 2009). Danish authorities actively market their online content as updated and trustworthy, it seems they are doing better in this regard.
- Lack of trust: Japanese distrust of government institutions also limits the take-up of online services and key enablers like eIDs and digital signatures. Similarly, the lack for trust in the public sector also limits the sharing of personal and company data between government agencies, or between the public and private sectors. Danes by comparison have a high level of trust in public institutions, civil servants and eServices. Not coincidentally, Japan ranked 14th on the 2011 Corruption Perceptions Index (CPI) while Denmark ranked 2nd (Transparency International, 2011).

To fully explain the reasons behind these differences is beyond the scope of this paper (see, Igari, To be published 2012, for an attempt.) Yet some of these differences, such as security concerns that seem to be rooted in psychological dimension, are not a matter of narrow ICT policies. Others, such as basic technological infrastructure, standardisation, user-centricity, and governance model, are more specific practices that Japan can adapt to overcome the current situation of low take-up. These are arguably of potential interest to many other governments, when looked at through a slightly different perspective: they are about efficiency of the government operations, effectiveness of government services, and organizational arrangement to ensure those qualities. For this reason, the following three sections describe how Denmark is doing more in details.

**Table 2 Comparison between Japan and Denmark (Igari, To be published in 2012)\***

Subcategory	Denmark	Japan
<b>Category 1 : Institutional aspects</b>		
National strategies	Focus on a consistent eGovernment system. Emphasis on improved convenience and efficiency and effectiveness incl. development of key infrastructure and components (eg standards, eIDs, Single-Sign-on), platforms and platforms (eg portals)	Transition to ICT usage/utilization with emphasis being placed on broadband infrastructure
ICT-promoting mechanisms	STS committee and Digital Task Force under the Ministry of Finance/Agency for Digitisation taking cross-organizational initiatives in consultation with other national stakeholders. Existence of ICT-promoting mechanisms in different fields, eg national portals <a href="http://borger.dk">borger.dk</a> , <a href="http://virk.dk">virk.dk</a> and <a href="http://sundhed.dk">sundhed.dk</a> (citizen, business and health portals).	Weak power of the IT Strategic Headquarters (Cabinet Secretariat). Vertical structure in each field contributing to weak collaboration. Weak ICT-promoting mechanisms in each field.
Personal information	Protection by laws and the Data Protection Agency.	Protection by laws. Strong discomfort with the personal information protection system. No neutral agency.
Decentralization of government authority	Highly advanced, also in budgetary aspects.	Little progress.
Policy-making process	Consensus/mixed top-down and bottom-up.	Weak consensus/top-down.
Incentive Policies	Clear incentives and semi-mandatory measures.	Handful of incentives for digitization and semi-mandatory measures.

Category 2 : contributing to social infrastructure		
Unique national and identification management (Symantec, 2009)	Personal ID: CPR. Numbers in operation since 1968. Cooperation with the private sector. Corporate ID: CVR numbers in operation Property ID: BBR numbers in operation.	Personal ID: Discussions ongoing, aiming at introduction in 2013. Corporate ID: not unified Property ID: not unified
Digital signature	Personal: Simple three factor authentication digital signature with an ID, password, and keycard. Professional/corporate: Software based but with simple three factor authentication being developed for roll-out in 2012. NB: Smartphone version expected in 2012	Personal: Emphasis on security. Not widely adopted due to reliance on hardware and low levels of convenience. Professional/corporate: Non-existent
Category 3 :Development of services		
Development approach	Emphasis on users' perspective. (the participatory design approach is adopted)	Technology-oriented. Ideas from developers.
Software development vendors	Initiatives taken by Local Government Denmark under KOMBIT and Umbrella projects for joint development and/or procurement, but also past KMD vendor when set-up and owned by the municipalities.	Competition among four companies. Slow in standardisation.
System construction	In-house. Accumulation of know-how.	Reliance on manufacturers and vendors.
Category 4 :Relationship between government and society		
Market	Demand-pull.	Supply-push.
Rel. with businesses	Cooperation with the private sector, e.g. banks.	Low levels of cooperation.
Rel. with universities	Regarded as a source of competitiveness.	Little progress.
Category 5 : Fluidity of the labor market		
Fluidity of the labor market	High level. Society presuming job changes (including between public sector and private sector). No regulation on firing employees.	Low level. Strict regulations on firing employees. Employment system presuming "lifetime" employment.
Expenditure on occupational training	Top-level budget in the world. Emphasized in employment policies.	Small budget. Little emphasis placed.
Category 6 :People's confidence in government		
People's engagement in politics and society	High level (approx. 85% voting rate).	Low level (approx. 60% voting rate).
Category 7 : National character (Symantec, 2009)		
Attitude toward risks	Tendency to try to change risks into investment opportunities.	Risk-averse. Emphasis on safe measures.

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\* Please note that, in order to save space, the wording is made concise, which has the effect of over-emphasizing the contrast.



## 2. Efficiency

### 2.1. Technological Infrastructure

Not all eGovernment services are made equal. Some have higher importance in the whole picture of eGovernment because of its capacity to serve as a key component for many other systems, and enabler of coordination among different services or processes provided by different systems.

Despite the Japanese recognition of the importance of unique, interoperable identifiers as the key building blocks of eGovernment and associated services and products none have to date been introduced in Japan. Denmark by comparison has introduced a number of interoperable key enablers required for successful information society. The personal ID system (the CPR number) supports increased social convenience and efficiency not only in government services like tax returns, but also in private sector services such as the opening a personal bank accounts. Denmark has similar unique identifiers for companies (the CVR number) and private properties (the BBR number). These form the foundation for an efficient and effective means of identifying individuals, companies, properties etc, but also enable the creation of relevant and more tailored services, which in turn can be accessed with the help of these IDs (e.g. digital signatures).

Digital signatures is another such technology, which can provide authentication issue for many services. While digital signature is used by 3.7 out of 5.5 million people in Denmark. Japan is yet to see its benefit in any serious scale.

### 2.2. Standardization and sharing of common components and contents

In general, standardization across departments or government agencies, and sharing of common components and contents are a key to an efficient investment and coordinated (therefore convenient) services. Unique identifiers and digital signature are two of the most important ones, but the possibilities are vast on this front.

While inter-agency cooperation is difficult in any large government, it can be ensured indirectly by individual authorities being compelled to adhere to a unified set of requirements and recommendations in a joint framework on architectural methods, security policy, and standards. In Denmark examples of such approach can be found with the OIO-XML and OIO-UBL standards (OIO, or Public Information Online, denotes the Danish sub-set of different international standards), and these are particularly important when new cross-cutting ICT solutions are put in place for use on the common public portals (Meyerhoff Nielsen, 2011).

Borger.dk offers an interesting lesson as well. Beach & Donslund (2009) concluded for Copenhagen Municipality a joint upgrade of the existing borger.dk My Page was the cheapest of three options available to the City. My Page is a personalised space collecting user-centric self-service options combining personal data, content and services. Login is with digital signature. Specifically, the borger.dk platform is DKK 1.6 million (€ 0.22 million) cheaper for Copenhagen to acquire and approx. DKK 3.2 million (€ 0.43 million) cheaper in annual operating costs (incl. support and maintenance) than the second cheapest provider which was analysed (Borger.dk, 2012). Joint development similar to that of the borger.dk initiative means that authorities can minimise their individual infrastructure investments and can concentrate on delivering content for the infrastructure. This case is also noteworthy because it goes beyond intra-government cooperation, but is actually an example of sharing between national and city governments.



To Extend this line of practice, will be helpful when collaborating with the private sector. Public sector data is seen by many as a veritable treasure trove of untapped potential for efficiency gains and innovation. According to IT analyst Gartner, the value of releasing government data to developers is somewhere between DKK 100 and 1,000 million (€ 13.42 and 134.23 million). Based on Gartner's analysis for the Danish IT- and Telecom Agency, the potential in Denmark is around DKK 3.3 billion (€ 0.45 billion), although the exact potential is not known. What is certain is, that developers of, for example, mobile applications can innovate and invent new types of services based on government data for large user groups, as seen in the USA (Elkær, 2010). Another example is the November 2010 Data Camp organised by the Danish National IT- and Telecom Agency with the IT University. Twelve public authorities and 40 developers, data analysts and IT experts created 18 digital products plus various ideas in a single day – or as then Minister for Science, Innovation and Technology Charlotte Sahl-Madsen said when opening the Camp: *"The idea is to create growth and new digital solutions for citizens and public authorities. Denmark is a country without many of the traditional raw materials, but we can find the raw materials in the data and building application on this..."* (Danish National IT- and Telecom Agency, 2010). Japanese government is stightly behind on this matter. The eGovernment Taskforce of the IT Strategic Headquarters, has just started discussing open government and open data policies since late 2011.

The business case of Gov 2.0 in a global context is still not on terra firma but is slowly emerging. For instance, in Denmark the national citizen portal, Borger.dk, has, since 2007/2008, indirectly made use of the Creative Commons principles in relation to its content. This content is not only available for free re-use, but local content (e.g. municipality specific information) may be added so that it "folds out" when a portal-user specifies his/her municipality. In turn, the full content, including local content, can be "imported" by other authorities for re-use. The business case for this Gov 2.0 inspired re-use and sharing of content includes personnel savings of approximately 0.25 man-years annually for each municipality choosing to automatically update their websites with relevant content from borger.dk. In practice, municipalities, such as Rødovre and Frederiksberg, annually use and update their websites with borger.dk content equivalent to 500+ A4 pages of text. The released 0.25 man-years is used by a number of municipalities to increase the information level and quality of location specific content added to borger.dk, leading to additional quality improvements for borger.dk content. To increase the efficiency and quality gains of the initiative, borger.dk is running a series of hands-on training courses for editors. To date, 54 of 98 Danish municipalities have registered local editors to make use of the content 'import/export' functionality on borger.dk (Meyerhoff Nielsen, 2010). This interoperability and the sharing of components and data is in Denmark used to enable personalization and localization. The benefit to the user is a personalised universe through which to contact the authorities. In this regard, key components such as electronic post and documents boxes to receive, send and store digital letters, help create a critical mass of traffic. The Danish Digital Post / eBox solution is, for instance, integrated on Borger.dk's My Page solution. To date Japan authorities have made few attempts to jointly develop cross-governmental services or joint service or infrastructure components. That said, the economic context makes it worthwhile for Japan to emulate the joint-development and cross-governmental approach used in Denmark. The financial benefits are obvious but similarly it is worthwhile to ensure interoperability thus allowing for the sharing and re-use of data and information in a Japanese context.

### 3. Effectiveness

#### 3.1. Quality improvements through participatory design and user-testing

More difficult to define, and spanning over a wider area, are the goals of ICT as an enabler of quality and service improvements. One approach to ensure quality of online content and services is to employ user-centric design and solution (whether easy to understand everyday language or a logical, easy to use online service). As a design philosophy and process, user-centricity focuses on the needs, desires, and limitations of the end-user(s) in relation to a given product or services. Attention to audience, context, accessibility, legibility, language, look and feel are key elements in the design process. Consequently, user-centered design is a multi-stage problem-solving process, not only requiring that designers and developers analyze and foresee how users are likely to use a product, but also ensuring that the validity of their assumptions is tested in terms of actual user behavior, the learning curve and, ultimately, successful take-up and use (Meyerhoff Nielsen, To be published in 2012).

The development and improvement of services from the perspective of users is the most basic and important strategy in Denmark. It is the foremost principle in the eGovernment Strategy 2007-2010 and is an essential approach to improving the usage rate of electronic government services. In this respect the involvement of end-users in service design is increasing notably. For instance, through eParticipation, user-testing and surveys, focus groups or personas (Igari, 2011a).

Borger.dk, for example, has since 2007 produced content and components based on seven specially developed personas. These 'mock-up persons' are also used to focus dissemination activities and to test new functionalities or solutions on portals. Regular surveys of the Borger.dk user-panel also assist in directing development (Kelly and Meyerhoff Nielsen, 2011).

Also of interest in a Japanese context is the wide use of participatory design (PD) in Danish software development, with specialists from various fields gathering to develop and improve software through repeated conversations with the potential end-users. An example of public sector use of PD in public sector development of ICT solution is Borger.dk and the improvements made to the portal and its content. Moreover, the portal makes use of various user-tests, including "think-aloud", focus groups, heat-mapping and eye-tracking. In addition Borger.dk's online user panel - of more than 1,200 citizen volunteers - contributes to the improvement of user-oriented functionalities and content. Lastly, Borger.dk is developing a user-involvement/PD framework in supporting a cyclical, process of gathering user-input for continuous improvement to the portal content, functionality and design. Here online surveys like the "Din mening tæller!" (Your opinion counts!), regular evaluations (3-4 times annually) analyse certain aspects according to age, sex, regions, and so forth (Borger.dk, 2011).

Japanese government has just picking up the signal. MIC has just launched a working group under the Information and Communications Council in February 2011 with the specific aim of promoting ICT usage and successful take-up. MIC considers Borger.dk and NemID (digital signature) examples of good practices which highlight how user-friendly and user-centric design can be used strategically to facilitate effective and efficient ICT usage and should be adopted in Japan (Igari, 2011).

### 3.2. Personalisation and user-centric services

Inspired by PageFleks, MSN my page, Google IG and similarly, the norge.no My Page functionality was the first European personalised drag-and-drop eGovernment solution in 2005. In early 2007, more sophisticated solutions such as genvej.dk and Borger.dk were introduced in Denmark (Borger.dk, 2012).

The Danish My Page provide a quick and easy overview of personal data, such as income and tax information, and the different service options available. This overview, in turn, enables the user to gain access to eGovernment services. Another aspect of user-centricity is direct user involvement. The theory is that authorities can increased take-up of online services by improving the knowledge of user and non-user including: Needs, behaviour and attitudes; perceived challenges and possibilities related to local government eServices, and; tools and methods that can be used in order to change behaviour and attitudes of various groups of citizens. The relevance of this approach is supported by studies in Northern Jutland, in Denmark, and which emphasise the importance of user-centric design as a tool for authorities to encourage more online self-service and reduce administrative burdens. User-centric design is also closely related to channel strategies, efficiency and productivity gains (Kelly and Meyerhoff Nielsen, 2011).

Essentially, the My Page infrastructure provides a platform for authorities to deliver more user-centric services. It also means that authorities avoid investing in eService delivery platforms, and can instead concentrate on developing content and solutions for the platforms. A well-designed My Page, encouraging citizen self-service, enables municipalities to decrease time and money spend personnel, telephone or written queries – as illustrated by an increasing number of Danish municipalities who see personalization of online information, data and services as key to move users from analogue (written, in person, by telephone) to digital service delivery channels (Igari, 2011b) (Borger.dk, 2012). To date Japan have made no attempts to personalise eGovernment services for citizens or businesses, but would be worthwhile considering as a tool to increase trust in Japanese government services, improve take-up and so forth.

## 4. Governance

It should already be obvious to many of the readers that behind both efficiency and effectiveness is a particular governance, or organizational arrangement, of ICT projects. Namely, inter-agency collaboration has potentially a large impact in standardisation, sharing of common component and content, as well as creating user-centric services as opposed to the services shaped and defined by government's organizational boundaries.

It is fair to characterize that, like Japan, Denmark has traditionally been characterized by silo thinking and continue to be so. Following early successes an increasingly horizontally focus between ministries and across levels of government have nonetheless emerged. Given that a public sector organised in silos cannot support the joint provision of services the focus have moved to a more horizontally oriented governance set-up supported by eGovernment (Meyerhoff Nielsen, 2011). It seems that Danish government is at least a few steps ahead of Japan's.

Inter-agency cooperation in Japan is fairly limited compared to public sector initiatives in Denmark, which have long been align and attune IT developments through both the formulation of inter-agency projects and joint initiatives. The aim has been to keep development costs down while promoting the reuse of data and thus ensuring that public IT systems are interoperable

(Meyerhoff Nielsen, 2011). This is important as electronic services do not necessarily have a natural driver or owner and are, therefore, dependent not only on cooperation between organisations, but also on dedicated people. This dependency is supported by anecdotal evidence indicating that up to 80% of good and innovative ideas come from citizens. The Danish context is interesting as many initiatives originate from committed individuals before they are taken onboard by the respective organisations and put into operation.

Unlike Japan, a joint strategy and framework to promote and coordinate the transition to eGovernment across all levels of government has been in place since 2001 and in 2005 it was decided to establish a Danish Steering Committee for Joint Cross-Government Co-Operation (STS) with representatives from all levels of public administration. The aim of STS was, and continues to be, to ensure a concerted focus on digitalization as an integral part of public modernization policy. Equally STS provides a forum for consultation and consensus making in relation to the Danish eGovernment efforts. With the launch of the fourth eGovernment strategy in 2011 and the subsequent Financing Agreement the mandate of STS has extended until 2015 – following the same blueprint from previous eGovernment Strategies (ePractice.eu, 2010a) (ePractice.eu, 2010b). Essentially STS is an eGovernment board of permanent secretaries from the main ministries and the managing directors of the local and regional government organisations. The implementation responsibility nevertheless remains with the individual authorities – but must respect to the joint strategy (Meyerhoff Nielsen, 2011).

To date the shift away from silos has produced positive results. This includes an increased scope and greater importance given to coordination and cooperation across levels of government and functional areas (OECD, 2011b). This shift is in part facilitated by a general teamwork and consensus seeking work ethic and Danish authorities has found it expedient to approach the development, implementation and operation of standards and services jointly.

Digitisation, qualitative and quantitative efficiency improvements require an increasing holistic approach as times pass. The Danish approach to the innovative use of ICT (illustrated by the examples in sections 2 and 3) and the joint development and cross-governmental governance model has enabled Denmark to consistently rank amongst the worlds' most advanced ICT nations.

The need for cross-organisational coordination originates from multiple sources. Among the most important is the development of services which span multiple agencies, development of common components such as digital signature, and increased focus on user-friendly and user-centric services. The appropriateness of a cross-governmental eGovernance model is also supported by the OECD, who in the 2010 review of Danish eGovernment recommended a strengthening central guidance and coordination across organisations and government levels (OECD, 2011b). Although this could counter act the consensus seeking culture and the work of joint fora like STS, which have proven so successful in Denmark's digitisation efforts – with a mandate accepted by the vast majority of stakeholders and public sector actors. Still the OECD recommendation emphasises the importance of eGovernance and the role of high-level political commitment and communication in driving development (Meyerhoff Nielsen, 2011). In a Japanese context one could imagine expanding the Danish STS or Digital Taskforce mandate, and embed these in the Prime Minister's office, or in the MIC giving the minister a wider mandate in relation to eGovernment.

## 5. Conclusion

Comparing Japan and Denmark reveals a number of key differences behind different take-up levels of eGovernment services. This paper has illustrated some of the key enablers to successfully “speaking Danish in Japan.”

Key efficiency lessons to be drawn from the Danish context are: Standardise formats and processes; share components and contents, especially such basic technologies as unique identifiers and digital signature for coordinated, convenient services for the users; Involve users to develop user-centric services; and establish inter-agency collaboration to achieve those goals.

Other governments may be less concerned about the take-up level, but these lessons may still hold significance, given that they are key to developing efficient and effective eGovernment services.

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# Mapping the Austrian Political Twittersphere

*How politicians, journalists and political strategists (inter-)act on Twitter*

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**Abstract:** *Politicians, journalists and political strategists in Austria increasingly discover Twitter as a channel for political conversation, forming a - more or less - distinctive Twittersphere concerned with national politics. This paper aims at mapping the relations between the actors within this sphere, which enables new ways of informal, but public communication between different types of professionals, and between professionals and citizens from the outside. Assuming that received @-mentions are an indicator for the influence of an actor within this sphere, we conducted an interaction and network analysis of the 374 most active and important users tweeting about Austrian politics. Following the selected users for four months, we built a database of their tweets and all tweets mentioning them. This corpus of data was used for a comprehensive network analysis of Austrian political actors on Twitter using the software Gephi. The results are mixed: While central actors within the political Twittersphere are mostly well-established, political professionals, who form their own dense network within the broader sphere, non-professionals are positioned on the edge of the network, but may still get in touch with professional actors, join the conversations and thus broaden the debate.*

**Keywords:** Twitter, politics, journalism, discourses, networks, mapping, Austria;

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**T**he changing nature of political participation is a major strand of discussion within the academic debate on potentials and challenges of the Internet for democracy (Bimber, 2001; Castells, 2000; van de Donk et al., 2004). The Internet may have “drastically altered the cost structure of participation” and “increased the spectrum of possible political activities” (Anduiza et al., 2009, 860), but if and how people use those new possibilities to engage in politics is still heavily debated. Dutton (2009) speaks of the Internet as the ‘Fifth Estate’, where actions of networking citizens enable a new source of accountability. Davis (2010, 746) states, that “politics, for those already engaged or interested, is becoming denser, wider, and possibly more pluralistic and



inclusive. But, he continues, “at the same time the mass of unengaged citizens is being subject to greater communicative exclusion and experiencing increasing disengagement”.

Twitter, which has now “established itself as the world’s second most important social media platform” (Bruns, 2011, 2) does allow for a new, low-threshold exchange of ideas and opinions and may intensify connections between political actors and citizens. Taking the example of Austria, we address the question how the political Twittersphere is organised and if and how it is open for participation from outsiders. Following Larsson and Moe (2011), the broader question thus is if and how Twitter contributes “to a broadening of participation in public debate, and to what extend it merely serves as yet another arena for already established societal actors” (ibid., 2).

## 1. Twitter and Political Communication

### 1.1. The Twittersphere

Communication on Twitter is open for participation and the global “public by default” (Bruns, 2011, 2). Through the manifold options to link messages to users (@mentions), external content (web links) and topics (Hashtags), Twitter communication takes on the form of networks of users and messages densely interconnected. It forms dynamic interaction spaces within networked publics, “complex networks that are bottom-up, top-down as well as side-by-side”, that can be “reactors, (re)makers and (re)distributors” (Ito, 2008, 3). Boyd (2011) refers to networked publics not only as spaces constructed by networked technologies, but the “imagined collective that emerges as a result of the intersection of people, technology and practice” (ibid, 39). Twitter publics can be understood as interconnected and fluid conversations constituted by the interplay of users connecting and relating to each other. Virtually all users may join conversations – the notion of the “Twittersphere” relates to this openness. The Twittersphere, however, is not an end in itself. Plenty of Tweets link to other media content and vice versa, making Twitter an integral part of today’s “networked public sphere” (Benkler, 2006).

While the Twittersphere itself is open-ended, the way people practice it, the “window” they view it through, is individually structured. Users view their personally composed “Social Awareness Streams” (Naaman et. al., 2010), streams of messages tweeted by all users someone choses to follow. These channels are is bound to individual networks of weak and latent personal (Haythorntwaite, 2002) as well as informational ties people choose to maintain. Who someone ‘follows’ (followers) determines which messages s/he receives, and who someone is “followed by” (followees) determines the primary audience for a user’s messages. Apart from that, users can search and view all Tweets sent worldwide at any time. The widespread use of Hashtags (words preceded by an ‘#’-sign functioning as keywords) enables users to follow messages on certain topics and events without following each user participating in the debate. Following a Hashtag is thus an easy way to get insights into conversations of relevance for a larger number of users. Bruns and Burgess state that a Hashtag serves “as a vehicle for otherwise unconnected participants to be able to join in a distributed conversation” (Bruns & Burgess, 2011, 49).

### 1.2. Twitter and Political Discourse

Consequently, a lot of research on Twitter has focused on the analysis of messages through Hashtags and some of this work is directly related to politics and political discourse. Small (2011) conducted a content analysis of Tweets containing the Hashtag ‘#cdnpol’ - an abbreviation for

'Canadian politics'. She shows that the Hashtag was hardly used for 'real' conversations (only 7.4 per cent were marked as 'conversational', 3.1 addressed other users), but rather for the distribution of news and statements. In the context of the Swedish election campaign in 2010, Larsson & Moe (2011) argue that Twitter has contributed to a broadening of public debate as large numbers of users contributed tweets with the respective Hashtag '#val2010'. However, only a minority participated to a larger degree; a result which is also supported by Tumasjan et. al.'s (2010) study of tweets related to the German Federal elections in 2009. Again, only a small share of the tweets mentioned other users. The political Hashtags in those studies, thus, seem to be less a forum for political dialogue than a channel for the (mere) expression of political opinion and the dissemination of news. It comes as no surprise that the quantity of tweets within a Hashtag on a given day is closely connected to 'offline' events that are covered by mass media, as both Larsson & Moe (2011) and Bruns & Burgess (2011) state. But, as the latter authors show in their analysis of tweets containing the Hashtag '#ausvotes' connected to the Australian Federal Elections in 2010, topics discussed on Twitter do not necessarily mirror topics represented by mass media. Quite on the contrary, topics that have been heavily communicated by politicians and journalists alike, like the asylum seeker policy, play a minor role in the twitter conversations, whereas traditionally less prominently covered topics, like the broadband policy, are heavily debated on Twitter (Bruns & Burgess, 2011).

A different approach to analyse Twitter conversations connected to election campaigns has been taken by Jürgens & Jungherr (2009). They collected all messages of users that have been tweeting on the German Federal Elections in 2009 (indicated by a set of keywords), 33048 accounts in total. They show that the number of Tweets sent by users was related to certain political events and that people tweet more, the closer the elections come. Tweets connected to the run-up for the German elections are also the research objects in a study by Welpé et. al. (2009), who conducted a sentiment analysis of tweets containing one of the party names. They showed that tweets contain more positive than negative keywords connected to parties, and that the semantic categories 'uncertainty', 'efficiency' and 'work' score highest. A sentiment analysis has also been done by Shamma & Diaplous (2010): They analysed sentiments of tweets commenting on the US presidential TV debates of 2008 and showed how people reacted on particular topics and incidents.

Apart from parliamentary politics and elections, Segerberg & Bennett (2011) have analysed Hashtags connected to protests related to the Climate Change Conference in Copenhagen, 2009. By relating Twitter messages to other online media (news websites, blogs), they found that the microblogging service cut across and connected diverse networks, actors and locations. Maireder & Schwarzenegger (2011), who looked at Tweets and Facebook updates connected to the student protests in Vienna in 2009 in a qualitative analysis, described comparable observations: The conglomeration of internal and external communication of the group resulting from the transparency of the media channels in use, integrated different actors into the conversations and drew a lot of interest to the scene. Having investigated the homogeneity or heterogeneity of opinion in tweets, Yardi & Boyd (2010) showed in a case study on a specific part of the abortion debate in the US, that people are exposed to a lot of different opinions within respective conversations on Twitter.

### 1.3. Twitter use by Politicians and Journalists

Politicians are increasingly using Twitter themselves. A Nielsen (2009) study, for example, shows that 68 of 612 Members of the German Parliament used Twitter in the run-up for the 2009 elections, and in the UK 111 out of 650 Members of Parliament were tweeting in early 2010 (BBC, 2010). Citizen Initiatives in the US (Tweetcongress.org) or Canada (Politwitter.ca) track how their representatives make use of the service. Analyses of tweets by members of the US Congress (Goldbeck et al. 2010) and US Governmental Organisations (Waters & Williams, 2010), however, found that most of them were using Twitter for self-promotion and simple information diffusion rather than conversations.

Twitter can help journalists to do research for their stories, establish and maintain contacts to sources, increase contact to their audiences and promote their work. Thus it comes as no surprise, that journalists are using Twitter to a large extent. According to Cision (2011), 25 per cent of German, 41% of Swedish and even 66% of British journalists use Twitter as a source. While official Twitter channels of most news organisations are hardly conversational and mainly link to content on the company's website (Armstrong & Gao 2010), journalist's personal twitter accounts are used more dialogical. Hermida (2011) argues, that journalism needs to participate in the networked conversations if it wants to gain (or remain) an important position in networked publics (gain position vs. play role). The value of journalism within Twitter is the conversations that are developed around news stories and linked to journalistic content. Journalism increasingly needs to interact with its environment to develop "ambient journalism" (Hermida 2010) – a continuation of what Deuze and Bardoel (2001) had called "networked journalism": "The convergence between core competences, functions of journalists and the potentials of online" (ibid.).

Within this context, Twitter could play a major role as a channel for communication between journalists of different media companies or bloggers. In a case study on the diffusion of a news story through journalistic networks, Anderson (2010) shows how information spreads from local to regional and, finally, to national news websites. News were "pushed forward by a set of quasi-institutionalized digital actors acting in their own organizational interest. Likewise, bloggers with one foot in the national and one foot in the local blogosphere (...) acted as a 'bridge' between the lower and higher traffic blogospheres. We see here neither informational anarchy nor the complete re-emergence of an older, mass media dominated hierarchy, but a new model somewhere in between" (Anderson, 2010).

## 2. Research Focus & Questions

The low-threshold nature of communication on Twitter and the individual-based organisation of its network seem to be perfect for the kind of information diffusion Anderson (2010) was focusing on. Furthermore, Twitter provides an easy and informal way for all actors within political discourses - journalists, bloggers, representatives of political interest groups, experts and politicians - to exchange information, ideas and arguments. Previously, these actors interacted only in formal ways, by way of conducting interviews or attending press conferences, formal appointments and similar events. Of course, back then journalists and politicians also met and talked informally, but only sporadically and in private ways.

In contrast, Twitter, provides a continuous channel for communication; communication that is neither strictly formal nor bound to a certain time and space. It consists of more or less informal

daily conversations about a wide range of topics, politics amongst others, and it's public. Focusing on users regularly tweeting about Austrian national politics, we investigated interrelations between those actors to answer the following research questions:

- If and how do politicians, journalists and other professional actors within the political system use Twitter to interact with actors of their own and/or other professions and do they interact with users from outside the professional political sphere?
- How is the Austrian political Twittersphere structured with regard to interactions between heterogeneous actors (users with more/less regular interactions, user clusters, role of particular actors)?

### 3. Method

Following Roger's (2009, 2010) suggestion to research the web by using its own means, we developed a methodology leaning on an approach by researchers from Queensland University of Technology. These scholars developed mapping and visualization tools in the context of their "New Media and Public Communication: Mapping Australian User-Created Content in Online Social Networks" project (Bruns 2011; Bruns & Burgess, 2011; Highfield et al., 2011). In this project, Tweets containing popular Hashtags have been collected, processed and visualized. Assuming that @mentions are indicators for interaction between users, and the count of received @mentions is an indicator for the influence of an actor within a topical 'Twittersphere', the Australian researchers have mapped the @mention network between users participating in discourses marked by a certain Hashtag such as "#eqnz" for the New Zealand earthquake in 2010, or "#spill", for the purported leadership challenge against then-Australian prime minister Kevin Rudd. Their method enabled them to "highlight the shifting roles played by individual participants over time, as well as the response of the overall #hashtag community to new stimuli – such as the entry of new participants or the availability of new information" (Bruns, 2011, 24). Moreover, they described different phases in the overall discussion and identified users involved as well as highlighted the spill-over of mainstream media reporting to Twitter discussions.

Contrary to our colleagues from Australia, who focused on Hashtags, we chose a user-centred approach. This decision was taken because the vast majority of tweets do not contain Hashtags (Hughes & Palen, 2009; Maireder, 2011). Thus tagged messages are the exception, not the rule. Furthermore, users generally tweet on a wide range of topics not necessarily represented by single Hashtags. These arguments hold particularly true for the national politics discourses in Austria: The topics change very often and if Hashtags are used, they are not used consistently; even less in messages directed to a particular user employing @mentions. At the same time, our (non-structured) observations in the run-up to our research showed that a distinct, limited group of users heavily shaped the discussions: mostly journalists, some politicians and experts.

Our first goal, thus, was to identify those users in a structured way. We composed a list of political keywords<sup>1</sup> and searched for those words within Twitter's public timeline using the

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<sup>1</sup> Those were political party abbreviations (spoe, oevp, fpoe, gruene, bzoe), names of the most prominent politicians (Faymann, Strache, Spindelegger, Glawischnig, Bucher, and others), names and words representing current political discussions (i.a. Scheuch, Grasser) and Hashtags used for political TV shows (i.a. #sg11).

software YourTwaterKeeper<sup>2</sup> to retrieve messages from Twitter's application programming interface (API). We compiled a list of 400 users by collecting the names of all users, that had mentioned at least two of the keywords, and ranking them by the number of keywords they used, the number of tweets using one of those keywords, the number of followers and listings. The list thus represented those users, who heavily participated, in different debates concerning Austrian domestic politics, who had at least 100 Followers and were listed by other users – an indicator for importance. We then manually adapted the list by excluding bots (automated accounts) and non-conversational accounts, and included top-users from the Austrian Social Media Radar we hadn't included yet.

In the end, we had 374 accounts. Next, we coded professional backgrounds of those users based on the information in the user profiles and the links provided: 69 politicians, 83 journalists, 28 other political professionals (experts, lobbyists, strategists) and 194 'ordinary' citizens (people without an affiliation to an organisation working politically). We then collected all Tweets of those users as well as the Tweets mentioning those users from October 8, 2011, to February 7, 2011, using self-programmed tools accessing the Twitter API. All Tweets were collected within a database including the user name, the Tweet itself, the date and time of publishing and some other variables.

From this data corpus, we chose four weeks<sup>3</sup> as sample periods. Assuming received @-mentions were an indicator for the influence of an actor within the Austrian political Twittersphere, we conducted a comprehensive overall @-mention-network analysis of political actors on Twitter, differentiated by professions and visualized using the network analysis and visualization software Gephi<sup>4</sup>. While the sheer number of @-mentions is one, but not a sufficient indicator for influence, we additionally conducted a series of other analysis based on activity, numbers of users mentioned, as well as incoming and outgoing messages sorted by profession.

## 4. Results

Social networks can be defined by the interactions between actors. In Twitter, these interactions can be traced by @mentions people are using in their tweets to specifically address someone else. These mentions, however, have very different meanings: They may be used (a) to directly address another user (@name as the Tweet's first letters), (b) to quote a tweet of another user (RT @name or via @ name or @name and quotation marks) or (c) to mention someone in a tweet (@name within the text). All those forms are included in our network analysis without distinction, because all of them can be counted as indicators for the relevance of a user within the discourses.

Figure 1 (below) shows the discussion network of those users, who received at mentions from at least twenty different users. Users, the nodes of the network, are represented by dots. Users mentioning each other are connected by a thin line, the edges. The more often they mention each

<sup>2</sup> Twapperkeeper software by John O'Brien, available at <https://github.com/jobrieniii/yourTwapperKeeper>

<sup>3</sup> We had to choose shorter time periods, because all tweets were also manually classified by political topic, allowing us to analyse topic networks. The weeks were chosen based on the observed variety of political topics on the agenda. The respective methods and results are, however, not covered in this paper. Please visit <http://www.twitterpolitik.net> for information (German only).

<sup>4</sup> Visit <http://www.gephi.org> for a description or see Bruns (2011) for use of the software for mapping online publics.

other, the closer they appear in the visualization. Proximity and distance, however, are approximations. The algorithm we used<sup>5</sup> clusters the edges by relative distance, but is not able to provide precise metrics. The size of the nodes represents the number of mentions a user received: the in-degree. The larger the circle, the more often a user was mentioned by others. The color of the nodes shows our classification in terms of profession. Politicians are pink, journalists are green, other professionals are yellow and non-professionals are blue.<sup>6</sup>

The figure shows the traditional political actors in the upper-left part of the network. Journalists @MartinThuer (private TV), @isabelledaniel (daily newspaper), @florianklenk (weekly) and @thomasmohr (private TV) alongside the political strategists @bachleitner and @rudifussi, the political scientist @HubertSickinger, the politicians @HansArsenovic (Green Party) and @Stefan\_petzner (BZÖ, right-wing) and @Svejk (webmaster of the People's Party) are the users most often mentioned by others and thus central for the political discourse network of professional actors, but not in terms of connections to users outside of the cluster of professionals, which are very weak.

The Users @arminwolf, anchor of the famous late night news broadcast ZiB2, and @michelreimon, member of parliament (Green Party) in Austria's federal state Burgenland, are densely connected to both political and non-political actors within the network. This is also true for @marcoschreuder, another politician from the Green Party, @corinnamilborn, the deputy editor-in-chief of Austria's largest news magazine and @helge, a famous blogger. They represent "bridges" between discussion networks of political professionals and other citizens.

Other users partly form clusters by themselves. One of those networks can be identified on the right corner of the network visualization, consisting of people mainly concerned with marketing. Users @\_alexoswald and @tometweetme are professional marketers at the center of their own clusters and largely connected to people outside of the initial 374 users. Anonymous user @porrrporr is central in a small cluster in the lower-left corner of the visualization that consists of political activists and politically active students from the left political spectrum. Journalists @corinnamilborn and @WernerReisinger connect these users to the political professionals. The large cluster in the lower-central part of the visualization is mostly formed by citizens that heavily interact among themselves, with users @fatmike182, @helge, @AnChVIE and some others connecting this cluster to political professionals.

In a more general perspective, the @mention-network of professional actors, politicians, journalists, experts, strategists and lobbyists, is – more or less – distinguishable from a greater network that also includes non-professional, but politically interested users. While some politicians and journalists are more oriented towards other professionals, forming a dense network among themselves, some are more equally engaged with other professionals and non-professional users. Users in the outskirts of the network, who are close to other professionals, like @claus\_pandi, @hansarsenovic or @isabelledaniel, are mentioned more often by professional communicators than other users, while users like @marcoschreuder or @bachleitner, are mentioned by both groups more equally.

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<sup>5</sup> Gephi's „Force Atlas“

<sup>6</sup> Unfortunately, the print version of this article is black and white only. For a full colour view please see the article's online version at <http://www.donau-uni.ac.at/cedem>



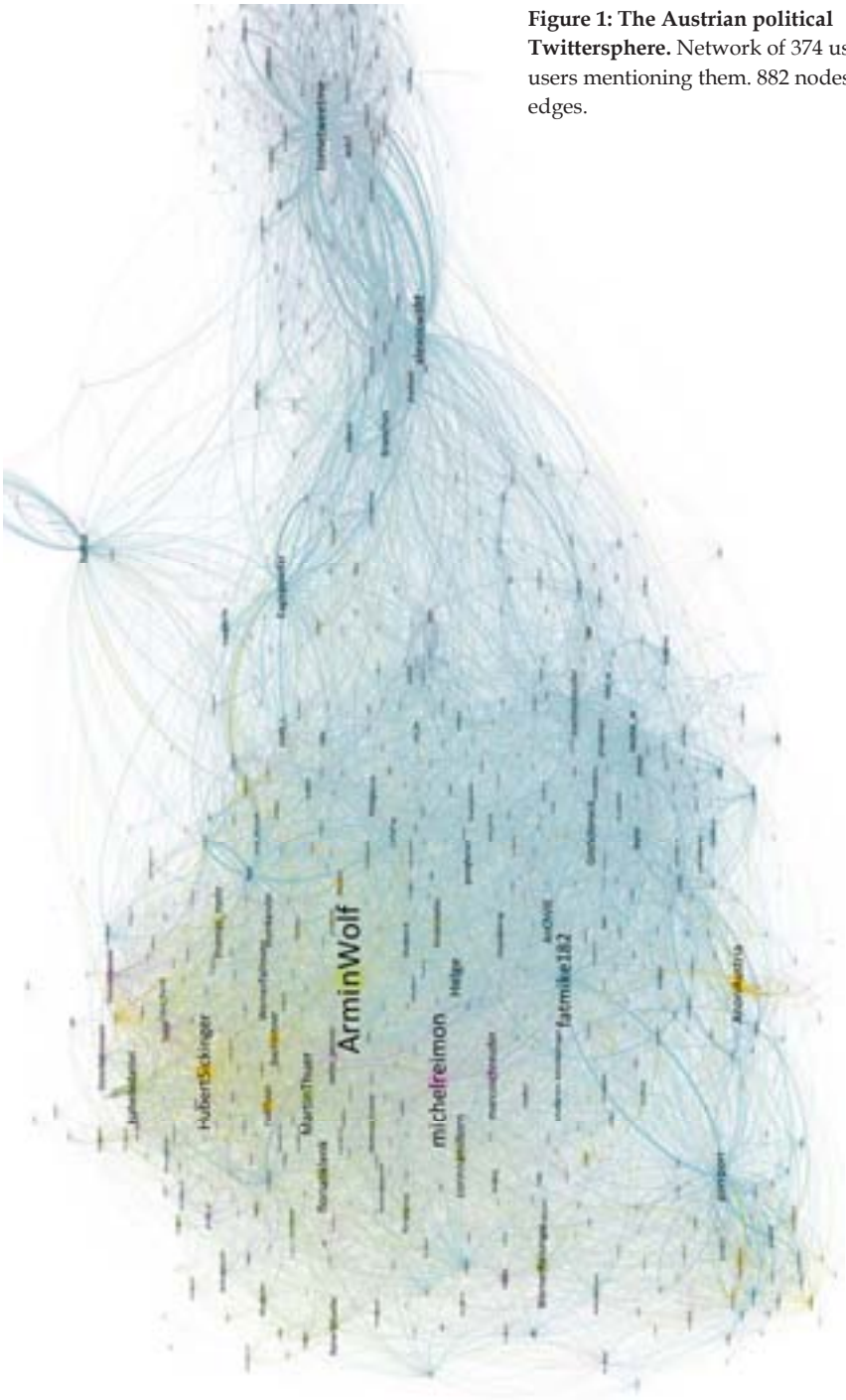


Figure 1: The Austrian political Twittersphere. Network of 374 users and users mentioning them. 882 nodes, 24384 edges.

Figure 2 shows which groups are mentioning other groups. Interestingly, journalists mention journalists, politicians and non-professionals quite often, while politicians and other professionals do not mention journalists very often. Both politicians and other professionals mention politicians and non-professionals very often. Accordingly, both journalists and politicians may be seen as having conversations among themselves more than they do with other groups and journalists. However, they sometimes mention politicians when they distribute news about a political incident or ask a question. However, all professional groups seem to be open to conversations with people from outside the political system, a vast majority of mentions goes to “citizens” or users outside of the network.

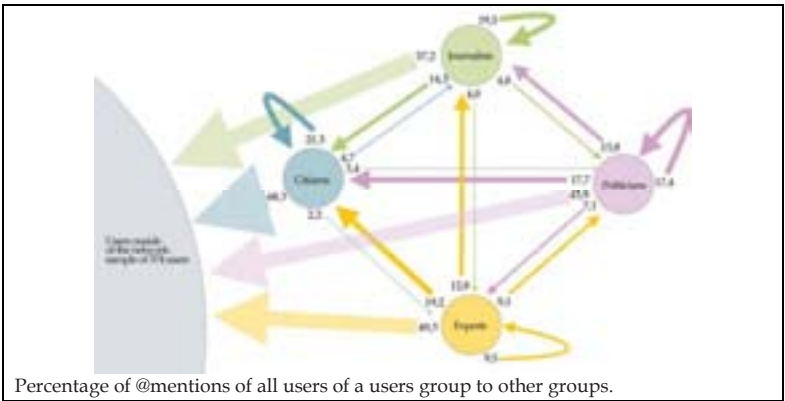


Figure 2: User groups mentioning other user groups

Additionally, users do not necessarily mention people from the same groups they were mentioned by. This may be explained by the fact that we do not distinguish between direct @mentions and Retweets. If someone was mentioned by a particular group more often than s/he mentioned this group, this could mean that s/he was retweeted often by those users but did hardly have any conversations with them. If we only count the number of mentions, we have high numbers because people have long and/or recurring conversations with a limited number of users. Thus, we did another analysis and compared the number of mentions of a user with the number of individual users mentioning someone, shown in table 1.

Table 1: Ratio of the number of messages and the number of users mentioning users of a professional group

	Ratio	100 mentions come from
Politicians	1 : 2,02	50 different users
Journalists	1 : 2,00	50 different users
Experts	1 : 2,15	47 different users
Citizens	1 : 3,18	31 different users

We see that the users mentioning another one are quite diversified. For politicians and journalist, the number of users mentioning them is about half the number of @mentions. Thus 100 mentions



come from 50 different users. Compared to political professionals, citizens talk more to each other – they tend to “chat”, while professionals are more likely to have “Q&A”-style conversations.

## 5. Conclusion

The transparent nature of Twitter and new methods to analyse and visualize network data allow for new approaches to track in-media interactions of actors within a certain discourse sphere. This case study on the Austrian political Twittersphere is a first attempt to map interactions of a particular group of interconnected users based on a topic they communicate about and their profession. It adds some indicators to questions on the changing nature of political participation from a structural, macro-sociological perspective:

Politicians, journalists and other professional actors within the political system use Twitter to interact both with actors of their own profession and other spheres. Politicians score highest with regard to conversation among themselves. Nevertheless, conversations are also quite open to the participation of users from outside the political system; about third of all messages including @mentions by professionals mention political non-professionals. There are, however, huge differences between users within the groups as the network diagram shows. A good part of professional users are forming a highly connected cluster, whose members are discussing with each other, while others connect to citizens much more. Other clusters, noticeably a political left-wing and a social media and marking cluster, are also well distinguishable from the rest of the network.

With regard to the question on the changing nature of political participation, the conclusion is mixed. On the one hand, central actors within the political Twittersphere are mostly well-established, political professionals: Journalists, experts and politicians. They form their own, dense network within the broader sphere. On the other hand, non-professionals may well join the conversations of the political centre, but it depends on with whom of the elite sphere of political professionals they interact with. Even though they might be ignored by some users, they get involved via users acting as “bridges” in the network, such as @arminwolf and @corinnamilborn or other citizens close to professionals like @helge or @fatmike182.

If our basic assumptions about received @mentions and number of users mentioning being an indicator for a user’s importance are reasonable, we could conclude that Twitter used for political communication is another arena for already established societal actors, but not exclusively. According to our results it also helps broadening the public debate, because chances for ‘ordinary’ citizens to get in touch and discuss with the establishment of political communication are much higher on Twitter than in traditional contexts of interaction.

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# What kind of activist are you?

*Positioning, power and identity in political online activism in Europe*

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**Abstract:** *In this article we examine the different forms of activism using information and communication technologies as a means to represent different political positions. Within the framework of radical democracy we develop a typology of contemporary activism as a form of political participation. The results are based on three qualitative case studies of political activism: [1] middle-class activists in Sweden fighting to save their bathhouse; [2] student protests in Austria; and [3] anti-fascist protests in East Germany.*

**Keywords:** activism, Internet, radical democracy, contestation

**T**oday activism is marked by extensive use of digital communication platforms such as Facebook, Twitter and YouTube (see Ellison & Boyd 2007; Mattoni 2008; McCurdy 2009; Uldam 2010). As far back as 2002 Rheingold drew attention to new possibilities of organization and coordination with mobile and digital media in his concept of SmartMobs. Developments in media and communication technologies do not only have an impact on protest coordination and mobilization but also on the way activists present themselves and negotiate their political identity. In this paper we will address the issue of activist-identifications as a form of political participation from a contemporary European perspective based on three cases of political activism where digital communication played an important role: [1] middle-class activists in Sweden fighting to save their bathhouse; [2] student protests in Austria; and [3] anti-fascist protests in East Germany.

By examining the three cases we develop a typology of online activism within the framework of radical democracy (Laclau & Mouffe 1985; Mouffe 2005). The main question is: how do activists negotiate their political identity online in comparison to their opponents and which types of activism are reflected in these representations? Thus, the focus of this paper is on meanings and identifications in contemporary European activism reflected in digitally mediated discourse.

## 1. Activism as Citizenship in a Political Community

To understand the representation of different forms of contemporary European activism we discuss political activism in the social and discursive field of the political where hegemonic power struggles take place (Laclau & Mouffe 1985; Mouffe 2005). These power struggles are closely related to the concepts of political participation and citizenship. The concept of citizenship consists of three components: participation, membership in a political community and rights & duties (Bellamy 2008). Participation within this framework is tightly entangled with the other components. Citizenship ideally entails a particular form of identification with the political community in which citizens participate and are conceived as members (Dahlgren 2009). Consequently, identity can be understood as a motivator behind participation, i.e. participation in order to form and reform individual identity and to develop feelings of belonging (Svensson 2011).

Computers in general and the Internet in particular redefine the way human beings negotiate their identities (Turkle 1995). Social media sites seemingly enhance processes of identification and self-representation since users are able to explore their multifaceted identity and form new relationships online (Svensson 2011). These processes are closely related to political participation online aimed at finding and exploring common causes, as well as challenging power elites, societal norms and values (Bennett & Amoshaun 2009). In this way, the individual level of identification with political opinions is interlinked with the socio-cultural level of mass mobilization and collective action. In other words, for people to act politically they need to identify with a community and a cause that provides individuals with an idea of themselves that they can value. Bakardjieva (2011) talks about mundane citizenship in this context as firmly rooted in individual experiences but expanding beyond these through collective identification. Such processes are strongly related to ideological beliefs, core values within political communities and to the expressive side of political activism (van de Donk et al. 2004). Rather than territoriality, it is around shared values, beliefs and norms that political communities are formed today (Bruns, 2009; Jenkins 2006; Shirky 2009), even though physical space/location still plays an important role for value creation and maintenance of norms.

Power in communities is at play in different ways: through hegemonic power struggles between communities claiming supremacy (Laclau & Mouffe, 1985), and within communities through socialization, shared norms and values. Even though these mechanisms of power are related we will focus on the first one here. Establishing a communal *We* implies a distinction in relation to *Them*. Hegemonic power struggles are centered around such processes of identification (Mouffe 2005). Power and conflict are thus linked to the political on different levels. Since the political refers to the organization of human co-existence (see Arendt 1998/1958; Dewey 1927; Foucault 1994/1988), political power struggles have to do with conflicts over interests and resources in the organization of society (Dahlgren, 2009). Hence, the political has a normative dimension since the organization of a democratic society is based on principles such as equality and equal division of society's common goods (Rancière, discussed by Arsenjuk 2005). However, following Mouffe (2005) we should not be misled to believe that consensus on this division ever could be fully achieved. Essential in her understanding of political participation are conflict and hegemonic power struggles between different groups and communities. Through construction of "frontiers which separate" (Laclau & Mouffe 1985), different communities in political struggle are based on identification with a certain political identity which then entails the identification of the *Other*.

Through outlining a normative concept of “agonism” Mouffe (2005) seeks to establish the *Other*, not as an enemy to be destroyed but as an adversary to be acknowledged. The task of democratic politics, according to her, is to bring different poles to the center, accept different positions but not with the idea that consensus will ever imply equal power distribution or that it can be fully achieved. We, therefore, define political activism as based in challenging power relations within the political formed around we/they distinctions, i.e. different political positions. Political activism consequently works through the circulation of struggle, which permits people to struggle with their adversaries, both against the constraints of the system and for the alternatives they envision – separately and together (Cleaver 1993). By analysing the construction of such frontiers in three different contemporary European cases, this paper concludes with a typology of online activism based on notions of identity, power, and positioning in discourse.

## 2. A Short Note on Methodology

Discourses are social constructions of possible worlds manifested in text and have to be studied in their relationship to each other, i.e. dominating, competing, cooperating, etc. (Fairclough 2003). Communities can have power over other communities by controlling them (van Dijk 2001), and activists try to challenge existing power relations by constructing a common enemy against which struggles are directed. In Harré and Moghaddam's (2003) work on positioning theory, processes of identification are viewed as temporary and dependent on both context and individual agency. To think of we/they identifications as acts of positioning underlines power relations between communities, as well as the role of discourses for understanding agency, power and identity. Harré and Moghaddam (2003) delineate a positioning triangle consisting of speech acts, positions (or identities) and story-lines (or discourses). In our case studies, digitally mediated speech acts of activists provided information about the we/they identifications (positions) as well as the discourses in which they were performed.

The following three cases show a high level of variation in their form and size, especially in terms of the actors involved in the events. This variation provides us with a diversity of political positions and, by extension, with a variety of processes through which the boundaries between *Us* and *Them* are built. In all these cases information and communication tools were extensively used. All the studies have an ethnographic component in the sense that we have been involved in each case of political activism to some degree. However, this article is not action research since we aim at understanding the struggles of these groups from the theoretical point of view presented in the previous section. To gather data a range of methods have been used, from participant observations to interviews and content/document analyses (for a more detailed discussion of the methods used in the three cases see Svensson, 2012, Edelmann et al., 2011, Neumayer, 2012).

## 3. Activism in Southern Stockholm to Save a Local Bathhouse

In 2009 a group was formed to save the community-run (but city-owned) bathhouse from demolition in the middle-class suburb of Aspudden. Online petitions were circulated, a Facebook-group, Twitter-feed, SMS-list and blog were used by the group together with more traditional offline activities. The focus here will be on the battle for the bathhouse and the online forms of communication among the activists in the group. The data for this research was collected through interviews and participant observations online as well as offline.

The most obvious constellation of *Us* and *Them* in Aspudden was made along a discourse of *we*,



the ordinary folks, against *them*, the politicians, detached from the people who they are supposed to represent. One typical example comes from one activist saying that it was not normal that politicians wanted to destroy a local meeting place that many people wanted and needed and thus ignoring the wishes of ordinary people. Some activists were very passionate when they positioned themselves in this discourse, describing for example personal and family hatred towards responsible politicians. On the blog, activists published YouTube videos mocking a Liberal politician chairing the city district to which Aspudden belongs. On the whole, politicians were described as enjoying themselves rather than representing the people. This discourse with its positioning of ordinary people against corrupt politicians is summoned on this blog post, after the bathhouse eventually was destroyed<sup>1</sup>:

*"We have decided not to continue with our struggle. We have children to take care of, we have employment to return to and household duties to fulfill. Those politicians whose job it is to represent us refuse to listen and instead of dialogue they chose to command the police"*

In this quote the distinction between activists and politicians becomes very clear. However, this we/they positioning was often more nuanced than the bipolar division between ordinary people against corrupt politicians. Most notably the activists made use of a participatory democratic discourse in order to position themselves as engaged citizens exercising their democratic rights. Many of the activists explicitly referred to themselves as participants wanting to change society by protecting it from politicians who no longer understood what "real" democracy is. On Facebook, this process was presented as the activists fighting against "*the democratic deficit*" of Stockholm.

The activists' political identities seemed to be especially connected to bad political decisions. The political process leading to the destruction of the old and picturesque Klara-neighbourhood in the 1970s was one political decision highlighted by some activists as spurring their political awakening. However, not all politicians were constructed as corrupt or enemies. In accordance with the participatory democratic discourse the activists commonly referred to the Green Party as being more bottom-up and, consequently, playing the role of a watch-dog *vis-à-vis* the ruling majority. Frequently it was right-wing politicians who were described as the *Other*. In Twitter and Facebook this positioning was expressed as "*the right-wing majority*" or "*the conservatives in power*". The Liberal Party, one of the members of the conservative coalition ruling Sweden, was specially targeted as the main adversary, not the least since both the chair of the city district and the politician in charge of sport and leisure were liberals. "*Liberals hate leftist people*" as one activist proclaimed, clearly positioning activists as left-wing and the Liberal party as right-wing.

There were activists who were part of, or in the process of, joining the Green Party. However, in line with the participatory democratic discourse of engagement they made clear that it was out of the question "*to just sit in a committee and discuss*". They wanted to do something, to act, to engage in "*real projects*". These statements further underline the importance of the participatory democratic discourse among the activists in Aspudden. One of the activists was also a politician, representing the Green Party. He performed an interesting balancing act between representing a politician position regarding the activists as short sighted and representing a kind of not-in-my-backyard participation – and fulfilling an activist position in which demands for "*real*" participatory democracy in the neighbourhood were ignored by the ruling conservative coalition.

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<sup>1</sup> Original quotes translated by the authors. --

The activists were aware of how they were positioned by the *Other*, i.e. the right-wing politicians, as militant left-wing extremists. Strategies to contest this position could be observed, often by using the discourse of participatory democracy to position themselves as active citizens. However, the activists also used the adversary's discourse in their favour, to position themselves as peaceful demonstrators and the politicians as undemocratic and authoritarian (due to the use of police forces and their excessive violence towards activists). The Sport and Leisure Committee was also described as "*incredibly militant*" for destroying the bathhouse, as opposed to activists who "*took care of*" it. It was also a conscious strategy to term the activists staying in the bathhouse 24/7 not as occupants, but as lifeguards (authors translation: badvakt, literally bath-guard).

The bipolar friend-enemy positioning also reflected different levels of engagement. Not all who participated in the protest considered themselves as activists but rather as citizens being politically engaged. Some of the activists clearly expressed their distrust towards politics in general, while other activists were actually involved in party politics. The police, described as the forceful right arm of the politicians in power, was a group that frequently appeared in the activists' discourse. The involvement of the police discouraged some activists to show their physical support in the bathhouse. Instead, they supported the protest online and showed their solidarity with the activists engaged in physical action. Other activists did not think that talking and deliberating was enough. These activists felt compelled to act, occupying and guarding the bathhouse, in spite of the likely consequences of police eviction and prosecution.

#### 4. Student Protest in Austria for a Better Higher Education System

Our second case analyses the Austrian student protest movement known as *unibrennt*. In October 2009 hundreds of activists occupied the largest lecture hall of the University of Vienna in order to demonstrate for better study conditions and against the commodification of education. Social media tools and mobile phones played an important role for mobilisation and coordination. The occupations ended after two months when lecture halls were evicted by police forces. The data used here is part of a bigger data-set including communication on social media channels, websites, video channels and news coverage as well as results from an online survey conducted by one of the authors during the protests. The following analysis focuses on the construction of identity, friend-enemy constellations and processes of identification enhanced by new media usage.

The protest movement represented a heterogeneous target group (Edelmann et al., 2011), which on the one hand enabled a lot of people to identify with the movement, but also led to various sub-goals within the movement. A common collective identity within the movement was mainly constructed through processes of disapproval. Students were frustrated by the current study conditions and the higher education system. By posing the current status as something to act against, several adversaries were created. The Bologna-process, as a structural, symbolic instance of the *Other* was representative of the commercialization of education in Europe:

*"The university does not belong to either managers, bureaucrats, or operatives. It should be everyone's!" (Activist, Interview)*

A very obvious friend-enemy constellation during the student protests was the Federal Minister of Science and Research (Johannes Hahn) opposed by student groups who identified the politician as a common enemy. Especially in social media channels it became clear that politicians with a certain agenda for the educational sector were the main adversaries, which was observable in

different cases of hate speech (e.g.: *“Pluck the rooster/Der Hahn gehört gerupft!”*, as the minister’s name translates as rooster) and parodies or ironical statements (*“LOL!!! Hahn states: It is not my fault!”*).

In the student protests not only very explicit statements but also expressions of political identification on a more symbolic level were observable. Assuming a relation between a clamorous struggle and its counter-images and the conferred identity, this obviously led to various identification opportunities that contributed to speed up mobilization despite a diversity of political positions among the participants. Although the absence of a clear common enemy can be a problem in political activism, in this case the selection of adversaries displayed by the protests turned out to be attractive to frustrated students, who mobilised against conservative politicians and neoliberal politics in general. The intensity of the protest was, therefore, not only a reaction to the political atmosphere but also to the climate of conflict already existing within the university system. Moments of conflict can be fruitful for identity building as, in particular, students had the feeling that they had been deprived of their voice within that system for a long time. This silent growth of dissatisfaction with existing power structures seems to have provided a fertile ground for the protests in the Austrian case.

Looking at how activists were positioned *vis-à-vis* the *Other*, both mass media and a counter-protest movement played a crucial role. The group of protest adversaries consisted mainly of students who strongly criticised the forms of activism, like occupying lecture halls which would prevent other students from studying. Actions by these counter-groups could only be observed online, in spite of the fact that these channels reached high numbers of supporters. Debates in this group were largely characterized by generalizations, insults and a tense atmosphere between supporters and opponents of the occupations:

*“Just look at these blockers, greenies, rastas, punks, anarchists, work deniers, German and foreign students who seek to study for free at our uni!!! Clean the Audimax!!!”* (Facebook)

Opponents furthermore preferred labels that identified protesters as belonging to the extreme left-wing of the political spectrum. This position was also being taken up by the mass media. The most influential tabloid newspaper, *Kronen Zeitung*, referred to protesters as *“extreme left-wing-Green-Communist student slobs”* and considered their claims completely utopian (Heissenberger 2010), whereas the first national newspaper, *Die Presse*, described the activists as *partisans* and *quixotic students*. Media and counter-protesters have been supported by leaders of Austria’s right-wing parties who used terms like *“leftist anarchists”* (BZÖ) or *“wannabe-revolutionists”* (FPÖ). Amongst the strategies to contest these positions, the live video stream from the occupied Audimax was used to invalidate mass media articles by providing first-hand information. However, mass media organizations cannot be seen as direct adversaries of the protests despite a mainly negative coverage during the first stage of the protests. In order to communicate with the public, activists were still dependent on the dominant discourse shaped by the mass media in Austria, while social media channels provided an additional and more personal perspective.

The increased usage of online media even enhanced the spectrum of engagement: results of an online survey that has been conducted during the student protests show that 84% of the respondents followed the students protests online whereas 60% took part in demonstration. A remarkable 43% of the respondents said that they participated in occupations. Online activism on one hand promoted reciprocal exchange and created bonds with those who couldn’t participate. On the other hand, technical alternatives might have dissuaded people from taking part in civil

disobedience actions such as the occupation of the lecture hall, for instance. Group norms were not only collectively shaped, but could also, due to a transparent information policy enabled by new media, be influenced by outsiders. Consequently, rules and regulations for upcoming actions were open to feedback. This transparent process enhanced identification with the movement, together with slogans such as “*One out of many*”<sup>2</sup>. As with the other cases examined in this paper, not everyone who participated in the movement seems to have identified as an activist.

## 5. Anti-fascist Protests in Germany

This case focuses on anti-fascist protests in East Germany and consists of three sites: [1] several marches planned by neo-Nazis in Leipzig, Germany, on October 16 2010, and mobilization for blockades; [2] neo-Nazi marches in Dresden on February 13, 2011 and February 19, 2011; [3] blockades in and around Dresden by NGOs, civil society groups and anti-fascist groups from all over Europe. The data-set includes communication on Facebook, Twitter, YouTube, websites, blogs and news media coverage. Additionally, informal interviews and participant observation methods were used to better understand the discourse around the events. The analysis here focuses on the different political positions articulated in the protest events, the power relations between the groups and the mobilization of people across the political spectrum for a common cause within democratic pluralism.

The obvious friend-enemy constellation in the anti-fascist protests is the neo-Nazi groups. However, within the discourse about the events it becomes clear that the blockades against the marches are formed by people with very different political positions, such as anti-fascists, anarchists, citizens, politicians (usually rather left-leaning), NGOs, representatives of Universities and also the church, which engages in counter-activities such as organizing commemorations. During the blockades the bipolar division between the groups is clearly expressed as, for example, by the Twitter stream organized by a hashtag that clearly separates the two positions. However, a more nuanced discussion takes place after the events. One criterion that is frequently discussed to differentiate core activists from “civil society” is the readiness to act in civil disobedience and to expose oneself to a high level of risk. Criticism is raised by both sides: by core-activists since they consider the blockades and acting in civil disobedience as the only way to stop the neo-Nazis; and by the civil society groups due to the readiness of some activists to engage in violent action. There is also a difference in terms of self-definition. “Citizens” are necessary to get a significant number of people in the streets, as well as to increase the number of members of a Facebook-group or to contribute with donations, tweets online and posts and comments on YouTube. This kind of citizens do not necessarily refer to themselves as activists, although they consider that they are as politically active in supporting the cause as anyone else. This becomes especially clear in the Leipzig case where the anti-fascist group *Roter Oktober* and the civil society network *Leipzig nimmt Platz* co-existed to resist the neo-Nazis. *Leipzig nimmt Platz* described itself as a cross-section of the whole political spectrum in comparison to the anti-fascists who clearly position themselves as left-wing. Although criticism was raised after the events due to the lack of clear political statements during the mobilization, the anti-fascist group concluded that it was necessary to overcome these differences and unite for the common political cause (*Roter Oktober* 2010).

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<sup>2</sup> <http://common-shirts.org/motive/unibrennt/> [Accessed December 11, 2011].

Another group that is often depicted as an enemy in textual representations produced by the activists involved in the blockades are the police as the authority that has to protect the marches: *"Not an unusual unity: neo-Nazis and police unite to fight democracy #19februar #polizeigewalt"*<sup>3</sup> (Twitter, Dresden). Activists involved in the blockades act in civil disobedience and, thus, struggle against authority. The police, as a representative of authority in relationship to the activists, are part of the traditional power relations when acting against civil disobedience. In this case, the struggle over domination can only be successful if the counter-protest outnumbers the neo-Nazis and the police and, thus, is able to block the march. The need to mobilise this critical mass unites different political positions into a clear friend-enemy constellation.

The event also gained the attention of the mass media and started to be part of the societal discourse in general. The political positions in the different media are reflected in the discourse on social web platforms about the events: *"Dear Aljazeera, please send us reporters, our media are either censored by the state or pimp their ratings #19februar #polizeigewalt"* (Twitter, Dresden). Media are usually addressed as being different from the activists. However, these boundaries are less clear when alternative media are included. Publishing on alternative media platforms that reported about the events can also be a form of political activism and is certainly a form of political engagement. Some of the journalists expose themselves to a high level of risk or act in civil disobedience by reporting about the events from a critical perspective. The different positions are related to power relations that exist between the dominant discourse in mass media that construct the public knowledge about the events and alternative media that give a different perspective on the events, usually with a certain political position.

A central question in the discussion is the legal justification of demonstrations by groups with an anti-democratic agenda based on the democratic right of freedom of expression, as compared to the blockades that were officially banned. Right-wing groups use the right for freedom of expression to justify their march. On their mobilization website for the event in Dresden on February 19, 2011, they say: *"[...] we will fight for our own freedom. This includes freedom of assembly and freedom of expression."* The political position of these groups becomes clear in digitally mediated discourse. Videos related to the events with titles such as *"Good Work! National Socialism now!"* or *"Heil Hitler! You are still among us"* were published in YouTube and became part of the discussion. This case shows that *the political* also includes voices that cannot be considered constructive in democratic pluralism since their aims are undemocratic and their supporters demand a system that increases domination and silences other voices, i.e. fights democratic pluralism.

## 6. Activism and Identity in the political

In the three cases discussed above, activists developed a counter-discourse that aimed at challenging power. By an analysis of digitally mediated discourse in each of the three cases we identified a set of criteria within the framework of radical democracy:

*Activism and participation:* In the three cases political participation took place outside of the established power centers of representative democracy. Activism within the framework of radical democracy and participation can be understood as part of the struggle to renew/develop recognized forms of citizen participation. Through the participatory democratic discourse in Aspudden, activists could demand to be taken seriously, exercising citizenship but from an extra-

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<sup>3</sup> All quotes originally in German are translated by the authors.

*parliamentary* position. Mouffe (2005) argues that contemporary democracies cannot include all political positions since deliberation and decision-making always implies to favor one position over another. Activism may thus be understood as a coalition of excluded opinions, views and expressions that no longer fit in the parliamentary political arena. In doing so, activism re-establishes that *Other*. Following Mouffe, the established institutions of democracy should be able to cater to a multiplicity of voices.

*Political positions:* Activism is happening through identity performances positioning one group in comparison to another. The role of the *Other* can be attributed to another activist community, as in the case of anti-fascists protests, to politicians, such as in southern Stockholm or to the counter-protest group in Vienna. In the course of a protest different political positions can be temporarily united to fight for a common cause as in the Dresden case where civil society groups, NGOs, politicians, citizens of Dresden and anti-fascists fight against neo-Nazis. In the Austrian case, university faculty members fight together with the students to improve study conditions. They all might have different agendas that determine why they engage in the events but fight for a common cause. Sharing political positions through digital communication platforms can support cooperation and community identifications, as well as mobilization and coordination of collective action. This process, however, requires that activists share beliefs and values and are aware of these (Shirky, 2009). In democratic pluralism we also find voices that are more difficult to accept, since they promote undemocratic values. As Cammaerts (2009) argues, it is difficult to include these extreme perspectives in the concept of pluralism particularly since they use the right of freedom of speech to incite hatred and they are characterized by “*an agonistic agenda towards democracy and its core values*” (p.558).

*Adversaries and enemies:* Whether the current flourishing of digital activism could be regarded as agonism or antagonism in Mouffe's understanding would depend on the context, the process of contestation and the political positions proposed (i.e. as friend-adversary or friend-enemy relations). The we/they constellations do not always turn out in “conflictual contention” in Mouffe's terms but can support fragmentation and, thus, make political positions more extreme as in the anti-fascist protests. The Dresden case shows that both antagonism and agonism are at stake and that these constellations are liquid rather than stable. The bathhouse activists in Stockholm wanted to be heard and listened to, and when this failed, the conservative municipal majority was increasingly portrayed as the enemy, something that resulted in clashes with police forces during the eviction of the bathhouse.

*Readiness to act in civil disobedience:* Although the clear identification of an adversary, often in a simplified bipolar friend-enemy constellation, is suitable to mobilize a critical mass of people, we see in our cases that there are more nuanced differences between the groups involved. One aspect that differentiates them from each other is the strategies they use to challenge power. The readiness to act in civil disobedience in all the cases is an important criterion that differentiates the groups from each other and determines their self-definition as political activists. Although citizens who support a cause by signing an online petition, joining a Facebook-group or even physically taking part in a demonstration feel that they engage politically, they would not necessarily identify themselves as activists, as compared to core-activists who deliberately use civil disobedience to contest domination.



## 7. Towards a Typology of Contemporary Political Activism

Based on the criteria developed above there is a difference between expressing political opinion as part of identity and self-representation and to be ready to act in civil disobedience to the extent of exposing oneself to surveillance and eventually punishment. Hence, we need to consider if activists are ready to engage in civil disobedience. This forms the first axis in our typology of activism in *the political*. Mouffe's understanding of adversary versus enemy in her discussion of agonism vs. antagonism forms the second axis of the typology. Along these axes we identified the following types of activists: *the Salon Activist*, *the Contentious Activist*, *the Law-Abiding Activist* and *the Gandhian Activist*.



Figure 7: Typology of contemporary activism.

The *Salon Activist* clearly identifies the *Other* as an enemy, who should be fought against and be eliminated. This type of activist is ready to engage politically within the legal framework but is not ready to engage in civil disobedience. They would identify themselves as being politically active but not necessarily as activists. Although they might support activists and their causes they would not expose themselves to a high level of risk. The label *Salon Activist* indicates the engagement within the secure walls of legality. *The Salon Activist*, even though he or she openly articulates enemy exclusion as part of his/ her political identity, stays at home and hence mostly within what is legal (hate speech not included).

The *Contentious Activist*, in comparison, is ready to engage in civil disobedience and violent action to achieve social change and to fight domination. This type of activist is aware of the risk that is involved in civil disobedience and is ready to face legal prosecution. They do not consider the *Other* as an adversary, i.e. someone that has to be listened to, but as the enemy who has to be eliminated. The readiness to act in civil disobedience is not only carried out offline, by engaging in some violent action for example, but also online, by illegal hacking for example. *The Contentious Activist* identifies with the role of an activist and with the aim of fighting the enemy. The readiness to act in civil disobedience can be used strategically to radicalize a political position, i.e. to develop frontiers to the enemy.

The *Law-Abiding Activist* is located on the opposite side of the matrix, i.e. he/ she respects the *Other* as an adversary that should be listened to and whose opinion has to be valued in discussion, even though it is contrary to his/ her own political position. This type of activist stays within the legal boundaries and does not act in civil disobedience. *The Law-Abiding Activist* has a strong

political opinion, is politically active, has a clear political position and engages in political action and discussion. He/ she, however, is not ready to engage in civil disobedience and most likely does not identify him-/ herself as an activist, despite having and voicing a clear political opinion.

The *Gandhian Activist* is situated in the fourth quadrant of the matrix. Inspired by the example of Mahatma Gandhi's, this kind of activist is characterized by a readiness to act in civil disobedience in order to fight injustice, while at the same time accepting the *Other* as an adversary, that is, someone having the right to exist and expressing a valuable political opinion that is worth to take incorporate in a serious political discussion. This indicates a high level of readiness to act in civil disobedience and to struggle for social change but at the same time accepting the pluralism of opinions. This type of activist risks punishment but within a normative framework that accepts the *Other*. Important to keep in mind here that the civil disobedience of Mahatma Gandhi was always non-violent as it tends to be if regarding the *Other* as an adversary rather than an enemy.

These four types are not static and can differ depending on the political cause activists are fighting for. There is an array of different subtypes of activists to be delineated and defined in each field. In the field of *Contentious Activists*, for example, we find *Ritual Activists*, in which actions themselves, rather than outcomes, are the most important part of their engagement. We also find activists who do want to change society for what they consider to be better, but their improved vision of society does not accept the *Other* as part of it. It can be problematic to wholly dismiss this kind of activists when the *Other* they want to exclude from society is a group that embraces undemocratic opinions such as the neo-Nazis in Dresden. The political position of an online community and the societal context in which it is operating are important elements that have to be considered. One's own political position also influences, for example, the readiness to engage in civil disobedience and, thus, the same individual can adopt different forms of activism in different protest events depending on the political cause. Consequently, political positions represent the contexts in which the different types of activism develop. There are certainly other dimensions and categories to consider for a typology of contemporary political activism. The aim of this typology, however, is to initiate a discussion that ceases to label as activism every form of identification with a political cause online and that moves towards a more nuanced perspective on political action in contemporary democracies.

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# Bottom-Up Movements

(peer-reviewed)





# Role of social media in political mobilization in Russia

*On the example of parliamentary elections 2011*

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**Abstract:** *This article examines the transformation of the online public sphere in Russia and the democratic impact of the Russian web with a focus on the analysis of the protest movement after the legislative elections of 2011. The author argues that the long underestimated democratic potential of RuNet has undergone rapid development, not only due to the political conjuncture, but also because of the emergence of a new generation of young “digital natives” coming into political activism. The author also analyses specific features of the online social mobilization in Russia and makes conclusions about the perspectives of deliberative discourse within the Russian web.*

**Keywords:** Russia, social media, political mobilization, democracy, digital natives, public sphere

**I**n the late 1990s and early 2000s the rise of Internet was praised as a chance for democratization in Russia via free access to political information and pluralism of opinions (Rohozinski 1999), however, by the late 2000's this potential continued to be viewed as unrealized. Sarah Oates wrote 2008 based on research of the Russian blogosphere that

*“despite the presence of the internet, Russia has remained a relatively authoritarian state in which political parties and grass-roots organizations have had little role to play” (Oates, S., 2008, p.2).*

She argues that the Internet in Russia is being influenced by the norms of the traditional media system and can be better understood via the conception of national models (Hallin and Mancini, 2004) rather than via the Western ideas of the democratic impact of the Web. Reuters Institute for the study of journalism even named their article based on the examination of the Russian blogosphere “The Web That Failed” (Fossato, 2008) referring to the same problem of the underdevelopment of political discourse in the RuNet. But at least since the Russian parliamentary elections 2011 we can speak about the new stage of development of the Russian public sphere in the Internet. Many experts and journalists immediately after the first protests of opposition drew parallels to the Arab spring and talked about a “white revolution” in Russia, but these comparisons turned out to be too rushed: whereas the tools such as social media were used in both cases, there are crucial differences in the respective political situations and the structure of societies in Russia and the Arab countries. In this paper I will examine the specific features of the

online political discourse in Russia and its mobilization potential referring to the protest movement in December 2011 as an example.

The protest wave in Russia was triggered by the big amount of information made available through social media exposing instances of fraud during the parliamentary elections that took place on 4 December. Several months before, top-blogger Alexey Navalny and his allies had started a campaign encouraging citizens to register as official observers for the elections and to track all the possible violations of election law with their cameras. Partly as result of this offline engagement of people, a large number of fraud reports filled RuNet starting during the day of the elections and for several days after. According to the official results, the pro-Putin party "United Russia" gained 49.3 % of vote (which is a 25% reduction since the 2007 elections), but according to the claims of the opposition in the Internet this result in reality was much lower. In Moscow for example 'United Russia' officially received 46.6%, but according to exit polls the figure was closer to 25-27% of the vote. (Golosov, 2011) Mass demonstrations against the falsification of elections in big Russian cities followed. The two biggest took place on December 10 in Bolotnaya Square and on December 24 along Akademik Sakharov Avenue gathering approximately 50 000 and 100 000 people, respectively, the largest protest wave in Russia since the fall of the Soviet Union (it must be mentioned that official figures and that of the opposition vary enormously). Protesters were mobilized mainly via social networks sites such as Vkontakte and Facebook – a fact that finally demolished the argument that the Russian web was ineffective at mobilizing citizens. Although about 30 000 people registered to the event on Facebook, there was a great deal of skepticism as to whether the protests could make a spill-over from online-communication to offline-action.

## 1. Portrait of the protesters: Generation Z as a motor of the movement 'For Fair Elections'

Although the Russian society is highly fragmented, it is nonetheless possible to speak about the common atmosphere of a crisis of political legitimacy in the country that was indicated by the elections results (even the official figures of votes for pro-Putin party were 25 percent lower than 2007). This corresponds with the global trend of declining trust in political elites which leads to a "processes of counter-power linked to social movements and social mobilization" (Castells, 2007, p.246). Until recent years Russia remained rather an exception in this global trend of declining trust in the Government, a fact which correlated with the relatively low interest of citizens in the Internet as a source of political information and as a result the underdeveloped democratic impact of the web. But the situation began to change rapidly starting in 2010 and one of the main reasons was obviously the appearance of the "new user". On the one hand, as everywhere else in the world, there is an increase of Internet literacy facilitated by the ease of access to online communication and the ability to self-publish content. The so-called "digital natives" or "Generation Z" (Hawkins P., Schmidt L. 2008) – young people who don't remember life without Internet and who were media-socialized already in the digital age, have come into their own. On the other hand, the Russian "Generation Z" has the additional important feature of being born in post-soviet Russia and already politically socialized in the frame of democratic rhetoric. That's why the growing-up of this generation is even more significant for Russia as a country of democratic transition than it is for established democracies. This is a historic "switch" of generations that in my opinion can be compared with that of the 1960s in the western world, in particular with the situation in Germany. Example post-war West Germany: the country was

established as a democracy in 1945, but in the first years it was mostly just the change of the political form, as far as numerous functionaries, teachers etc. from the old regime were engaged in the new democracy. It was only the so-called "generation of 1968" (young people already born in the new Germany) who was at last ready for the true democratization of society. As for Russia, we can observe a similar process of transition to the democratic political system.

Laura A. Henry in her book "Red to Green. Environmental activism in Post-Soviet Russia" writes about the re-production of soviet patterns in the modern Russia and the perspectives of the future development:

*"Organization leaders and political judgments are an important way in which the soviet experience continues to shape post/soviet state/society interactions. ... more specifically, activists redeploy their preexisting beliefs, networks and resources in the post-soviet context to construct organizations and build relationships. ... Leaders also are engaged in a constant process of learning and adaptation. Therefore, the influence of the soviet legacy, which was very powerful in the first fifteen to twenty years of the post-soviet experience, will likely fade over time. However, the new organization constructed by these activists establish new constraints on mobilization."* (Henry 2010)

Sarah Oates describes the state of the democratic institutions in Russia in the similar way as Henry:

*"There is the appearance of democratic institutions in form, including a range of media outlets with various types of ownership, elections, parliament, and a popularly elected president, but these institutions lack democratic content."* (Oates, 2008, p.5)

Apparently it was this lack of democratic content that became the main reason for the rise of discontent among the young Russians. As the analysis of profiles from social networking sites of those who were registered for the rallies in December shows (Basiliklab, 2012), most of the registered people were from 18 to 28 years old with the peak figures in the age group from 23 to 24: these are internet-oriented young people, who have little fear of opposing the Government because they were raised in a democratic country, and as result there are easy to mobilize via the Web. "Generation Z" will definitely continue to play a significant role in the democratization of the country. But of course the social portrait of protesters is much more complex.

According to a Levada-Centre poll made during the second big rally in Moscow, on the 24th December, 31 percent of protesters in Moscow were between 25 and 39 years old, and 25 percent between 18 and 24. They were mostly well-educated, middle-class people; the urban elite. (Levada-centre, 2011) Unfortunately there was no poll made during the first big rally on the 10th of December, where according to journalist reports the constellation of the crowd was a somewhat different, with even more young people, so-called "hipsters," turning up in contrast to the second rally where there were more older citizens (Pishtschikova, 2011). This diffuse crowd of protesters mobilized by online social networks belong apparently to the new social milieus that appeared in Russia in the 2000s, the so-called "Modern Performers" and "Post-Materialists" (classification of the Sinus-Institute). The first group is well-educated people, internet-oriented, under 30, with large number of students and self-employed entrepreneurs among them; they understand themselves as "non-conventional, technological and culturally elite" (Sinus-Institute, 2011). The second group, the "Post-Materialists," represent creative industry. They are intellectuals, for whom freedom is more important than security and who fight against ossified bureaucratic structures. These social milieus were formed in Russia only recently and they do not have any political party they could



consider as representative of their interests (similar to the situation we can also observe in the western world, where in Europe for example “pirate parties” gain popularity, addressing exactly these two social milieus).

As journalist Kolesnikov from “Kommersant”-newspaper puts it, “it was the demonstration of satiated”, that essentially differs from the rallies in Russia of the 1990s, where mostly socially disadvantaged people took part practically to fight for survival. Julia Ioffe from the online-magazine “Foreign policy” mentions in her article “Decembrists” that the protesters have all the basic benefits and now the time has come for them to long for living “with dignity and justice” (Ioffe, 2011). It seems to be the classic example of Maslow’s pyramid in work: the urban elite has satisfied its basic needs and now seeks a higher quality of living. They want to be heard and respected by the government and to take part in the decision-making process.

## 2. Network Society in Russia and the Participation Divide

After the December protests it became obvious that the modern Russian “Network Society” (Castells 2007, 2010) has the same characteristics that have been observed in other countries, facilitating horizontal and (at least at first) non-hierarchical structures, where a deliberative process of decision-making is possible (Habermas 1989). One demonstrative example of such decision-making was the discussion of measures against violence during rallies: people discussed and agreed upon rules of behavior in blogs and on social networking sites, and then followed these rules during demonstrations (ex. giving flowers to policemen, booing provocateurs etc.). Yet another example is that people used Facebook to discuss and bring to a vote the question of whom they wanted as speakers for the rally, resulting in a very diverse composition of personalities from leaders of legal and illegal opposition groups, civic activists and journalists to singers, a poet, and an “it-girl.”

It is necessary to mention that the ‘digital divide’ in Russia, and in particular the ‘participation divide’ (Marr M., Zillien N. 2010), is so huge that it is impossible to create a more or less common public sphere. Although the rise of Internet users in Russia has been exceptional in the last years (it passed the mark of 50 million people in September 2011 (Ioffe 2011) and the Russian internet-community is now considered to be the biggest in Europe, it is still only one-third of the Russian population. But even if people are online or using blogs, most of them are hardly interested in politics (Etling, Alexanyan, Kelly, Faris, Palfrey, Gasser 2010), which correlates with the international patterns of internet usage (Castells 2007). Russian Facebook, which can be considered as a core “meeting point” of intellectuals and political opposition (according to Business Week (Ioffe, 2011), “Whereas Odnoklassniki.ru has become the domain of the older generation, and VKontakte the hangout of young middle- and lower-class Russians, Facebook is the network of choice for the urban and the urbane. Facebook’s Russian users are generally of the wealthier, well-traveled, cosmopolitan variety, have foreign friends and tend to live in Moscow and St. Petersburg”), has only 9 million users. That represents a big figure to support a rally in Moscow, but a small one to influence the 142 million Russians. Russia’s most popular social networking site, Vkontakte, has more than 110 million users in the CIS-States, and was also used as mobilization tool, particularly for organizing the rallies in cities other than Moscow.

It can be concluded that there exist at least two big information “worlds” in Russia, which are more or less isolated from one another in the field of political issues, and that within each exist thousands of information cocoons of different groups of interests. One of these two “informational

worlds" is that of traditional media, of which TV is the most important having the biggest access of all to the Russian households, and the other is that of online media. As the December protests showed, it is challenging for acute political topics to make a spill-over from the blogosphere to traditional media, especially to state-controlled TV-channels, and if they do manage it, then these topics get a certain political spin that matches with the usual news framing of these TV-channels. Thus, Russian Federal TV-channels, with the exception of Ren-TV (which doesn't have a wide access to Russian households anyway), did not cover the protests until the rally on Bolotnaya Square, which was then shown as an attempt by spin doctors to manipulate the public and to organize an "Orange revolution" in Russia. As result, most of the Russian population didn't really know what was going on in Moscow, Saint Petersburg and other big cities. According to statistics of Levada-Centre, only 6 percent of Russians know who Alexey Navalny is – the top-blogger and one of the most famous leaders of the "Internet-opposition" and of the December protests.

It can be concluded that in terms of the political field we still cannot speak in Russia about a 'hybrid media system' (Chadwick 2011), that would represent a full convergence of traditional and new media. Not only is the society fragmented, but TV and mass media in particular contribute to this gap between different information "worlds."

### 3. Online mobilization process

In Russia social mobilization via the Internet started in 2008 with the local cases, where interest groups tried to solve some practical problems, and has increased enormously since 2010. (Etling, Alexanyan, Kelly, Faris, Palfrey, Gasser 2010) The most prominent examples of such mobilization are automobilists with their campaign against violation of the road regulations by VIP-cars or the ecological movement against the felling of the Khimki forest. A lot of people organized help-communities, for example via the platform Ushahidi during the summer fires in Moscow 2010.

Thus, at the beginning social mobilization was mostly focused on the local level and on solving practical problems before it developed an increasingly political and nationwide character. I would like to pinpoint the following characteristics of the Russian protest movement in December which can also be considered applicable to online political mobilization processes in other "network societies":

Thanks to the ease of political participation via the Internet, political activism is facilitated

*"You don't have to go out of your comfort zone and put up with all the unnerving external stimuli. All you have to do is sit comfortably and press few buttons and you are really done with it. (...) It has shattered the taboo of political campaigning of holding placards in rain and sun (...) Now even a slight political inclination can make you take part in this social media frenzy."* (Raza S.)

The spiral of silence (Noelle-Neumann 1993) works as well in the social networking sites. It can be assumed that its effect is even stronger online than offline, because people see their own friends (and not just strangers) sharing views and attitudes, so it becomes even harder to express an unpopular opinion and for example to support publicly an unpopular politician. This was obviously the case in the Russian Facebook, where expressing pro-governmental ideas in December was considered to be bad manners. The famous TV-anchor Tina Kandelaki fell into strong disapproval on Facebook and Twitter for expressing publicly her support for the ruling party.

At the beginning it was unclear if the online protests would manage to spill-over into offline rallies, and afterward many participants of the rally wrote in their status-updates that it was the first time ever that they attended a demonstration. This successful spill-over from online-communication to offline-activism can be explained by the "spiral of silence" theory: when a person gets the feeling that overwhelming number of his friends ("the critical mass") is supporting the rally and is going to go, he decides to go.

Although it is assumed that political mobilization in online social networks is based on non-hierarchical and horizontal structures, it seems to be true only to a certain extent. The whole campaign of tracking falsification during elections was obviously started by the top-blogger Navalny, who is now one of the leaders of the non-parliamentary opposition in Russia. After that there was a period of an intensive horizontal communication, but after the first big rally on 10 December it was clear that the movement badly needed leaders and a clear vision. In Moscow, where a group of popular activists exist who undertake the role of leaders, the second rally became a highlight of December, whereas in other cities, even in St. Petersburg, the lack of charismatic leaders lead to a decline in "revolutionary mood" according to numerous bloggers (e.g. Chuviljaev 2011). It appears that successful online mobilization presupposes a combination of hierarchical and non-hierarchical communication as well as horizontal and vertical communication.

One more feature of Russian protests that shouldn't be underestimated was humor: a lot of satirical placards during rallies, funny videos and caricatures in social media, which were both politically pointed and entertaining, were perfectly crafted to go viral. This amount of humor also shows the lack of fear towards the political elite and expresses a feeling of freedom on the part of the protestors. It is also worth mentioning that protestors were also self-ironical, ready to laugh at themselves: for example after being abused as "Facebook hamsters" they wrote a placard "hamster expanded shoulders".

The Blogosphere makes it difficult to control the content and the sources of information making it easy for provocateurs to spread a mess into the rows of the opposition, but the "collective mind" managed until now even under difficult circumstances not to "lose its orientation." Such as after the publication of recordings of the phone conversations of one of the opposition leaders Boris Nemtsov where he speaks rudely about other opposition leaders and protesters.

The example of two big rallies, which ran to a great extent peacefully thanks to the self-organization of the crowd, shows that a deliberative model of the public sphere can be considered applicable to Russian online social networks.

Based on the analysis made above it can be concluded that there are significant changes going on in the Russia public sphere due to the usage of social media in political communication. It is not appropriate to talk about "a revolution," because only a relatively small part of the population takes part in the oppositional discourse, but there are definitely some signs of an evolution towards democratization to be seen, although a more exact prognosis of the future development can be given only after the evaluation of the evolution of the protest movement after the presidential elections in March 2012.

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# SADproject.tv

*Lessons learned from a social media system to raise surveillance awareness.*

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**Abstract:** *This article describes a social media/art project conducted to invoke discourse about the growing dichotomy between the (voluntary) social media over publishing and (involuntary) surveillance of public space with video cameras. While surveillance has been a focus of technology and art projects for some time now, social media over publishing is still a rather young term that has had little attention from the art scene. The text goes on to describe the concept and design of the aforementioned project, and discusses lessons learned from a three month trial period.*

**Keywords:** social media, over publishing, surveillance, sousveillance, participation, web 2.0, art

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**C**CTV surveillance has become increasingly ubiquitous in recent years. Especially since 9/11, but e.g. in the UK also significantly before (Lomell, 2004), video cameras have become more or less omnipresent in public places. Even if studies again and again show that this kind of surveillance is more or less without any significant effect (Welsh & Farrington, 2002 & 2009), there is a widespread belief in the general public as well as (seemingly) with decision makers that putting up CCTV raises the security of a place.

Social networks and location-based services have rapidly gained in popularity over the last few years. People use them every day to stay in contact with family and friends, to meet new people, or to find points of interest. Over publishing has been identified as a potential risk for the users of such systems, with consequences ranging from harassment and public ridicule to impeded job prospects (Barnes, 2006).

It's a rather recent trend that an increasing number of people use social media sites via smartphones, allowing them to be connected with their peers regardless of their location. Certain services use information provided by mobile phones to pinpoint the users current location. While

these services are undoubtedly helpful to users, the constant transmission of information about user locations pose another potential threat to privacy. Using such information, habits, activities, or even workplace or home address of a person can be reconstructed (Beresford & Stajano, 2003)

In order to raise public awareness and encourage discourse about the rise of video surveillance as well as about over publishing in social media and location based services, we designed and implemented a software service that lets users document instances of CCTV cameras in public places. Since this requires disclosure of the date-time and location of the user, they find themselves in a conflict between the urge to document surveillance, and self-surveillance through over publishing.

In this paper, we will discuss in detail the concept and design of the aforementioned system and discuss the lessons learned from its implementation and operation.

## 1. Related work

### 1.1. Society in flux

French philosopher Michel Foucault used Jeremy Bentham's "panopticon" concept to illustrate the change between premodern and modern society, creating the term "panopticism" to describe what he called the disciplinary society (Kammerer, 2008).

According to Foucault, in premodern times law affected only what was prohibited, indirectly regulating what is allowed, while in modern times, law also explicitly regulates the things that are allowed. In "Discipline and Punish: The Birth of the Prison", Foucault uses Bentham's "panopticon", a hypothetical prison where every inmate is subject to constant, potential surveillance, as a metaphor for modern society.

Foucault concludes that people in such a situation will internalize the rules the surveillance system is set up to monitor, thus becoming their own surveillant. (Foucault, 1975).

While George Orwell's "1984" was in its time seen as a cautionary tale of a potential surveillance society, the economic and political change after the cold war introduced the concept of decentralized and semi-automated video surveillance without much public discussion.

Kammerer observes that this trend leads to a situation where what is permitted or prohibited becomes increasingly unclear. According to him, the repressive state has been substituted with a systematic control and disciplinary action, originating from a network of disciplinary institutions. The loss of clear rules in favor of a fuzzy idea of what self discipline looks like then leads to an increased conformance with societal norms (Kammerer, 2008).

Even recent studies show that widespread video surveillance does not lead to a significant drop in street crime (Welsh & Farrington, 2009). This makes it harder and harder to accept the steady increase in CCTV cameras as something necessary for modern urban society. Klauser notes that "consequences of video-surveillance on urban territoriality do not only concern access restrictions or increased use of places that are perceived to be safer because of surveillance cameras, but, more generally, the more far reaching relation between society and city space as a whole. This also leads to the question in what way security measures like CCTV may indeed transform the very society they are only designed to protect." (Klauser, 2004)



## 1.2. Social Media activism

While social media has been discussed in the context of democratization and participation for much longer, the so-called "arab spring" has put a spotlight on such a potential. At the same time, online activism is often denounced as "slactivism", making people feel good, but resulting no change or even influence in "real" life (Morozov 2009). Countering this pessimistic view, Neumayer and Schoßböck (2011) describe the role of online activism as a precondition for active political engagement.

However one wants to side in this discussion, it is undisputed that only a select few elite users can shield their privacy enough to remain anonymous, as exemplified by the hacktivist group "Anonymous" and the various spin-off hacker groups. Other than the participation in rallies or protests, using social media system to organize or conduct activist action leads to an inevitable uncovering of the identities of campaigners. Often, people are unaware of this connection or of the consequences of their identified and visible public actions.

This carelessness is amplified by the overall pressure of companies like Facebook or Google to make people share and publish ever more parts of their private lives, with the obvious goal to monetize this information in various forms.

## 1.3. Art projects

The worldwide propagation of CCTV is a subject of increasing relevance to social, political and cultural discourse. Cameras are ubiquitous today, and subsequently, the reflection thereof has become a common point of reference for art and media projects. Numerous street art projects have dealt with political and social implications, reflecting on the confidence the general population seems to have about CCTV. Artistic commentary questions political, cultural and democratic rights to video surveillance. Some art projects do not only question public concordance regarding video surveillance, but aim to create new concepts of space in the public domain (Brighenti, 2010), as exemplified by some of the works by renowned street artist Banksy. In the following we want to sample a cross-section of some of the art project dealing with surveillance.

Other art projects aim to focus on the imperfection and error rates of the technology. In October 2002, Michael Naimark published his comprehensive description »How to ZAP a Camera: Using Lasers to Temporarily Neutralize Camera Sensors«. (Naimark, 2002) If a cameras location is known, and it can be seen, it is possible to »zap« a camera using a laser. The camera pictures will then just show a red, blurred dot. With this work, the author introduces the concept of de-presentation, which is to him a much more important concept than re-presentation in times when massive databases and cameras are everywhere.

»How to Hide from Machines« plays with cosmetic methods for eluding CCTV cameras (Adam, 2010) The article describes how to hide from cameras by combining make-up techniques, hair styling, and various accessories, just like hiding a warship by camouflage. In his recent novel »Zero History« (2011), William Gibson envisioned a shirt that makes its bearer invisible to surveillance cameras. The result of an unwritten agreement between camera manufacturers and intelligence, it is not only top-secret but also highly effective, shielding whoever it wears from being recorded by CCTV cameras.

»Life: a Users Manual« is a project by the Canadian artist Michelle Teran. The purpose of her project is to capture media signals on the street. Teran receives pictures from private and public



cameras with a video scanner and emits the signals on a television on the street. She pushes a shopping cart with some displays through city streets and shows passersby feeds from cameras, received from mostly private environments nearby. (Teran, 2009)

#### 1.4. Geolocative information

Hudson-Smith et al. (2009) argue that »location and space are becoming increasingly important in the information technology revolution«, pointing to the fact that the public has developed an awareness for the value of geographical information. This in turn leads to fundamental changes in the field: »With this increased awareness has come the rise of volunteered geographic information, crowd sourcing, neogeography and citizen science, amongst many other newly emerging terms linked to the geographic profession.« (Hudson-Smith & Crooks, 2008)

Following the raised importance of geographical data, people started to develop new behavior in respect to how to collect data, interact and search for spatial information.

The fusion between the growing importance of geographical data with social media initiated new systems that specialized on user generated data. Systems like Google Maps, Google Earth and Open Street Map are typical examples of the emergent field of user generated geographical data and tagging.

Hudson-Smith et al. (2009) argue that »location and space now represent a third force in information technology besides computers and communications. Tagging not only the type of data but also where such data is produced, who uses it and at what time, is becoming one of the core applications of web-based services.«

The openness and the scalability of Web 2.0 as well as the responsiveness to the needs of real users initiated a rush of excitement over tagging, not just about the possibility to create geographical data, but about connecting geographical data with other information, and about creating mashups. This new trend facilitates the combination of data from two and more sources in order to create new services. (Höffken et al., 2008) (Smith, 2008) It was also the starting point for the invention of a new form of mapping and a movement towards »open data«.

One of the prevalent topics in this discourse is video surveillance. Information about the amount and location of surveillance cameras are more often non-disclosed than public. Authorities usually don't want the public to know where and when they are monitored. Bottom-up initiatives try to shed light on video surveillance. They encourage users to research and publish information about CCTVs. With these bottom-up approaches it is possible to obtain sensible information otherwise not accessible to the public. In the following we will describe some of these bottom-up projects.

##### 1.4.1. NYC Surveillance Camera Project

A comprehensive collection of surveillance cameras was already conducted in the course of the »NYC Surveillance Camera Project« in 1998. As a result, the number of cameras in Manhattan could be estimated to be around 15.000 in 2005. In 2006 the project was discontinued because the goal of the project, to locate and tag all surveillance cameras could not be met. According to Weiser et al. (2011), similar projects in other American cities like Chicago or San Francisco still exist.

### 1.4.2. Mapping CCTV

During her project »Mapping CCTV« Manu Luksch tried to create a comprehensive map of all surveillance cameras in the government administration area in London, Whitehall. She was forced to discontinue the project following a police warning, pointing out that she has violated UK counter terrorism laws. Luksch didn't give up and continued the project, trying to be less conspicuous. She e.g. used tape to mark the field of view of one particular camera. As passersby entered the marked area, their attention was turned to the cameras presence, and they were handed a map of CCTV cameras in the region. (c.f. <http://vimeo.com/3802118>).

### 1.4.3. Other similar projects

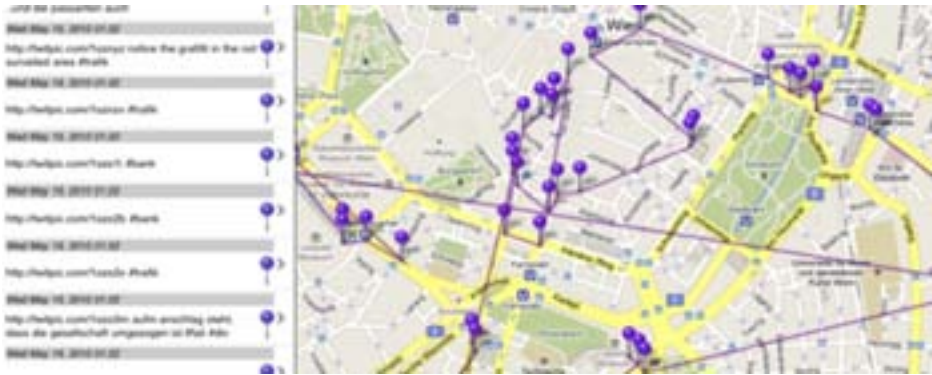
Similar projects are documented from Germany (<http://www.ak-ueberwachung.org/standorte/>) and Norway (<http://www.webkamerainnorwegen.com/map/>). Furthermore, Open Street Map (OSM) provides a way to document surveillance cameras, which is used by projects like Leitstelle 511 (<http://osm.leitstelle511.net/>) and orwell.at (<http://orwell.at/>)

## 2. Our Approach

The idea to develop an online system for the world wide documentation of CCTV cameras originated from an ambitious teaching project, organized within the course »Gesellschaftliche Spannungsfelder der Informatik« (Informatics and Society) at the Vienna University of Technology. In this teaching project, participating students were asked to find and document every camera they encountered during a whole work day.

Starting with their journey from home to university, they would watch out for cameras all the way, paying attention to things they usually ignored. Whenever they found a camera they would stop, take a picture of the camera – thus reversing the surveillance situation – and post this picture on twitter. Twitters »tweet location« setting was turned on for the duration of the project, so that every tweet was geolocated. Due to the high density of surveillance cameras especially at public transport hubs, all movements of the student »camera spotters« during the day could be traced. Thus, the students put themselves into a deliberate situation of geolocative surveillance in order to document CCTV surveillance they encountered throughout their daily routines.

During a debriefing, the results of the camera documentation day were discussed. The aim was to analyze and to reflect upon the ongoing surveillance, both external monitoring and self monitoring. Visible motion profiles of the students were produced using the iPad-App »TrackinU« and discussed with the students.



**Figure 1: Map of Surveillance Cameras/student movements during a day, along with some of the comments posted.**

Based on the experience from this teaching project, a more extensive approach for the documentation of surveillance cameras was developed; Surveillance Awareness Database project (SAD project). A follow-up project was conceptualized, designed and implemented using an explorative and iterative design process. During each step, new ideas and issues were discussed, along with the creation of interaction sketches and prototypes for usability and functional testing. The project started in early 2011. In April 2011, a beta version of the website went online ([www.sadproject.tv](http://www.sadproject.tv)), with a complimentary iPhone App published on the App Store in June.

## 2.1. SAD project

SAD users embarked on a tightrope walk between the exposure to privacy intrusion through surveillance cameras and the often inconsiderate neglecting of privacy that can be observed in social media contexts. The software is realized both as a mobile app and as a social media web site. The project plays with different forms of monitoring - external surveillance via CCTVs, the sousveillance potential of mobile phone technologies, and voluntary self-surveillance via social software.

Everyone with a smart phone<sup>1</sup> can participate by documenting encounters with CCTV cameras, but will at the same time breach his or her own privacy through the necessary disclosure of his or her whereabouts. The app uses the available GPS information to pinpoint the photo as precisely as possible, and gives the user the possibility to adjust the position if necessary. On the SAD web site, users can find all CCTV cameras entered so far on a map (or as a list), and also add or edit camera information.

As often with mobile apps, the SAD mobile app is reduced to a necessary core functionality in order to reduce the complexity of the interface so that it fits the small screen and limited resources of the mobile phone platform. Thus, the mobile app is focussed on users adding new cameras and/or add images to cameras already in the SAD project database.

<sup>1</sup> at the Moment, the mobile app exists only for iPhones, but an Android version is actively being implemented.



Figure 2: SADproject.tv web page and mobile app, both showing a map segment with tagged cameras.

The website SADproject.tv on the other hand is structured like a social media system and encourages users to participate in a wide range of activities typical for that kind of service. Users can post stories associated with their hunt for cameras, other resources such as links or descriptions of similar projects they find, and comment database entries by other users. Also, users can contribute elaborate profile information about themselves with an option to declare whether this information is true, fictitious, or mixed true/fictitious, and become »friends« with other users of the system.

More features were conceptualized, but are not finished yet. We want to amplify the often unintentional neglect of privacy typical for social media systems by using game mechanics, playfully enticing users to contribute more information about encountered cameras as well as about themselves. To this end, SAD already awards scores, badges, and achievements to active users, calculates ratings, and compiles hall-of-fame-lists. Additionally, a corresponding game forum is planned to be opened, where users can discuss and develop games that would be played using SAD as an online platform, e.g. by defining their own goals and badges.

Another idea not yet pursued was to organize regular events to address surveillance awareness. One such event would be the »Surveillance Awareness Day«, where activists all over the world are asked to document or tag every camera they encounter during that day, similar to the teaching project that kicked off SAD. Such an initiative could be made visible world wide not only via the SAD web page, but also on social networks such as Facebook or Twitter.

## 2.2. Statistics

SADproject.tv entered a public testing phase in April 2011. We monitored the usage of SADproject.tv between April and August 2011. During this period, 253 users have registered on the website. 57 users have tagged at least one camera, contributing a total of 793 cameras to the SAD database, breaking down to an average of almost 14 cameras per user. Almost 25% (197 cameras) or an average of 3.13 cameras per user were tagged via the mobile app. The mobile app saw approximately 500 downloads from the App Store.

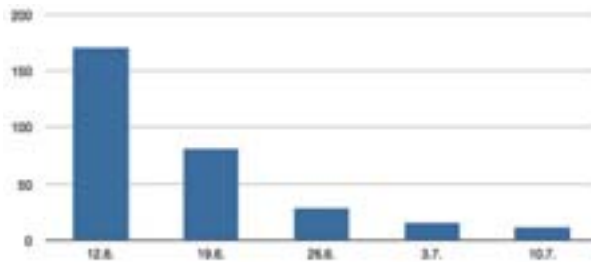


Figure 3: Downloads of the SADproject.tv mobile application. After the initial surge, downloads leveled off to around 10 download per week.

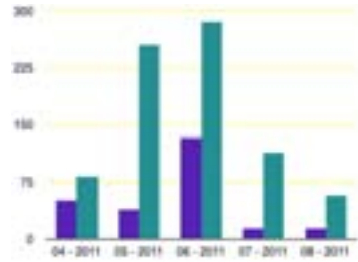


Figure 4: A comparison between newly registered users (blue) and the newly added cameras (green)

Figure 4 shows the comparison between newly registered users and newly added cameras on average during the monitoring period. The figure shows a conspicuous drop for new registrations, while active users kept contributing new cameras, even if the numbers dropped a little.

The average user behavior of within the first month and after the first month after registering illustrates the steady behavior of active users. During the first month after her registration, a user typically tagged an average of 2.14 cameras, and 0.99 cameras in the following month. The most active users in contrast tagged between 10 and 11 cameras per month consistently for the whole period. This split into a few highly active »power users« and many significantly less active members can commonly be observed on most social media systems, documented e.g. here (Guo 2009).

The cumulative visualization (Figure 5) of camera data shows a continuous increase in the number of tagged cameras. As can be seen, the curve levels off around mid-July 2011.

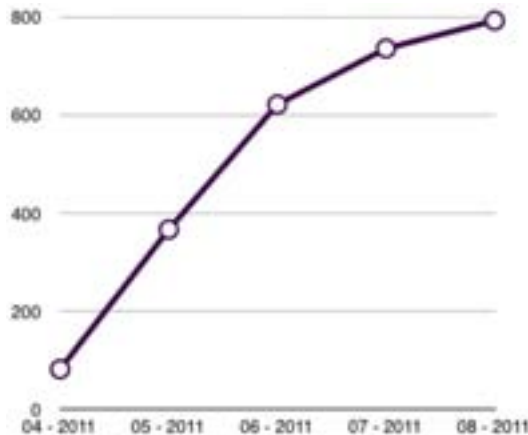


Figure 5: Cumulative work of users during the test phase.

As of the time of the submission of this article, the number of cameras in the database has consolidated at 841 without any change since at least 6 weeks.

### 3. Discussion

The data shows quite clearly that while we managed to attract a highly active core group of users interested in documenting surveillance cameras, we failed in creating sustained growth in the user base necessary for such a system to stay interesting even for the core group. We never managed to reach a »critical mass« for the effects around the so-called »long tail« (O'Reilly, 2005) to kick in. Consequently, we have to acknowledge that our goal to start a process of reflection and discussion of privacy issues has been missed.

Before discussing the failures of our approach, we would like to reflect on the more successful aspects of this project so far.

#### 3.1. Obvious successes

Within only three month, more than 800 cameras were tagged. Most interestingly to us, we managed to attract users from all over the world. While most users live and/or work in Austria, and here mostly in Vienna, cameras have been tagged in places as far away as UK, USA, Asia and Australia. A couple of cameras tagged in northern Africa were documented by a team of Austrian sport swimmers, visiting a competition in Egypt. A large collection of international cameras was added to the database when a German activist contributed a large collection of geolocated data from his home town Jena. We managed to activate the members of a flickr picture group about surveillance and have them contribute their pictures to SADproject.tv.



Figure 6: Map clipping showing some of the approx. 750 cameras tagged in Europe.

Conversations with users online and offline showed that they were generally quite pleased with the design of the web offering as well as with the mobile app. Also, we generated some media resonance with e.g. an article in one of Austria's leading quality newspaper, »Der Standard«, as well as coverage in several smaller weekly and monthly journals.

The news feed/blog was used quite vividly during the test period. Users posted stories about their camera documentation quests, and regularly other images concerning the rise of surveillance



were posted, e.g. an English »information« campaign on terrorism where taking pictures of surveillance cameras was portrayed as a potentially suspicious activity. Also, the news feed worked well as a vehicle of motivation, since it showed the amount of recent camera tagging activity, enticing users to add even more data.

### 3.2. Reasons for failing

As shown above, we did not succeed in creating an attractive social media system that created sustained traffic, and thus failed in initiating the discussion among users about the surveillance/over publishing dichotomy.

As a first starting point in understanding this failure, it is important to keep in mind that creating a social media system from the scratch is something that has been tried hundreds of times in the last couple of years, yet only very few systems succeeded. Some argue that creating a successful social media system is impossible altogether, that the success of a system is much more dependent on certain external factors than on concept or design of the software itself. Social media systems thus would be successful rather by chance than by design.

For some time now, making a service a social software was an interesting proposition that attracted a lot of people. It seems that many of those people have now settled for a selected few systems, and are showing a growing reluctance to jump onto new boats.

Be it a direct consequence of this, or for some other reasons, the planned social media community did not form. For most users, SADproject.tv was a (very nice, but ultimately also very limited) attempt to offer an online database to tag and document the ever-present surveillance cameras. Once all cameras they usually encounter were added to the system, it quickly lost its appeal. One indicator for this was that comments to cameras tagged by other people were only posted by a very narrow core group, consisting of the project team and close friends. Activities within the system beyond the simple tagging of cameras were of no interest to most users, showing quite clearly the failure to form a community from the people using the system.



**Figure 7: User Profile of one of the authors of this paper, with several awarded badges.**

In the same train of thought it can be added that the reward system didn't work out like it was supposed to do. The core group wasn't in for achievements and badges, and they never cared much for any of them. While the achievements and badges were supposed to become a driver of competition and friendly rivalry, it really was just a lot of work hardly noticed.

Badges and achievements only work if they make sense to the community at hand. Not only did we never really observe the formation of much of a community, the badges were purely quantitative bragging rights rather than anything that made sense to the people involved.

### 3.3. Criticism

Users consistently criticized the system for its use of Google Maps. Especially since the recent changes in Google's data use policies where large scale users have to pay for the traffic they generate, it seems sensible to avoid their service. We also have understood that the people who are most likely to contribute to such a system would rather see it based on Open Street Maps.

The mobile app has received its own share of criticism. While it was a brave and valiant step to implement an iPhone app as the reference point for future mobile apps, this was also the most sophisticated and demanding market available. iPhone apps stand out compared to apps on other platforms, raising the bar for an app to be used every day. Design and implementation issues with the iPhone app led to a reluctance to its use, making it less likely that people tag cameras casually on their way. This once again reduced the number of frequent users to the core group. We learned that making a mobile app only makes sense when it can be made not only good enough, but something people crave to use for its smooth and gratifying user experience alone.

### 3.4. Future work

Starting from January 2012, SADproject.tv is undergoing a redesign and re-implementation process.

Some of the issues described above are easy to fix. Obviously, the mobile app requires some more attention in order to make it into the gem it should be. To replace Google maps with Open Street Map is a minor implementation issue. The delivery of the »missing« features described in Section 3.1 could round up the redesign. In our view, the success of such measures would be highly doubtful.

For one, we believe that we have succeeded in scaring away the core user group of the system. Even with a »relaunch«, we would face a hard wall of »been there done that« of the people who have invested time and emotion into the system before, only to find it rather less than captivating. While we have gathered an interesting set of data about surveillance cameras, we still map out only a surprisingly small share of all cameras installed. But, mapping out the cameras was only the superficial goal of SADprojects.tv. The real goal was to make people think about the dichotomy between over publishing and surveillance in our society.

Since the submission of this paper, a reconceptualization process has been initiated. Also, we were invited to make SAD project a part of an upcoming exhibition about new technologies and society that is largely targeted towards students from 12 to 18 years. One option to redesign the system is to take this opportunity to change the system in a way so that it offers an interesting activity for those kids and young adults for an afternoon, and to produce materials for teachers so that they can accompany the students and guide them in the reflection of their experiences.

With the inclusion in the exhibition, a core characteristics of the project changes; instead of being a stand-alone site that has to rely on social media dynamics alone, it will be redefined as a shared online infrastructure for real-life activities of students and other visitors. This takes a lot of pressure off the site, as there will be other incentives, eg. the social dynamics of the classroom, to drive participation in the hunt for cameras. This in turn will provide us with more data and experiences concerning the use of the system, which might put us into a position to better face the question whether such a system can work on the inner dynamics of social software alone.



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# **E-Politics & E-Campaigning**

(peer-reviewed)



# Mobilizing Effects of Online Campaigning

*Swiss parties' activities in e-campaigning and how the use of ICT contributes in engaging the party base as voters and volunteer campaigners*

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***Abstract:** Elections are a culminating point of political parties' communicative endeavors. Election campaigns afford considerable efforts and in light of restricted financial and personal resources should be carried out as efficiently and effectively as possible. This especially holds true for Swiss cantonal parties that largely carry out their campaigns on a voluntary basis. Based on a larger research project, this paper explores the relevance of online as opposed to more traditional campaigning with regard to the content and activity-oriented mobilization of the party base. The analysis is based on interviews with campaign managers, a survey among the party base and on a content analysis of party web sites. Contrary to many studies in the field, the discussion is not confined to an analysis of how parties engage in online campaigning, but also examines how particular communication channels, such as party web sites and social media are assessed and used by their members and supporters. On the supply-side of e-campaigning, results suggest that the sophistication of party web sites partly relates to the size and available resources of a given party, while the adoption of specific features rather relates to the type of party unit (youth vs. cantonal, local parties). On the demand side, research shows that the communicative preferences and behavior of younger members and supporters clearly differ from those of older age groups in that they are more open to online communication and campaigning. Members and supporters in fact use ICT (social networks, party web sites) to get involved as volunteer campaigners. Within the range of voluntary campaign activities, e-campaigning by now plays a subordinate role however. Still, results suggest that there is potential for parties to further mobilize their supporter base by providing adequate instruments such as online campaigning material.*

**Keywords:** e-Campaigning, Political Parties, Party Web Sites, Social Media, Mobilization, Switzerland

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**T**he Internet has become an important instrument in political campaigning for a broad range of political actors. Since the 1996 presidential campaign, online political marketing has irrevocably become part of the campaigning repertoire in the US and it was not long that political parties in other countries joined this trend. The question is therefore not whether, but how the Internet is being used in the context of election campaigning (Kamps 2007). Additional benefits

of engaging in online-communication are that parties can provide regular, target-specific as well as ad hoc information at less cost. Web sites, blogs and social networks provide political parties and candidates with new opportunities for self-promotion. By exploiting new communication formats, parties can freshen their campaign and potentially render themselves more attractive to new supporter groups. Furthermore, parties are not only offered new channels for establishing contact with their party base, but also for mobilizing them as volunteers in campaigning, e.g. as communication multipliers. This latter aspect is at the core of the present paper.

The following discussion examines how Swiss cantonal parties engaged in online campaigning during the elections for parliament in 2009/2010. The focus is on how the parties use information and communication technologies (ICT) to inform and engage the party base as voters and campaigning volunteers. The supply-side is contrasted by a demand-side of e-campaigning. The aim is to examine through which channels the members and supporters would like to be addressed by their parties, which channels they use as sources of information in the context of the elections and what role online communication plays in that respect. A closer analysis of the usage of party web sites and social networks by the party base is aimed at assessing whether specific forms of e-campaigning in fact are likely to have a mobilizing effect on members and supporters with regard to their engagement as multipliers in the campaign. In a final section, online campaigning activities by the party base are compared to other voluntary campaigning activities in order to draw some general conclusions on the relevance of ICT in the context of activity-oriented mobilization. In all areas of analysis, special attention is devoted to notable differences with regard to different age groups.

## 1. E-Parties in the Light of Current Research Discussions

There is a growing body of literature on the online activities of political parties and politicians (cf. Foot et al., 2009). Scholarly discussion on the use of the Internet by political parties often ties in to reflections on the democratic potential of the Internet for politics in general. Two major lines of argumentation have emerged over time (Lillecker et al., 2011 see also Anstead & Chadwick, 2009): The *equalization hypothesis* implies that the Internet has the potential of altering existing power relations, by offering the possibility of surpassing the need of having access to traditional media in order to exert political influence. The *normalization hypothesis* conversely suggests that existing power relations are reflected online (captured by the term “politics as usual”, Margolis & Resnick, 2000) or even reinforced. Accordingly, research on political parties’ use of the Internet has focused on differences in the adoption of ICT by smaller parties as opposed to major parties with regard to the mere web presence, the sophistication of web sites or the adoption of features or communication channels related to Web 2.0. Empirical evidence has been provided for both hypotheses, supporting the *ebb and flow thesis* (Lillecker et al., 2011) which suggests that parties innovate their web presences independent of size, while partly stressing different functions. Further potentially influential factors such as the media environment, the political environment, organizational capacity, ideology, age and status are discussed by Ward & Gibson (2009) with regard to political organizations in general. Their discussion of empirical evidence suggests that incentives to adopt ICT are “likely to be greatest among young, oppositional network-style organizations with a dispersed internet-literate and participatory support base” (ibid: 37). Research on party websites mainly focuses on their content and distinguishes different communicative functions such as information, mobilization, participation and presentation. With

regard to mobilization these studies for instance assess, whether features that enable e-volunteering, allow for becoming a party member or donating money are existent. Relatively little seems to be known however, to what extent such features are actually being used. Studies on how e-campaigning and the use of specific online media affect political engagement or electoral outcomes are generally more limited and provide mixed evidence (cf. e.g. Gibson & McAllister, 2011; Towner & Dulio, 2011; Bouliane, 2009).

## 2. Object of Investigation, Data and Methodology

In Switzerland, cantonal elections are a relevant focus of interest for several reasons. Within the Swiss political system that is characterized by pronounced federal structures, the cantonal as well as the communal political level are assigned specific powers in various areas. Unlike other nations, these competences and the right of self-determination of the Swiss cantons are far-reaching (Vatter 2002: 17). The Swiss party system reveals a decentralized structure that is reflected in a large number of small and heterogeneous party units at the local level. Swiss parties receive few state subsidies and rely primarily on self-financing through member fees or donations (Linder, 2004). In that respect and also with regard to exerting their influence on society as a whole, national parties depend on the party units at subordinate political levels (Geser, 2011). Cantonal and local parties thus play an important role in establishing linkage to the party base.

As with many European parties, Swiss parties currently face the problem of an eroding party base (Ladner & Meuli, 2005) and an increase of volatile voters. The parties' self-presentation in elections therefore generally gains in importance. Accordingly, expenses reserved for campaigning make up a rather large part of the local and cantonal parties' budgets. On average a cantonal party's budget during the election year amounted to approximately a quarter million Swiss francs in 2007 (Gunzinger, 2008). In accordance to their financial resources, Swiss parties exhibit a rather low level of professionalization. Taking the percentage of paid party work as an indicator in that respect, earlier research shows that in 2001 only 45% of the cantonal parties actually had some paid staff while the other parties worked entirely on a voluntary basis (Ladner & Brändle, 2001 cit. in Gunzinger, 2008). Being able to mobilize party activists as volunteer campaigners is therefore essential, especially when taking into account, that the efforts related to campaigning are considerable. However, there is little empirically tested evidence on how elections are organized at the cantonal level, which members voluntarily engage in campaigning and how the distribution of tasks is established party internally. The same holds true for Swiss parties' use of the Internet in general (cf. Fraefel et al., 2010a) and its potential with regard to mobilizing the party base in particular.

The paper presents results from a larger research project aimed at examining the communicative structures and practices of Swiss parties in the context of election campaigns for cantonal parliaments. Among other research questions, the project sought to establish whether the way parties communicate with their support base matches the demands and preferences of their members and supporters and how communication contributes to mobilizing them for voluntarily engaging in the campaign. As a distinct part of the overall project, the research focused on the relevance of ICT as opposed to more traditional modes of communication in today's work of Swiss parties. The research was conducted during January 2009 and May 2011 and focused on the campaigns of the four major parties represented in national government, namely the Radical Democrats (FDP), Christian Democrats (CVP), Social Democrats (SP) and the Swiss People's Party



(SVP) as well as the Greens (GP) in three selected cantons which held elections at the time (Berne 2010, Aargau 2009 and Neuchâtel 2009). Research data was collected via 25 semi-structured interviews with party officials and campaign managers, a survey among 9472 party members and supporters (response: 1920 valid questionnaires), a content analysis of 55 party web sites across different party units (15 cantonal parties, 27 local parties, 13 cantonal youth sections) as well as a selective analysis of corresponding social network profiles.

Several restrictions shall briefly be discussed. Due to differing time frames in data collection and availability it was not possible to generate entirely corresponding samples of interviewees and party web sites. With regard to the survey among members and supporters it must be noted that respondents are not equally distributed with regard to age, the majority being over 50 years old.<sup>1</sup> It must also be kept in mind that participants are to be considered as being rather active already – 14% of the respondents in the sample for instance stood for elections themselves.

### 3. Results

#### 3.1. Communicative Strategies in the Campaign Management of Swiss Parties

With regard to political parties as organisations with “fragmented and loosely linked structures” (Deeg & Weibler, 2005, p. 25) one can neither assume that all members are aware of what the party expects from them in the context of an election campaign, nor that all members and supporters are provided with the relevant information concerning the campaign. Party internal communication therefore fulfils two central functions: first, the content-oriented mobilization, i.e. informing the party base and second, the activity-oriented mobilization of members and supporters, i.e. inciting them to go to the votes and/or to actively participate in the campaign (Kamps, 2007, p. 170).

Based on the interviews we find that the efforts dedicated to party internal communication may differ depending on campaign managers’ assumptions on whether the party base will become engaged anyway or whether it affords repetitive calls and target-oriented information in order to reach participation. Besides informing the broader party base, the examined parties’ internal communication is mostly targeted at mobilizing members and supporters to vote for their party and to engage in viral political marketing in their personal environment. It is primarily the already active members who are expected to take over particular tasks in the campaign such as distributing flyers or being present at party stands.

The Internet potentially plays a role both as a source of information and as an instrument for supporting the party base to engage themselves as volunteers in the campaign. Based on the interviews with party officials and campaign managers the examined parties reveal quite similar approaches in designing their campaign communication. Parties make use of as broad a range of communication channels as possible in order to reach potential voters and the party base irrespectively. This is not least due to a lack of knowledge with regard to the use or preference of specific media or communication channels by their audience. Exclusive communication with the supporter base mainly takes place through the party press, (personal) letters and e-mails. Attempts towards target-specific communication are most observable with regard to the younger electorate and party base. Most campaign managers consider it necessary to provide at least a minimum

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<sup>1</sup> This may also relate to data collection (questionnaire distributed via postal mail through party secretaries). The total number of respondents indicating their age is 1833 (-20: 0%, 20-29: 4%, 30-39: 8%, 50-59: 23%, 60-69: 28%, 70-79: 14%, 80+: 5%).

level of online communication in order to keep up with the assumed communicative demands of this target-group. To this end, the examined parties primarily use their official web site and to a lesser extent also video platforms and social networks.

### 3.2. The Supply Side of e-Campaigning

#### E-Campaigning via Party Web sites

Generally, the design and use of the examined party web sites is very heterogeneous, among organisations of one and the same party as well as among parties of a particular political level, thus reflecting the decentralised Swiss party system (see Fraefel et al., 2010a). Patterns in the use of websites are mostly observable with regard to different types of party units, less so with regard to party affiliations. The most important communicative function of all examined web sites is information. In that respect, media specific opportunities are not systematically exploited. Features that allow visitors to stay connected, e.g. via RSS feeds or by signing up for an e-newsletter or the party press are only partially integrated – mostly by the cantonal parties and their corresponding youth sections. Participative functions, such as public interaction between the parties and the visitors of their web sites are hardly integrated. Also, the design of the party web sites does not provide a lot of multi-media elements. It is primarily the cantonal youth parties that integrate such features rather consistently. These general trends towards top down information as opposed to rather few opportunities for interaction are also observable in other countries (cf. e.g. Schweitzer, 2011; Vaccari, 2008).

With regard to campaign communication in particular, the content analysis of the party web sites confirms the interviewees' assessment that online campaigning has gained in importance, but also reveals some deficiencies in this respect. The majority of homepages inform about the upcoming elections quite prominently (85%) and provide additional information on the candidates (78%). Conversely, 15% of the examined parties do not inform about the elections at all. It is mainly local parties and cantonal youth sections that do not engage in e-campaigning on their web sites. Interviews with local party representatives suggest that a lack of resources (personnel, time, know-how, tools) plays a role in that respect.

Party web sites cannot only be used for informing the party base, but also for mobilizing them. While most parties promote membership on their web sites (78%) only a minority of them also promote donating money to the party or the campaign (40%). 36% of the web sites provide access to downloading signature lists used for enforcing popular votes that are regularly carried out in Switzerland on all political levels. Youth parties provide them slightly more often (46%) than cantonal (40%) or local parties (30%). Members and supporters who wanted to become active as multipliers in the examined election campaigns had access to campaign materials (digitized flyers, posters, election programs or e-cards) on 38% of the examined party web sites. Again we find significant differences between the different types of party units – it is mainly the cantonal parties that exploit these opportunities (73%), less so the local (30%) and youth parties (15%) ( $\chi^2 .003$ , df 2). However, across all types of parties, campaign material that can be distributed seamlessly has not often been propagated by the time of our research, only 9% of the analyzed web sites provided such opportunities. Interviews suggest that campaign managers do not necessarily expect the broad party base to actively participate in online campaigning, but rather provide campaign material for members who stand for election.

### E-Campaigning via Social Media

On their web sites, only few of the examined cantonal and local parties promoted their other online activities. While 36% of the parties included in the content analysis had their own Facebook profile, only 9% drew attention to it – other social networks were not promoted at all. While a majority of the parties at the cantonal level were present on Facebook (cantonal parties 67%, youth sections 62%) this was rarely the case for parties at the local level (7%,  $\chi^2 .000$ , df 2).

The campaign managers' assessments of the use of e-campaigning on Facebook were quite heterogeneous (cf. Fraefel et al., 2010b). Most interviewees did not dare to draw any conclusions on the effectiveness of this campaigning instrument. A brief assessment of the party profiles reveals that there is hardly any interaction between the parties and the public. Only few people followed the parties on Facebook at the time of our research and neither visitors nor parties contributed much to the discussion. It may well be however that interaction rather takes place among individuals, that is with candidates or party representatives. How strongly the use of Facebook is propagated internally may differ even within a given party and seems to relate to how interested a party is in addressing new and especially younger voters. Some parties aspired that all candidates have their own profile while others entrusted this decision to the candidates themselves. Generally, the use of Facebook as a campaigning instrument in the cantonal 2009/2010 elections can be considered as experimental. Recent empirical studies suggest a continued trend towards e-campaigning via Facebook in national as well as cantonal elections, despite prevailing doubts about the mobilization potential of such endeavours (Koller, 2011a, b).

Another instrument for e-campaigning is videos, distributed either through the party web sites or via social networks such as Youtube and Dailymotion. At the time of data collection, all parties maintained at least one video channel, mostly provided by cantonal parties or cantonal youth sections ( $\chi^2 .023$ , df 2). Based on the interviews with campaign managers, video campaigning received uptake by the media in one of the examined cantons in particular, serving as an incentive to engage in this type of campaigning and as an explanation for observable spillover effects. In the canton of Neuchâtel, almost half of the parties included in the content analysis had their own video channel (43%) while this was considerably less the case in the canton of Berne (5%) or Aargau (15%) ( $\chi^2 .015$ , df 2).<sup>2</sup> This finding is confirmed when looking at how often videos were integrated on the parties' web sites (Neuchâtel 43%, Aargau 25%, Berne 19%,  $\chi^2 .289$ , df 2). Swiss parties thus reveal similar video campaigning strategies towards a media rather than an electoral arena, as campaigners in other countries (cf. Towner & Dulio, 2011).

### 3.3. The Recipient and Demand Side of E-Campaigning

#### Communicative Preferences of the Party Base in General

With regard to party communication in general, the survey among members and supporters of the examined parties shows that traditional communication channels by and indirect information on the parties still play an important role. Most participants in the study favored to be informed via the media or the party press. When asked how they would like to be informed or contacted by their party, articles, interviews and debates in the local press (85%), the party press (82%) and articles, interviews and debates on TV (75%) or the radio (70%) obtained the greatest approval.

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<sup>2</sup> Whether a video channel has in fact been set up by the parties themselves, could not be established.

58% of the participants would “very much” or “rather” be informed and contacted via e-newsletters and more than half of them appreciate e-mail (52%) or personal letters (51%). 49% of the participants assess party stands positively as an opportunity for interpersonal communication, while information material distributed to the households gains less approval (38%). Looking at the party base on the whole, social networks as a communication channel are hardly popular (13%), phone calls and personal visits that can be considered as important campaigning instruments in the US are appreciated the least (9% and 7%).

When comparing the communication preferences of the members and supporters of different age groups we find some notable differences. 70% of the party base aged up to 29 years “rather” or “very much” appreciates being informed and contacted via social networks, while a minority of 30% of the 30-40 years old, 15% of the 45-59 years old and 6% of the 60 years and elder does so as well ( $\chi^2 .000$ , df 3). The approval of other online communication channels, namely e-newsletter and personal e-mail also diminishes with age, however less accentuated ( $\chi^2 .000$ , df 3). The youngest age group is also slightly more open to more direct communication channels, such as party stands and phone calls (see figure 1). The finding on social networks confirms results from European surveys on media usage in the context of politics (TNS Opinion & Social, 2011).

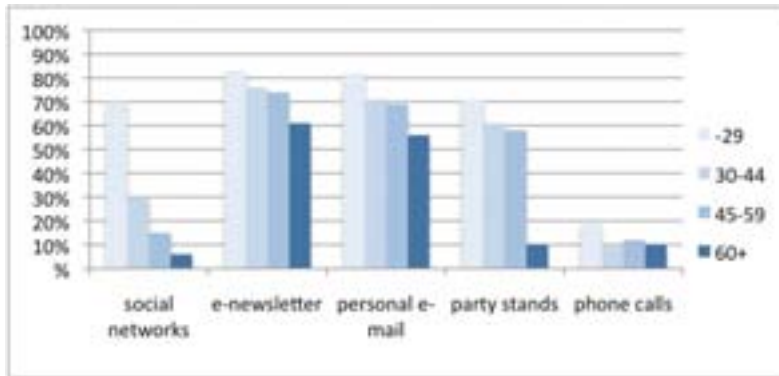


Figure 1: Preference of communication channels according to age groups

### Mobilizing the Party Base as Voters through different information channels

In the survey, members and supporters of the examined parties were asked what kind of channels they use to inform themselves before cantonal elections and popular votes. The results show some analogies with the preferred information and communication channels in general: The media and local newspapers in particular are important sources of information (88%, 78%). Even though receiving information material to the household is not particularly appreciated (see above), this campaigning instrument receives considerable attention (75%). Further important sources of information are discussions with friends and family (62%). Party web sites (29%), interpersonal communication at party stands and events (22%) or direct information from the party office (8%) received comparably less attention. Again, we find some notable differences with regard to differing age groups however: While most communication channels are almost equally important to members and supporters of all ages (media in general, discussions with friends and family, e-mail and events), party web sites are a rather important source of information for the younger electorate, while they pay less attention to the local press ( $\chi^2 .000$ , df 3) (see figure 2).

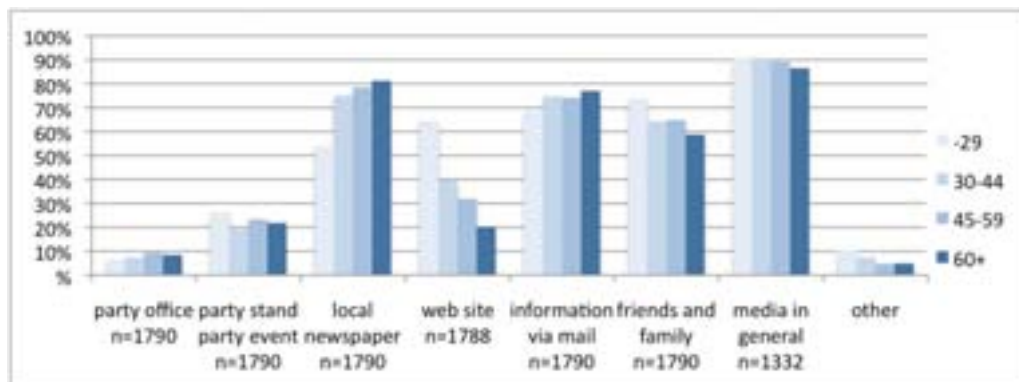


Figure 2: Sources of information on elections according to age groups

Even though the members and supporters do not equally consult party web sites for informing themselves on the elections, the party base across all age groups considers it “very” or “rather important” that their party disposes a “professional” Internet presence (very: 58%, rather: 35%,  $n=1628$ ). What can be derived from this is that e-campaigning is not least a question of image and not necessarily one of designing communication effectively, at least not equally for all age groups.

#### Mobilizing the Party Base as Multipliers in Campaigning through Party Web Sites

In accordance to the findings above, the party base on the whole frequents the parties’ web sites differently, depending on the level of the party units. A majority of the members and supporters who participated in the survey visited their cantonal party’s website at least once a year (58%) while this was less the case for web sites at the local level (districts 50% and communal level 33%). Systematic differences in the use of this communication channel by users of different age groups are again notable: the younger the surveyed persons are, the bigger is the proportion of those who actually use the web sites and also, the bigger is the proportion of visitors who use the web site regularly ( $\chi^2 .000$ ,  $df\ 12$ ) (see figure 3).

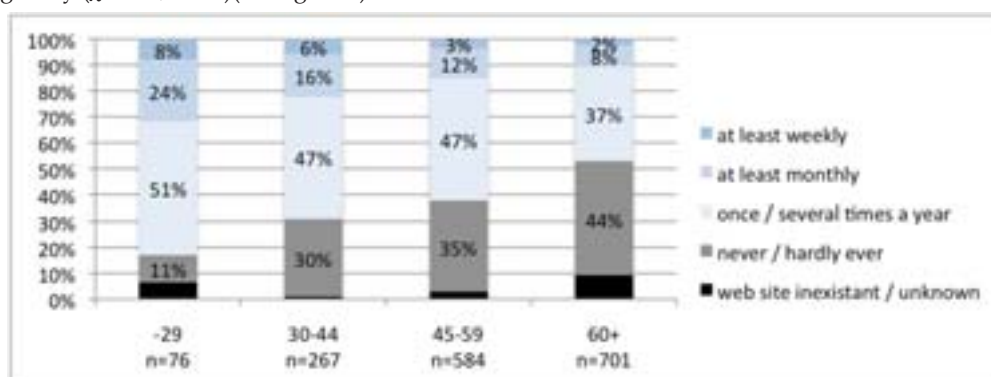


Figure 3: Use of cantonal party websites according to age groups

In the survey the members and supporters were also asked what motivates them to visit the parties’ web sites (see figure 4). Information on elections and popular votes is clearly the most frequent type of usage (81%), followed by information on the party in general (68%), on party

events and dates (60%), contact information (45%) and information on party representatives (42%). Besides informing, party web sites actually seem to have a mobilizing effect with regard to viral political campaigning. 30% of the members and supporters accessed party web sites for downloading signature lists that are provided for engaging the electorate in petitions or popular votes. 16% used the website for downloading or disseminating campaign material. Even though these rates are not particularly high, they are notable, when taking into account that such opportunities must not necessarily be opened up by all parties as the content analysis has shown (see above). A smaller interest for other content and formats of communication that are not a widespread among the party web sites (donation, audios/videos, forums) is also observable.

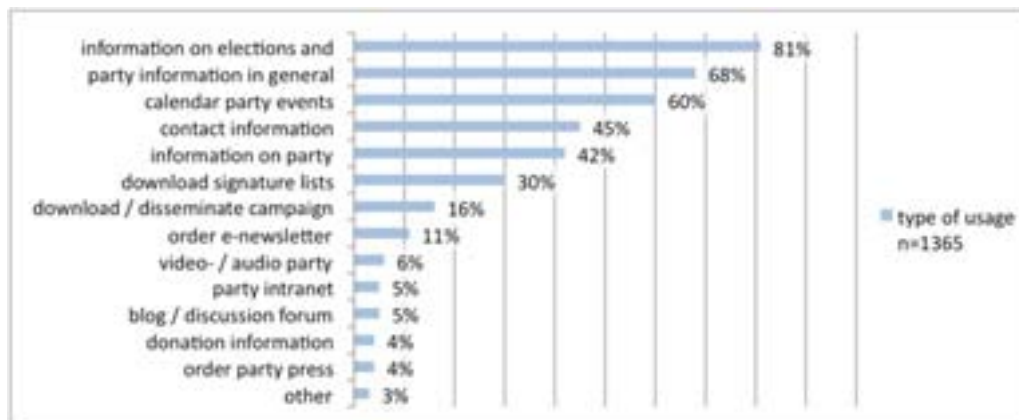


Figure 4: Usage of party web sites by the party base

Even though Swiss cantonal and local parties primarily use their web sites to provide information and integrate rather few features that promote interactivity or serve a multimedia design, the party base generally assesses their parties' web sites positively. As expected, cantonal parties' web sites are rated slightly better than those on the subordinate party levels. A majority of around four fifths of the members and supporters who visit the websites sporadically or regularly assesses their quality as "good" or "very good". Critical assessments are primarily provided by younger users: among all up to 29 years old who rated the cantonal parties' web sites, 34% had a "bad" or "very bad" impression (30-44: 15%, 45-59: 10%, 60+: 14%,  $\chi^2$  .000, df 9).

### Mobilizing the Party Base as Multipliers in Campaigning through Social Media

Campaign managers of Swiss cantonal and local parties do not necessarily pursue a social media campaigning strategy and there is some uncertainty with regard to the cost-benefit ratio of engaging in communicating through social networks.

Among those members and supporters who explicitly appreciated being contacted or informed via social networks (n=245) only around a third (34%) were also reached through this channel by their party. The match between demand and supply is clearly better for other communication channels tested in the study. As has been shown however, the broad party base that with regard to the participants in our study is older in age, are not particularly interested in communication via social networks and also cannot necessarily be reached through this channel. Overall, 23% of the questioned supporter base actually has a personal profile in at least one social network, mostly on Facebook (n=1826). As expected, the rates are considerably higher in the youngest age group than



in the others (85%, 30-44: 40%, 45-59: 25%, 60+: 8%). In the survey, respondents were also asked whether and how they use social networks in the context of party politics.

A majority of 57% of the party base that has a social network profile does not use it in the context of their party affiliation (n=413). 28% of them however use it for political persuasion in the elections and popular votes and thus engage themselves as voluntary e-campaigners (candidates: 56%, non-candidates: 16%). Another 23% uses social networks for an exchange with other members and supporters (candidates: 32%, non-candidates: 19%) and 10% use it for coordinating dates and events (candidates: 16%, non-candidates: 7%). Members who stood for election obviously used their profile more actively than non-candidates. Still, political engagement via social media also plays at least some role for other party members and supporters.

### 3.4. Relevance of Potential Multiplication Effects in E-Campaigning

When seeking to assess the role of e-campaigning especially with regard to mobilizing members and supporters as volunteers in the campaign it is worth comparing this type of campaigning activity to more traditional opportunities for supporting one's own party. As could be expected, the members who stood for election are generally more active than the non-candidates (see table 1). While 41% of the candidates engage in some sort of e-campaigning, other activities, such as being present at party stands (76%) or distributing flyers (77%) still play a greater role. Among the other members and supporters, e-campaigning by now plays a subordinate role with 6% of them engaging in this kind of activity.

**Table 1: Campaigning activities of candidates and non-candidates**

campaigning activity (all activities listed here: ( $\chi^2$ .000, df 1)	% of candidates n=259	% of non-candidates n=1625
engaging in campaigning committee, action group	51%	8%
presence at party stand	76%	13%
distributing posters, flyers	77%	24%
discussions with family, friends	78%	57%
online campaigning	41%	6%
donating to campaign	52%	38%

When looking at what motivates the party base to engage themselves as volunteer campaigners during elections we find that communicative mobilization by the parties generally is an important factor in that respect. 65% of the participants responded that their motivation was incited by personally being asked to become active, 45% answered that a general call by the party worked as motivation. This finding is confirmed when looking at those respondents who were not active, but stated that under other conditions they were willing to engage themselves (n=153). 48% of them would participate if they were addressed personally, for 49% of them such an engagement would need to be realized in a limited time frame and with little effort. 22% would want to perform this activity from home and 14% would expect that their party provide them with campaigning material. These latter affordances could potentially be met or supported by using ICT in a target- and goal oriented way. This includes providing forms of collaboration that do not underlie

temporal or spatial restrictions. It also includes providing adequate instruments for voluntary e-campaigning. Similar to interpersonal discussions with friends and family, political viral marketing through the Internet can be considered as a low-threshold activity that may contribute to mobilizing further groups of potential voters and communication multipliers.

#### 4. Conclusions

The aim of this paper was to analyse in what ways Swiss cantonal parties engage in e-campaigning via party web sites and social media and to contrast their communicative endeavors online with the communicative preferences and behavior of younger as opposed to older members and supporters of the party. With regard to the supply side of e-campaigning the results provide some support for the *ebb and flow thesis*: While a distinction between cantonal parties as opposed to local parties and youth sections rather confirms the *normalization hypothesis* in that resources may play a role with regard to the sophistication of web sites, it is in particular the youth sections' web sites that adopt interactive and multi-medial features. Specific opportunities offered through the Internet such as providing different forms of campaign material for viral political marketing are partially, but not systematically exploited. Campaign managers assess online campaigning to be important with regard to addressing younger voters, without having any information on the communicative preferences of their party base. They engage in campaign communication through a broad range of communication channels. Within this range, traditional channels such as the party press, posters, newspaper advertisements, party stands, postcards and flyers still play a prominent role from the supply- as well as the demand-side of communication. The survey among members and supporters reveal, that online communication channels such as e-mail, e-newsletters and particularly social networks are indeed more important to the younger party base. They visit party web sites more frequently and consider them an important source of information on elections, however also assess their quality more critically. Since party internal communication works as a strong motivational factor for members and supporters to become active in the campaign it seems important that the parties' communicative endeavors relate to the communicative behavior of their addressees. With regard to online communication there is certainly room for improvement, especially with a view to future party members and supporters. Younger party members and supporters are generally also more likely to engage as online communication multipliers in the campaign, for instance via social media. While e-campaigning as a voluntary campaign activity by now plays a smaller role than more traditional activities, the results suggest that there is a mobilizing potential in that respect, which parties could better exploit by providing adequate instruments. With regard to the mobilization potential of different communication channels it must be kept in mind however that the survey addressed members and supporters who can be considered as being already politically active and thus, the results cannot necessarily be transferred to the electorate at large.



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# Social Media and The Arab Spring

*The historical context and the role of Aljazeera Satellite Station*

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***Abstract:** This paper examines the role that social media played in the Arab Spring by locating these events within a wider historical context specifically in relation to political, demographical, and cultural changes that took in the Arab world in the last three decades. Looking at the events preceding the Arab spring we examine the influence of online activism, social media and Arab satellite television. The resulting ethnographic and autographic observation shows that the combination of these factors were critical to the transformation of the status quo through a cultural awakening, opening the door for a stronger unified discourse that centered around the need for change. This discourse in turn created online groups that were ready and able to quickly act and organize into online and street activists communities from the early days of unrest. The paper argues that the events of Arab Spring was a result of a gradual buildup that should be understood in relation to the historical context, the role of social media and Aljazeera in setting up the scene in the years preceding the events and the use of social media in the early days of unrest via already existing albeit fragmented online communities.*

**Keywords:** Social Media, Arab Spring, Arab Nationalism, Social Change, Online Activism, Arab Revolution

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**W**hen Tarek al-Tayyib Muhammad Bouazizi, a Tunisian fruit street vendor known among his friends as Basbossa burnt himself to death on 17th December 2010 after being humiliated and having his cart confiscated by a city official, his actions triggered spontaneous riots that shocked the Arab world and soon led to the demise of Tunisia's long-term ruler Zine al-Abidine Ben Ali. There followed a chain of events that few would have predicted, as demonstrations and the fever of a youth revolution quickly spread across the Arab world. These early events took the world media and government agencies across the world by surprise (Dupont and Passy, 2011), with the exception of Aljazeera which proved a rare voice of clarity from as early as day two (Reuters, 2011) by immediately understanding the significance of the events unfolding in a small town on the outskirts of the Tunisian capital. From these early days of the uprising Aljazeera identified the crucial role of social media as the preferred tool of communication for activists on the streets wishing to "get the word out". For example, Aljazeera writes in late December: 'for the first time, through the use of social media, the world was seeing videos and pictures of the protests, and how the government can't contain it' (Randeree, 2010). It is no surprise that

Aljazeera put emphasis on social media from the early days considering that months before the events the Aljazeera bureau was shut by the Tunisian authorities; "As events unfolded in Tunisia, a country where Aljazeera's bureau had been closed, the channel again innovated among Arab broadcasters by using mobile phone footage and social media" (Reuters, 2011).

Aljazeera's initial reporting of the events in Tunisia gave Arab World viewers a head start; it took the rest of the world weeks to catch on and try to make sense of the magnitude of what was happening. Even as late as the 24th of December Reuters was still referring to the demonstrations as isolated events: "Reasons for the latest violence were not immediately clear but clashes broke out one week ago in the town of Sidi Bouzid after a man committed suicide in a protest about unemployment" (Reuters, 2010). Consequently, because of this lack of news from world media many activists in neighboring countries resorted to social media and independent bloggers for extra news

*"I do not understand how the mainstream media and social media dedicated itself to support and help the Iranian opposition after the last presidential elections in false hope to down the regime while it is ignoring the uprising of the Tunisian people that really have suffered for a long time in a way you can't imagine it" (Egyptian Chronicles, 2010)*

After this slow start, the world media had no choice but to play catch-up. They were forced to use social media as they searched for information, in effect relying on these earlier youth activists' accounts for reporting (Josphe, 2011). These otherwise underground voices were thus distributed to an even wider audience. Furthermore, the activists were increasingly manifesting an organized and vocal social media campaign which became able to operate across borders in most countries in the Arab world (Dupont and Passy, 2011). Those activists were mobilized and multiplied by the events in Tunisia and, later, in Egypt. Consequently, the story of The Arab Social Media Revolution was born on the world media arena.

## 1. The Historical Context

The weakening of the Ottoman Empire in the late nineteenth century had opened the door in the Middle East for a wave of dissent and unrest; a new generation of activists set out in search of a new formula, and through this possibly a new national identity. The identity search through the years shaped the attitude in the Arab street and continued to do so far after the Arab countries gained their independence (Maalouf 2000). In reality, most of this identity search was confined to university campuses (McLaughlin 2003) and most Arab countries authoritarian regimes were always able to keep demonstrations within the confines of the university campuses and quickly arrest the organizers before they reached major city centers (ibid). This intentional suppression of these small pockets of resistance kept a lid on any intellectually led demonstrations, contributing to the submissive state of the wider population in the Arab world, a situation that continued for many decades.

In order to understand the significance of connecting universities and giving power to student activism we need to look back at the early 16th century when the European universities finally broke from the grip of the church. This was the beginning of modern Europe as we know it now. Even as early as 1548 La Boétie's argues, in the Discourse on Voluntary Servitude, that men of book are more likely to reject the status quo and revolt against a tyrant:

*"These are the ones who, having good minds of their own, have further trained them by study and learning. Even if liberty had entirely perished from the earth, such men would invent it. For them slavery has no satisfactions, no matter how well disguised" (La Boétie 1548).*

The Arab world with its long history of colonization under the Othman rule differs significantly from Europe. As far back as the sixteenth century it was clear that the Turks had intentionally deprived the Arab world of its most valuable commodity - an educated population

*"The Grand Turk was well aware that books and teaching more than anything else give men the sense to comprehend their own nature and to detest tyranny. Why dictators burn books. I understand that in his territory there are few educated people, for he does not want many. On account of this restriction, men of strong zeal and devotion, who in spite of the passing of time have preserved their love of freedom, still remain ineffective because, however numerous they may be, they are not known to one another; under the tyrant they have lost freedom of action, of speech, and almost of thought; they are alone in their aspiration" (La Boétie 1548)*

The history of the Arab world is littered with examples of failed attempts of the public trying to throw the regimes; An example of one such failed attempt was the Bread Riots in Jordan in 1989, which was quickly quelled by the army before it reached a critical mass. Thus the impoverished classes lost a golden opportunity to connect with organized movements in universities (Urdal 2004). In addition, some of these incidents happened within the confines of the university campuses, where students were making demands for free student union elections, rather than a follow-up on the economic factors of the bread riots. Although the two events happened in the same year they did not connect nor show any coordination to generate momentum. This failure to connect was ensured by the regime, which was successful in keeping both riots entirely separated (Bayat 2002). Even as recently as 2008 in Tunisia there was the Gafsa uprising that some even identify as the beginning of the current uprising (Verdeil, 2011). Large parts of this failure could be attributed to the lack of effective communication tools before to the age of Internet.

By the early twenty first century the Arab world demographic make-up had gone through a major shift with the population almost doubling in twenty years. This population growth resulted in a sudden increase in the percentage of youth. In a World Bank 2004 paper Henrik Urdal notes that there is 'evidence that the combination of youth bulges and poor economic performance can be explosive' (Urdal 2004). This new generation of youth, educated, unemployed, and frustrated with the status quo, was ready to act but was somewhat lacking in organizational skills. What they had instead was a lot of free time at hand, which meant they spent more time in internet cafes online chatting, forming online communities and accessing social media; consuming content that otherwise would have not been available. For example, in 2008 the Arab League passed a resolution forbidding Arab TV media from ridiculing its leaders. As a response, Aljazeera performed an interview with Moroccan political satirist, Ahmed al-Sanousi, to discuss this issue; this video went viral on Youtube and within few weeks thousands of Arab youth had engaged with it and passed it around (Aljazeera 2008).

## 2. The Role of Aljazeera

Aljazeera can be singled out for being instrumental in breaking the grip of the regimes on the common daily political discourse with shows like The Opposite Direction where its host, Faisal Al-kasim, stated that Aljazeera had "succeeded in forming an Arab public opinion, probably for the first time

*in Arab history*" (Lynch 2005). So as far back as 2005 it was clear that Aljazeera had set itself apart with its message of speaking to the people and for the people. Looking at this attitude in the context of the events that instigated the Arab Spring it becomes clear that Aljazeera provided the right media environment in which such events could reach the masses and more importantly be heard seriously; thus taking hold and spreading wider and faster than any politician would have expected or wished for. Social media were instrumental in setting up this environment but when it came to the events itself social media became less of an agitator and more of an organizing tool. It is also clear that mainstream media played a bigger role in bringing the people to the streets and giving the events a momentum among the poorer sections of the community. Monitoring mainstream media in the early days of the uprising shows a strong reference to social media as a direct source of news (Leetaru, 2011). This role that Social Media played in tandem with the mainstream media outlets points to a cycle of activists connecting to the wider population via social media content relayed through mainstream media. Mainstream media was happily playing up the role of social media in the Arab Spring because that would in turn ensure a cycle of news narrative alternating between social media and mainstream old traditional media. In some cases the media exaggerated that role, evidenced by the famous image of an Egyptian holding a sign with Arabic writing and the word "Facebook" in English which newspapers quickly and incorrectly translated to "Thank you Facebook" as opposed to its correct translation: *"Thank you Egypt Youth – Facebook"* (MSNBC, 2011). This incident and many others show that mainstream media were instrumental in articulating (and slightly overstating) the role that social media played in the Arab Spring, as though this very "western" medium (computer plus social media) was the West's contribution to the Arab Spring.

The Arabic satellite news station Aljazeera has been a key player in covering the events of the Arab spring. When Tunisia's Mohamed Bouazizi set himself on fire Aljazeera was one of the first outlets to broadcast pictures of his self-immolation: *"Aljazeera is like a media brigade,"* said Jordanian Maisara Malass, an opposition activist. *"By its coverage of events it has helped far more than any other outlet such as Facebook to spread the revolution from one city to the other"* (Reuters, 2011). Aljazeera network has been accused of many things including being: biased to the West, an Israeli collaborator, biased against the West and pro-Palestinian. Some have even gone so far as to say they were Al-Qaida (Miles, 2006). No matter what biases Aljazeera have there are a few facts that cannot be denied about them. Firstly, they have always managed to be in the right place at the right time and therefore report the news first hand. Secondly, Aljazeera also had a policy of employing reporters that speak the local language and often are locals with great depth of local knowledge. Lastly, it was clear from the early days of broadcast that they were never going to shy away from controversy. They even published news critical of their backers, the Qatari government (Al-Kasim, 1999). These three factors distinguished the network from many of its competitor Arabic stations. Combined with the fact that it is an Arabic language channel, Aljazeera was assured the lion's market share in the Arab world when it came to news consumption. The effect of the Aljazeera network is so tangible in the recent events that activists in Tahrir Square were calling Wadah Khanfar, the Director General of Aljazeera, imploring him not to switch the cameras off or that would be their end. Wadah announced, at a recent TED conference, that in the case of Egypt, Aljazeera was more than a media organization, it was an effective tool in motivating the masses (Khanfar, 2011).

### 3. The Role of Social Media

The Arab world hasn't been immune to the phenomenal rise of social media in the last three to five years. In some ways this rise was particularly pronounced in the Arab world because of the demographically younger population and the dire economic situation. The lack of employment among the youth meant a lot of free time to play games and get online (Urdal, 2004). The rise of social media ensured that the online tools for the revolution were readily available. Not only were they regularly accessed by the largest demographic in the Middle East, youth, but also that demographic was the most in need for change. The use of Social media dates back the late twentieth century with clear evidence that political movement like the Jordanian Brotherhood were not active online but were actively organizing demonstrations using their website (McLaughlin, 2003).

The social media activities of the Arab Spring is a continuation of an underground cyber activism that dated back to the mid-nineties (McLaughlin, 2003). The sudden change of pace during the early days of the riots allowed activist to be more vocal and less underground. This, combined with an increase of internet outreach in the Arab World during the last few years and the fact that social media finally reached a critical mass of consumption enabled workers and low-income earners to finally connect with their counterpart activists in universities. This connection enabled intellectuals to generate discussions and communities around issues that are relevant to both parties and, in turn, ensured an online environment able to engage with political issues; not just the regular chitchat that was characteristic of the early days of the Internet. This connection, aided by social media, had directly contributed to loosening the grip of Arab regimes by allowing university activists to join forces with their counterparts in other universities. With that came an immediate shift in the nature of university political discussions online and offline. Even in the most tightly controlled universities, like the Yarmouk University in Jordan – well known for its Jordanian Army ties, the small group of hardened activists who had been isolated in the North suddenly found a voice on the web. One example of this is the violence in 2006 that soon after appeared on Arab video network Ikbis and helped spread the news to other universities and generated online discussions (Ikbis, 2006). This role of social media in connecting voices of dissident had a direct effect on the rise of an organized university movement that was later to play a vital role in the Arab Spring (Harb, 2011). It is clear that social media played a role in the recent events, however the jury is still out on the extent (and nature) of this role. I'll just list here four main arguments to the extent of this role. Firstly, some argue that social media could in fact have a negative effect on such a revolution. For instance, Malcolm Gladwell's New Yorker piece argues that had social media existed at the time of Martin Luther King it would have not been advantageous. Gladwell goes on to state that activism instigated by social media

*"is simply a form of organizing which favors the weak-tie connections that give us access to information over the strong-tie connections that help us persevere in the face of danger" (Gladwell, 2010).*

The second argument downplays the power of social media and claims that it has little or no effect, thus implying that social media were neither sufficient nor necessary. This argument simply fails to articulate (or understates) the important role that social media played in the years preceding the Arab Spring and in setting up the environment and the infrastructure that made it possible for these events to succeed.

The third argument states that social media is just another technology in the long line of technologies used by revolutionaries across history. This use of technology for social change is not



new. For instance, the Zapatista Army of National Liberation of Chiapas, Mexico was one of the first movements to effectively use new media for their activities (Castells, 2009). Nevertheless, this use of technology has its supporters and critics as we've seen above in Gladwell's New Yorker piece. In contrast, Freire in his book *Cultural Action for Freedom* talks about the use of technology to engage activists, arguing that new technologies are part of the natural phase of the creative process that engages activists to transform the world (Freire, 1970). Regardless of technology, what makes social media so influential these days is the way it is changing our habits of media consumption and creating back channels of communication that blur the boundaries between the storyteller and their audience so much so that the medium becomes the message (McLuhan, 1969).

This leads us to the fourth argument which states that even though social media was not the sole instigator of the Arab Spring its influence was far more important than just being a communication tool at the hands of the activists. In the context of this media ecology, the act of participating in discussions on social media is itself news and is often overplayed and emphasized on traditional media. For example CNN's use of IReporter reframes what is acceptable as a news source, almost regardless of the value of the content. The fact that a bit of information is conveyed through social media seems to add value to that information. This might be as a result from our perceived value of social media news combined with our changing habits of media consumptions. Especially worth noting is the rising popularity of new mobile technologies like smart phones, which are profoundly changing the world media landscape. The Middle East is not immune to these changes.

To understand this new interactive role that social media played in the Arab world during and prior to the Arab Spring we need to look at its three key attributes: communities, content and communication. These three elements combined created an environment in the last few years that directly contributed to many of the factors that preceded and led to the recent events. These included: firstly an increasingly charged attitude on the Arab street that slowly built up to a critical mass of dissent, especially with the forming of social media communities like Facebook pages where counter-regime dissatisfaction was elaborated, intensified and circulated (Mcquillan, 2011). Secondly, these communities constantly disseminated content exposing the brutality of local authorities and, on a larger scale, the futility of Arab authoritarian regimes (Harb, 2011). Finally, social media helped nurture the events in Tunisia by creating an effective and immediate vehicle of communication and deployment of content, thus enabling Tunisian activists to distribute valuable information to activists in neighboring countries and some key media outlets like Aljazeera. History tells us that similar events in the Arab world had been happening even decades before the invention of social media so it is clear that social media is not the sole reason for the Arab Spring. Equally evident is that social media was essential for creating the momentum, the effectiveness, the wide spread and more importantly the critical mass to beat the well-tested method that Arab regimes have been using to quell such uprisings. Social media might be said then to be necessary but not sufficient. In saying that it is clear that Arab activists saw the potential of Social Media not just as an organizing tool but also as a tool for content distribution

*"Generally, in Libya before this, there was no media," explains Shallouf. 'So if Tobruk made a revolution, [the government] would spend three to five days killing us and finish the revolution. Nobody in [larger nearby communities and cities] al-Baida or Darna or Benghazi would have heard about it. But now with Aljazeera and Facebook and the media, all of Libya hears about the revolution and is with the revolution. They know about it. They think, 'I am Libyan, this is my family, so I will go to the street to fight for them'"" (Hauslohner, 2011)*

The recent events were not the first time Social Media was used in the Arab world. Activists like Ahmad Gharbeia were working in collaboration with global organizations to create Arabic tools for online activism to ensure that they can quickly mobilize when the time is right. According to Ahmad,

*“The role of the internet was critical at the beginning. On the 25th, the movements of the protesting groups were arranged in real time through Twitter. Everyone knew where everyone else was walking and we could advise on the locations of blockades and skirmishes with police” (Mcquillan, 2011).*

Even as early as 2007 there was a number of movements that were *“orchestrated via Facebook, including the 6 April uprising of 2007 but at this time such resistance invariably ended in persecution and even more oppression”* (Harb, 2011). This was to continue and reach its height with the 2011 Arab Spring. In Egypt there were a few precedents of demonstrations organized using Facebook but the authorities were able to control them. This might have in fact have given the regime a sense of false security (Harb, 2011).

A group of researchers from webeconology project and Microsoft analyzed a large set of data from twitter including,

*“168,663 tweets posted January 12–19, 2011, containing the keywords #sidibouzyd or #tunisia. The second includes 230,270 tweets posted January 24–29, 2011, containing the keywords #egypt or #jan25”* (Lotan et al, 2011).

The results showed that while the most active tweeters were bloggers and journalists (activists came third in terms of volume), it also showed that activists and bloggers were the most active in terms of retweeting which indicates they had a vested interest in getting the word spread. It is also worth noting that in the Tunisian data set Journalists tended to retweet activists’ tweets more often which confirms the fact that the mainstream media resorted to activists and their content on social media as a way to source news for the early days of the Tunisian events.

The “We are all Khaled Said” Facebook page had started six months earlier, in mid-2010, as a response to the brutal killing of Khaled Said. Khaled, a 28-year-old Egyptian from the coastal city of Alexandria, who was tortured to death at the hands of two police officers. On the Facebook page we can see the potent image of Khalid before and after, which was successfully used to rally support for the page. This page has now more than a 100,000 followers and, although it started among a few thousand activists, it slowly built a coherent community and purposeful discussions months before the events in Tunisia (Facebook, 2010). It is worth noting that the page was not just used as a discussion tool but, more importantly, it was and still is being used as a content publishing channel. Recently the administrators of the page put a link to a newly formed page “We are all Hamza Alkhateeb” in reference to the recent torture of the 13-year-old Hamza by the Syrian government (Facebook, 2011). This page includes videos that document the torture and rallies of the Syrian public who revolt against the regime.

What is interesting on this page is the way the video was shot. You can hear the voice of Hamza’s father pointing out all the wounds his son incurred during his torture before being killed, in addition to the voice of the activist who shot the video translating the father’s words into camera movements and adding his own commentary. There are two important points here. One, is that Hamza’s parents called this activist to video their son’s wounds, which implies access to this network of camera-equipped activists. It also implies that the parents understood the power of social media in getting justice for their son. Two, in this video the activist is assuming the role of a

citizen journalist. The fact that this video spread online quickly is a testament not only to the effectiveness of this mode of communication but also that there is a clear online effort to form interconnected communities.

I agree that revolutions can only happen on the streets, but we should not perceive the online environment as simply a superficial accessory. To do so would ignore the growing power of networked societies and their influence on political activism. Eytan Tufekci, in her technosociology blog points out that an important advantage of using social media in participatory activism is its faster method of spreading the word and therefore greater capacity to create a critical mass

*"Under normal circumstances, autocratic regimes need to lock up only a few people at a time, as people cannot easily rise up all at once. Thus, governments can readily fight slow epidemics, which spread through word-of-mouth (one-to-one), by the selective use of force (a quarantine). No country, however, can jail a significant fraction of their population rising up; the only alternative is excessive violence" (Tufekci, 2011)*

By the time this paper is published the situation on the ground would have changed significantly. Even though it is outside the scope of this paper, we need to note that this change is as much social as it is political so it is important to understand the significance of the cultural context in regard to social change. What will become increasingly demanded by a young revolution is a cultural readiness to embrace a new order. This readiness cannot happen overnight, as Morozov points out:

*"even if we assume the internet may facilitate the toppling of authoritarian regimes, it does not necessarily follow that it would also facilitate the consolidation of democracy" (Morozov, 2011\*2).*

#### 4. Conclusion

Looking at many precedents of riots and demonstrations in the Arab World we can see that, historically, governments were able to easily quell them by using brute force on the one hand and symbolic concessions on the other hand. This tactic, combined with heavily-controlled media made it impossible for popular revolts to gain critical mass and break from the grip of the regime. This media control had another effect creating a submissive state of the Arab world and a severe case of cultural backwardness (Safouan, 2006) that was indirectly aiding the regimes by ensuring that riots and unrest were not able to receive critical mass support among the working class. This state has been slowly changing in the last decade or so with the increasing popularity of satellite television and the rise of social media consumption (Rinnawi, 2006).

Gradually, the increase in the consumption of shared content across the Arab world via the introduction of satellite television, combined with social media's ability to create effective online communities that transgress borders, created an intellectual awareness among the Arab youth. In turn, this cultural awakening created an attitude in the streets that ensured a receptive ear when the Tunisian event was carried across the social media networks and its content picked up by Aljazeera. Aljazeera managed to pick up the story where social media had started it and distribute it to a different demographic, therefore creating a critical mass while at the same time validating a movement that had actually started online. Social media then became an effective and essential tool of communication and organization because of its existing communities and effective ability to dissipate content bypassing the secret services. This game of tag, and of information moving freely between actions on the streets, online communities and mainstream media was essentially creating

an exponential groundswell and a cycle of information/actions that was increasingly gaining power, momentum and recognition.

There is no doubt to the magnitude of change we are witnessing on the Arab street. This newfound momentum and power is still unpredictable and the question remains open to how it can be harnessed to create effective mechanisms of long-term stability within the context of a highly connected, highly engaged society. I hope future research can shed light on a subject so important and very little researched.

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## About the Author

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Sohail Dahdal is a filmmaker and new media artist with strong interest in social change. His credits include the award-winning online documentaries *First Australians* and *Long Journey, Young Lives*. Sohail is currently doing a doctorate in creative arts at UTS. His research topic is the role of social media in participatory political activism.



# Jobbik on the Web

*Right-wing extremism in Hungary*

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*Abstract: Extreme right-wing parties can appear out of nowhere, as happened with Hungary's Movement for a Better Hungary, shortly Jobbik in the past few years. 2010 the campaign strategy "one camp, one flag" of the right-wing Fidesz<sup>1</sup> party failed to stop the ultra-right-wing Jobbik party from gaining ground. Jobbik is a Hungarian radical nationalist political party. The party describes itself as "a principled, conservative and radically patriotic Christian party", whose "fundamental purpose" is the protection of "Hungarian values and interests." (Vona, 2009, p.3). Jobbik is since the national election in 2010 the third largest political party in Hungary. The explosive release of Jobbik in 2006 is remarkable. The party rose from its inception to a tactfully positioned dissemination of its own ideology. The Internet marketing was able to combine the previously segregated social groups with extremism attitudes. The party operates within a surprisingly well-developed and self-sustained online universe. Recent studies have found that the party's supporters aren't the "losers" that were expected by many experts.*

**Keywords:** Right-wing extremism, Hungary, Jobbik, web

**J**obbik is the third largest party and is seen by the Hungarian voters as necessary member of the party system. Its growth over the past decade has been remarkable and now commands significant political weight in the Hungarian parliament. The rise of Jobbik is mirrored online. The Internet has played a larger role than for all other Hungarian parties in the success of Jobbik. Jobbik has more than 12,000 official members. At the end of January 2012, on the Facebook profile of the party 38,608 people gave it a "like" (Bartlett et al., 2012)<sup>2</sup>. 75% of the party supporters identify themselves as regular Internet users and 82% of them vote for the party (Ibid.). In fact the "invisible" support for Jobbik becomes more than clear. Jobbik created with its marketing strategy on the web virtual reality for its fans and at the same time offers an ideological platform for its supporters.

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<sup>1</sup> The Young Democrats Alliance (Fidesz) led by Prime Minister Viktor Orbán is since 2010 the ruling party in the Hungarian parliament. The alliance secured by the election the 2/3 majority which is required for modifications of the law.

<sup>2</sup> The British Demos research institute and the Hungarian Political Capital Institute examined the Facebook fans of Jobbik in their research paper: "Populism in Europe: Hungary".



## 1. Background - Right-wing extremism in Hungary

According to the Derex<sup>3</sup> index, as measured by the study of the Hungarian Political Capital Institute, the number of potential right-wing extremists in Hungary has more than doubled from 10% in 2003 to 21% in 2009 (Political Capital, 2010).

After the Hungarian credibility crisis of the political elite in 2006 the Hungarian political as well the right-wing extremism has been growing in strength across Hungary. Jobbik, the Movement for a Better Hungary (Jobb Magyarországért Mozgalom, shortly Jobbik<sup>4</sup>) was formed as a far-right party with a unifying band of right-wing ideologists. Founded in 2003, Jobbik is, since the national election in 2010, the third largest political party in Hungary. It managed to break away from MIÉP, the Hungarian Justice and Life Party (Magyar Igazság és Élet Pártja, in short: MIÉP) which was until 2002 the most successful party in the extreme right political spectrum. The extreme-right Hungarian Truth and Life Party (MIÉP) failed, with 1.6% at the first national election in 1994. After rebuilding the party structure, MIÉP succeeded by the next elections in 1998 in getting into the parliament. She got 5.5% of the vote. This success could not be repeated in the coming elections of 2002 – at 4.4% they just missed the 5% threshold. Since the election of 2002 the party is marginalized. Personnel and substantive differences occurred at the surface. To soften the extremist course the "reformers" had attempted unsuccessfully to replace the authoritarian, anti-Soviet dissident party leader Csurka István, who died in February 2012. Nevertheless the party is, with 7000 members, still present on the streets of Budapest. It regularly takes part in demonstrations of opposition forces. Just weeks ago, Csurka spoke at a rally in the southern city of Szeged in defense of Prime Minister Viktor Orbán's government, which has been severely criticized by the European Union for laws seen curtailing civil liberties and upsetting the democratic system of checks and balances. The tactical alliance of the new far-right force Jobbik with MIÉP by the parliamentary elections of 2006 had no success. They got together 2.2% of the vote. As a result the coalition fell apart.

The extremism "in the middle of the Hungarian society" results from the fact that Hungary does not have a historically evolved democratic culture. From the end of World War II until the collapse of socialism the country was – with the exception of 1945 to 1948 – under authoritarian rule. Current political events bring the historical cause for the right-wing extremism to light. In neighboring Slovakia the Slovak National Party is a significant political force that deliberately foments anti-Hungarian sentiments which is arising from the specific situation of the Hungarians minority living there (Barlai & Hartleb, 2011). More than two million ethnic Hungarians live outside the nation-state: in Transylvania, Serbia, Ukraine and Slovakia.

As a consequence of the Peace Treaty of Trianon (1920) after the First World War, Hungary lost not only 68% of its state territory but also 58% of its population. The trauma of Trianon is still present and is used as an instrument of national(istic) policy. As a result, models for solutions are proposed, such a dual citizenship<sup>5</sup> or the bill of rights for Hungarian minorities which would allow

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<sup>3</sup> Demand for Right-Wing Extremism Index measures and compares people's predisposition to far right-wing politics.

<sup>4</sup> The name Jobbik has two different meanings ("Jobb" is the comparative form of good and means also the direction right) – a word-play with depth.

<sup>5</sup> March 2004 Fidesz initiated a referendum about the dual citizenship for the Hungarian minorities abroad and emphasized the patriotic necessity of this step. The socialists stressed the huge financial burden on the

them cultural and educational benefits in Hungary as well as facilitating access to the Hungarian labor market. These issues with explosive nature are often on the agenda in the “Országház”<sup>6</sup> and are hidden extremist potential (Von Ahn, 2007).

### 1.1 Subcultural right-wing extremism

The current political and subcultural right-wing extremism is based on a "latent" right-wing extremism which was, until October 2006, a constant social by-product. Even before the change of system in the early 1980s, right-wing extremism has appeared, particularly on the music scene. Young people from the working class began to organize themselves – although rather apolitically. In addition to the theme of national pride they articulated issues concerning anti-Roma and anti-communism. In the late 1980s the movements developed into racist attacks which were continued in the 1990s. At that time the “Rights” had approximately 1500 to 2500 activists whose number rose at the mid-1990s to 4000. The extended circle of sympathizers integrated in the society was, according to a study by the National Security Bureau, much larger – experts estimated in the mid-1990s 160 000 followers (Karsai, 1999).

Subcultural extremism is primarily not an immediate transformation phenomenon, but a product of post-transformation. Radical street protests and the appearance of paramilitary groups since the “hot autumn” of 2006 indicate the increasing protest potential half a decade after the system change. The subcultural right-wing extremism in Hungary is increasingly becoming a serious threat to liberal democracy (Barlai & Hartleb, 2011).

The national radicalism gained momentum and became stronger thanks to the formation of Jobbik. The academic roots of Jobbik provide a broad ideological exchange. Historical events are instrumentalized – particularly on public holidays remembering the Hungarian history. At the most recent of these Jobbik fans, together with the party chief Vona, burned an EU flag on the central Kossuth square in Budapest as response to the warning letter of Manuel Barroso to Hungary’s prime minister (hvg.hu, 14 January 2012). Right-wing extremism in Hungary is not a lower-class or fringe group phenomenon although the majority of violence is used by socially marginalized fans. On the one hand the formation of the Hungarian Guard can be seen as “Theater of the Absurd”, on the other hand as a symptom of growing extremism (Magyar, 2010).

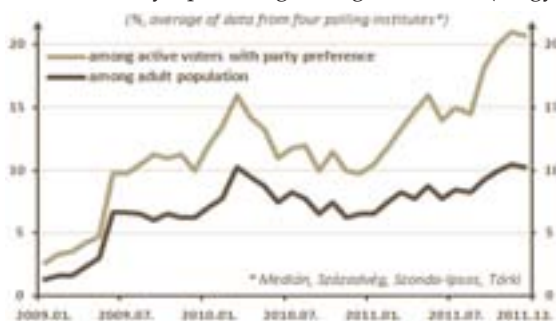


Figure 1: Support for Jobbik, 2009–2011 (www.riskandforecast.com, 2012)

national budget. According to Hungarian tradition the discussion finally culminated in the question: who belongs to the nation and who was a traitor of his own country. The referendum failed.

<sup>6</sup> The Hungarian name for the parliament.



Over the past two years, support for Jobbik has increased markedly amongst both active voters with a party preference and within the adult population in general. According to the latest poll of Századvég from March 2012, 17% of decided voters would vote for Jobbik if the national election were held next Sunday (Századvég, 2012). Among the population as a whole 9% would vote for Jobbik. Fidesz-KDNP remains the most powerful party with 46% support of determined voters (Ibid.).

## 2. The (web)rise of Jobbik

Hungarian right-wing extremists have been using the Internet to reach their goals and mobilize their fans and potential supporters. The Internet is an ideal platform for disseminating messages and organizing demonstrations and campaigns as well for propagating their ideology.

### 2.1 Ideology of Jobbik

The mental foundations for today's right-wing extremism were laid by the Right Youth Community (Jobboldali Ifjúsági Közösség –Jobbik for short) which was founded in 1999 by students as a consequence of their frustration with the political elite. With new actors and an openly national- socialist ideology in Hungary a specific situation of mixed influences arises. The "Right- wing extremism movement" meshes the party and the street. It shows features of a "new social movement," connected to a historic- symbolic framework openly referring to Fascism. The Jobbik movement makes old wounds and unsolved conflicts obvious, particularly the majority population's general hatred towards the Roma. Thus, right-wing extremism is a phenomenon originating from the midst of society. The population's dissatisfaction with the elites is due to the populist, polarizing behavior of the big parties. A militant democracy, distancing itself from extremist poles, is unknown in Hungary. Jobbik emerges with a dedicated system and social criticism (Barlai & Hartleb, 2011) The "new social movement" legitimizes its radicalism through their methodology: "asking the right questions and have the correct solutions." Its vision of the future is the ideology of "a morally renewed Hungarian," who is able to unite the whole Hungarian nation. In Hungarian politics only words matter, not deeds – says the founding document of Jobbik (Jobbik, 2003).

Jobbik describes itself as a "principled, conservative, radical, patriotic, Christian Party, which has the fundamental objective: to protect the Hungarian values and interests" (Vona, 2008). Contrary to its self-image slogans like "Hungary belongs to Hungarians" make it seem extremist, anti-Roma and anti-Semitic. Jobbik is trying to bring history alive and repeatedly emphasizes the omnipresent trauma of Trianon and calls for the restoration of the borders of Greater Hungary before 1919.

More significant is the anti-Roma campaign of the party. Jobbik managed to seduce voters by demonstrating that it was the only party prepared to speak out and step up against "Gypsy-crime", a potent metaphor amalgamating the material woes and fear of downward mobility experienced by the lower middle and working class in a time of crisis, and their growing intolerance towards "idleness" and "welfare scrounging" in economically depressed areas (Barlai & Hartleb, 2011).

*"The Internet has been and remains very important to us. It is not only on account of our limited access to the traditional media, but also because a major part of our supporters and voters are young people who we can best reach via new media", explained Márton Gyöngyösi, a Jobbik member of the Hungarian parliament (Gyöngyösi, Spiegel-online, 3 February, 2012).*

After the fiasco of the MIÉP-Jobbik-coalition in 2006, Jobbik strengthened its position with the formation of the paramilitary organization, the Hungarian Guard (Magyar Gárda). The uniformed, police-type organization, the Hungarian Guard was established to prepare the youth for "exceptional circumstances".

*"Before the establishment of the Hungarian Guard the World Jewish Congress had written a letter to the Hungarian Prime Minister to prevent the formation of the Guard. As far as I know, this action is unique in the history. Not even during the Second World War there was such a direct and public trial of the organized Jewry to interfere in the internal affairs of a country" (Vona, 2008, p. 9).*

The young party chairman and leader of the Guard, Gábor Vona comes from a traditional farming family. Vona studied at the famous Eötvös Lorand University (ELTE) and has degrees in history and psychology. He was a member of the civil circle "Alliance for the Nation" which was initiated by Orbán. The formal top candidate of Jobbik in 2009 (without party membership), Krisztina Morvai teaches criminal law at the ELTE. The Vona-Morvai Couple earned 15% of the vote - far more than expected. The voters of Jobbik came also from the group of disaffected supporters of the Socialists. The party was not only stirring up resentment, but also communicated messages such "Hungary for the Hungarians". At the constituent meeting of the European Parliament a newly elected member of Jobbik arrived in a uniform of the Hungarian Guard.

The Guard was able to "swear in" more than 2500 members and is, together with Jobbik, the exclusive representative of the right-wing camp. 2009 Jobbik won 14.8% of the vote and became the third strongest force in Hungary (valasztas.hu, 2009). This result culminated in their sensational success at the national parliamentary elections in 2010 by that Jobbik scored 16.6% of the vote (Ibid.). This successful development is directly related to the general cluster of factors that weigh heavily on the society and politics (Jobbik, 2003).

## 2.2 Online activity of the Hungarian Parties

Due to increasing Internet use in Hungary (in the first half of 2006 39% of the population were regular Internet users) the World Wide Web became more popular among the parties and the political elite (NRC, 2007). The campaign of 2006 was considered a breakthrough in the history of Hungarian political internet communication (Boros, 2010). During the campaign new instruments in the form of political blogs, viral marketing, micro-sites and campaign elements based on manipulative pictures have been appeared. Only the MSZP's campaign has shown innovative online elements. The "Wind Rooster campaign"<sup>7</sup>, Ferenc Gyurcsany's<sup>8</sup> blog and YouTube videos were deemed to be pioneers in the Hungarian political communication. 2006 the popularity of MSZP<sup>9</sup> with voters between the ages 18 and 29 was in part caused by the adaption of the new social media platforms (Ibid.). After the success of the elections the online communication of the MSZP was neglected and it collapsed as the whole left camp. At the same time Fidesz became more powerful. The right-wing party started to increase in influence in the blogosphere and enjoyed popularity with internet journalists. While Fidesz was able to retain its young voters the

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<sup>7</sup> MSZP described the policy of Fidesz as "Wind Rooster" policy. The picture of a wind rooster appeared the first time during the US-campaign Bush vs. Kerry. It was intended by the Republicans to raise awareness about the changing opinion of Kerry.

<sup>8</sup> Prime Minister from 2006 to 2009 (MSZP)

<sup>9</sup> MSZP- Hungarian Socialist Party

support for MSZP has fallen under 10 percent. The circle of the internet users had become mainly a “right profile”. The right-left dichotomy on the Internet was broken by the sudden appearance of Jobbik which took the lead online.

In 2010 the five parliamentary parties and party coalition, Fidesz-KDNP<sup>10</sup>, MSZP, LMP<sup>11</sup> and Jobbik were using web tools. The parties and their candidates relied on popular social networking websites, such as iwiw (Hungarian social-networking service), Twitter and Facebook in order to present themselves and find supporters. In 2010 the most popular community platforms were iwiw and Facebook which were most commonly used by the political parties for the needs of the campaign (Boda & Kiss 2010). In the first half of 2010, 1.2 million people visited the social network iwiw, with 0.8million visiting Facebook. Jobbik’s community-building power was demonstrated in the fact that the extreme right had, with 40,000 fans, four times more supporters on iwiw as the other three parties’ together (webforgalom.hu, 2010). Fidesz MSZP and LMP did not invest any effort in the “iwiw- campaign” – the number of their iwiw-groups showed only a slight increase.

Facebook became the most popular social online platform in Hungary. Fidesz invested energy in their own promotion on the site. The party has repeatedly endeavoured to campaign in “Obama-style”. At the time, Fidesz already had a highly developed media platform and a huge group of activists. Therefore the party was not dependent on the internet. In contrast, in the campaign of LMP, Facebook played a key role. This was due to the fact that one of the target groups of the “greens” was the circle of young and well-educated internet users and that LMP started a campaign with modest financial expenses and without any media platform. The MSZP neglected Facebook as well (Boros, 2010). Today Viktor Orbán has 131,000 likes on Facebook, Jobbik 41,000 (Gábor Vona 36,000), LMP 17,000, MSZP 10,000 and KDNP 1500 (Facebook.com, 2012).

During the campaign the parties launched a Twitter channel (Ibid.). One week before the elections the most followers on twitter went to Jobbik and LMP, with 1196 and 818 fans respectively. In comparison, Fidesz had 277 people signed up on its channel. However Fidesz had the most “tweets” with 4,171 entries. LMP has an active online presence since 2008. The fans of the green party are mainly well educated young people, live in urban areas and have a high internet activity. It was therefore not surprising that 2010 the online activity of the LMP overtook Fidesz and MSZP (Ibid.).

### 2.3 Jobbik on Web

The internet network of Jobbik, which is their most important instrument to reach their voters, must be taken into account in the analysis of Jobbik’s rise. Also during the 2010 election campaign the Internet as a whole played a key role for Jobbik. Compared to other parties, the party had the most up-to-date Internet presence based on Web 2.0 (tools). Fans visiting those (web) pages could take an active role in helping shape them, thereby becoming part of the campaign themselves. Jobbik has build up an extremely well-organized network made up of hundreds of right-wing extremist websites interlinked via platforms like twitter, Facebook or iwiw.

Jobbik is the first party in the history of Hungary which to have effectively used the Internet platforms such kuruc.info, facebook and iwiw for its own purposes in the period of the beginning domestic crisis. In December 2007, the former socialist politician Csintalan Sándor was attacked

<sup>10</sup> KDNP - Christian Democratic People's Party

<sup>11</sup> LMP - Lehet Más a Politika - Politics Can Be Different, Hungary's “green” party.

and severely mistreated. Before this Jobbik started a campaign against the so called "Jewish rat" (jobbik.hu, 2007). Those suspected of carrying out the attack, including Hungarian neo-Nazi leader György Budaházy, were arrested in 2009 and are currently standing trial on charges of committing terrorist crimes.

For Jobbik the network is even more valuable for the sole reason that its users are not people who are poor and socially frowned-upon. Contrary to the assumption that Jobbik is a party of "losers" the latest study of the British think tank Demos and the Political Capital Institute in Budapest proved the opposite (Bartlett et al., 2012). The study of 2012 is based on the results of a survey of over 2,200 Facebook fans of the Jobbik party. The experts found that the typical Jobbik-fan has "very low levels of trust in all major social and political institutions" Ibid., p. 18) and is "more likely to think that violence is justified if it leads to the right outcome" (Ibid., p.19) Likewise, the Internet-based service index.hu, Hungary's best-read online news website, summed up the average Jobbik voter as: "Very young, very Hungarian, very ill-tempered" (Király, 2012).

Age group	Jobbik total % (Hungary total %)	Western Europe PPAMs % (European total %)
16-20	50 (21)	32 (19)
21-25	22 (18)	19 (17)
26-30	12 (14)	12 (14)
31-40	20 (24)	17 (21)
41-50	9 (12)	12 (15)
51+	6 (11)	8 (13)

Figure 2: Age of Jobbik facebook fans (Bartlett et al., 2012, p. 18)

Jobbik Facebook supporter tend to be young, 64% are under 30. The same result demonstrated also the study of Táarki, the Hungarian Social Research Institute. According to the tárki-survey nearly one-third of voters under the age of 37 would vote for Jobbik (tarki.hu, 2012).

	Male (%)	Female (%)	Total (%)
Elementary or secondary school	73	70	72
College or university	20	24	22
Postgraduate professional training institution	6	5	6

Figure 3: Highest level of education of Jobbik facebook fans (Bartlett et al., 2012, p. 19)

72% of the interviewed fans stated that they have primary or elementary school level of education and 22% that they have a college or university degree. The Hungarian average is 17%. In comparison to that Jobbik fans appear to have higher level of education. The same result came out by tárki (tarki.hu, 2012).

	Male (%)	Female (%)	Under 30 (%)	Over 30 (%)	Total (%)
Formal members of Jobbik (%)	16	17	15	18	16
Voted for Jobbik in the last election (%)	80	84	78	88	82
Taken part in a march or demo last 6–12 months (%)	36 (3)	33 (2)	37	31	35 (3)

Figure 4: Offline involvement of Jobbik facebook fans (Bartlett et al., 2012, p. 20)

82% of the interviewed fans said that they voted for Jobbik in the last election and 35% acknowledged having taken part on marches, demonstrations or protests in the last six months (Ibid.). The national full year average is 3% which is much lower than that of Jobbik's fans.

### 3 Conclusion

Jobbik managed to seduce voters and turn a large number of affected citizens towards its online movement with the result that it is one of today's major parties in Hungary. Jobbik has developed a strong and powerful presence on the most-visited online social networks in Hungary: iwiw, Facebook and Twitter.

The official data and the results of surveys challenge the general stereotype that simplistically depicts Jobbik supporters as the "losers of the transition": the poor, unemployed, undereducated people. The fact is that Jobbik's (web)supporters are motivated in large part by a desire to protect identity, ideological and cultural considerations rather than economic ones. Therefore, the interpretation of Jobbik's success as a mere political consequence of the economic crisis is a false simplification. The results also stress that the Jobbik party should not be grouped together with other nationalist populist parties in Western Europe. While there are obvious similarities, the demographics, concerns and attitudes of Jobbik supporters — as well as the Hungarian context — differ in significant ways.

For the Hungarian political scientist Áron Buzogány, Jobbik's popularity is the tragic result of Hungary's failed political transformation. "For a long time, the country has been split into left and right to an extraordinarily deep degree, which is becoming an increasingly large social problem," he says. "An entire stratum of young people has grown up in the context of this division and has now found a home in the right-wing extremist micro-universe" (Buzogány, 2012, in Spiegel-online.de).

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# Government 2.0 & Open Government Data

(peer-reviewed)







# A Temperature Check on Open Government

*Assessing parliamentarians' attitude towards democratic concepts*

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**Abstract:** *This paper describes the attitude of Austrian politicians towards Open Government evaluated through a survey conducted in March 2011. After presenting the concept of Open Government, several streams of study in the Austrian context, the survey undertakes the effort to investigate Austrian parliamentarians' perspectives on Open Government elements. The results indicate that the topic has already reached the political public sphere in Austria, but has not yet played an important role in politicians' daily activities. However, social arguments seem to be a good starting point for advocating Open Government in Austria. Finally, respondents' preferred strategies towards more transparency (in particular regarding the legal framework) and publishing strategies (Open Government Data) are addressed.*

**Keywords:** Open Government, transparency, collaboration, participation, Open Data, legislation

**C**oncepts that emphasise the idea of openness are discussed with view to their potential to strengthen transparency and accountability in the state, as promising ideas for the vitalisation of citizens' interest in politics and as motor for economic and scientific innovation. However, most research on the transformation of governments focuses on a critical evaluation of projects and policies or technology based approaches to innovation. Other investigations emphasise citizen's expectations with view to the acceptance of new tools or project measurements. What is less discussed is how the different elements of new governmental concepts like the Open Government approach are evaluated by citizens, political stakeholders or parliamentarians, although such knowledge would be important to access the public opinion on the concept as well as finding reference points for advocates and activists to influence political stakeholders. Whilst expert knowledge about the potentials and risks of Open Government is important, efforts to redefine governmental principles will only be successful if positively assessed by politicians in charge. Integrating the knowledge of citizens in administrative and political processes is based on a change of values and power shifts. Assessing the level of enthusiasm for new government concepts and the related values can thus be a first step towards understanding policies and political change, with research providing information on the opinion of both citizens and stakeholders. This is particularly important in countries where such initiatives are not yet driven top-down and thus rely on NGOs or bottom-up, interest-driven organizations.

## 1. Open Government - Conceptualisation and strands of research

### 1.1. Definition and development

In the narrow sense, Open Government is about improving transparency and thereby accountability in all public affairs [Heckmann 2011]. In the broader sense the concept also comprises participation and collaboration as proposed by the Open Government strategy of Barack Obama in his election campaign and Open Government Directive [Obama 2009, Memorandum for the Heads of Executive Departments and Agencies 2009]. Beyond publishing governmental information or holding public meeting, the goal is increased citizen participation, involvement, and direction of the governing process itself [Thibeaudeau 2009]. The Obama administration is often seen as the driving force of the Open Government strategy with the three pillars transparency, participation and collaboration. These three pillars have also been taken on as a working definition and structure for this survey, with a particular focus on aspects related to transparency in the paper.

At the forefront of contemporary public debate is the balance between governmental secrecy and open government [Piotrowski et al. 2007]. However, openness and transparency are keywords that have not only been used in the long tradition of discussing freedom of information, but also in movements like Open Source or Open Access. To be historically precise, the usage of the term Open Government was already shown in the late 1950's among experts observing information exchange in the American government [Parks 1957] due to a withholding of governmental information after World War II. Open government principles and the idea of free government information were considered and legal amendments took place leading to the Freedom of Information Act (FOIA) which came into effect in 1967 [Little et al. 1975]. Despite this long tradition, the Open Government Directive and the re-evolving international discussion mark a specific trend line: For the first time, the principles and strategies were discussed as a holistic government strategy on the highest level. The Obama Open Government strategy has had impact in Europe as well. For instance, the Belgium presidency of EU arranged a conference called "Lift-off towards Open Government"<sup>1</sup> which included a range of topics, but with limited focus on transparency. The Open Government Partnership<sup>2</sup> is an international initiative initiated along the UNO summit in September 2011. On the global level, 79 countries (a commitment of Austria is so far missing) meet the 4 criteria proposed by the initiative: discovery of main budget data, citizens' access to information and public data, information on the income of politicians and senior officials as well as openness to participation and protection of civil rights. Once a grassroots movement of activists, Open Government now seems to be adopted by some of the world's biggest NGOs and entering the domain of governance policy.

### 1.2. Open Government in research

Many studies focus on citizen's attitude towards transparency and their evaluation in the context of local government [Piotrowski, et al. 2007]. Several strands of research concentrate on one of the key elements of Open Government, resulting in a plurality of concepts (e.g. eParticipation, eDemocracy). It was criticised that there is no clear meaning of these concepts and that some of

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<sup>1</sup><http://www.opengov2010.be/> (accessed January 28th, 2012)

<sup>2</sup><http://www.opengovpartnership.org/> (accessed January 28th, 2012)

them remain very vague or contradictory [Fuchs 2009]. Although most Open Government experts or advocates have a better understanding of the elements, little is known about both the understanding and evaluation of these ideas by political representatives throughout the parties or the cultural differences.

Research in the field focuses on analysing the potentials of Open Government as an instrument and the link between people's trust in democracy and transparent institutionalized procedures. These potentials can be divided into two categories: economical and social arguments. With view to international policies, economical arguments in order to create efficiency and innovation are quite dominant. Pollock's "Model of Public Sector Information Provision" and the follow up paper "The Economics of Public Sector Information" make the economic argument for value gained from releasing specific datasets currently under trading funds [Pollock 2008]. O'Reilly [2010] argues that these new strategies will create significant economic value, data being a key enabler of outside information. Economical arguments see Open Government as a corrective to the current economic crisis, proposing that transparent structures and new services will lead to innovation. However, financial arguments are also amongst the main criteria for not fostering Open Government in a state (now referred to as Open Government budget crisis [Greer 2011]). In addition to the global economic crisis and changes evoking new innovation and business models, other transformation forces are bringing the urgency of public sector transformation to the fore: The socio-technological revolution referred to as Web 2.0, social networking and demographic changes (the "net generation") [Tapscott 2009]. From this perspective, social arguments focus on the potential of Open Government instruments to foster civic participation and collaboration. There are many reasons why citizens choose not to engage in politics. A popular explanation is emphasising an expanding gap between politicians and citizens by less support to specific parties and a disengagement from the institutional democracy and the parliament [Coleman 2009]. The sociological approach is looking at the reasons for this by considering changes in the political economic structures or socio-cultural transformations [Dahlgren 2009]. In other words, these changes are based on the evolution of the preconditions of democracy, which can also be economically driven. Thus, economic and social arguments in Open Government will always be interwoven, although the emphasis will differ according to regional and cultural differences or the respective political attitude.

There are several streams of study in Open Government: Open Government case studies, policy recommendations (a "how-to" of Open Government emphasising the potentials and risks) and meta-research (focusing on citizens' and stakeholders' perspective). Often, these are institutionalised in local governance and strategic public management studies with a strong focus on studying innovation as the hub of new efforts to revitalize and strengthen the role of governments within the complexity and new scenarios of today [Ramirez-Alujas 2010]. A difficulty of applying research in this field to practical circumstances is that the potentials are mostly described with reference to international best practice projects and case studies. Consequently, national or cultural differences as well as citizens' and politicians' precise opinions play a secondary role in research. And whilst research is often using the three pillars of Open Government as a framework, a deeper investigation of the notion of these components is missing.

Along the assumption that good governance emphasizes the involvement of stakeholders for achieving goals [Bicking and Wimmer 2011], a better understanding of the evaluation and rating of both the theoretical and practical instruments of Open Government by political stakeholders can

be utilized for national implementation strategies. Doing politics includes conveying a philosophy of governance to citizens and stakeholders, drawing on both economic and social arguments. Thus it is important to investigate how elements of this philosophy are seen by different target groups or policy makers. The survey seeks to draw a first picture of political stakeholders' enthusiasm for and rating of the subject in a national context.

## 2. The Austrian case: cultural context, legal background and national initiatives

### 2.1. The socio-political background of openness

Legal and political institutions' conceptualization of terms such as transparency, participation and collaboration relates to different socio-political cultures. It would go beyond the scope of this article to demonstrate them all, however, causalities are visible on the example of the notion transparency, which is related to different levels of openness.<sup>3</sup>

Whilst the Anglo-American and Scandinavian countries have a longer tradition of this Open Government element, in Austria we need to take a more nuanced understanding into account. In Europe, Nordic countries are well-known for their general openness in political and administrative terms in order to reach consensus, which is referred to by the term "Nordic Openness"<sup>4</sup>. Compared to other European countries, Austria has not such a long-lived principle of transparent governance, in particular with view to the legal preconditions. While Scandinavian and Anglo-Saxon countries traditionally have liberal laws, other European states like Austria have rather restricted information access [Parycek et al. 2010]. The question of transparency and information access is closely linked to the culture of a society. Information cultures play a key role in how important access to information is seen [Maier-Rabler 2002]. The differences in the approach to governmental information become clear by comparing the laws concerning freedom of information among Member States of the European Union. Sweden's "Freedom of the Press Act" of 1766 counts for early legislation on the field [Goetze et al 2009], and other Freedom of Information legislations have followed since then. There has been a worldwide increase in Freedom of Information acts during the last decade, for instance, Germany and the UK got their Freedom of Information acts in 2005. Increased access to information and strengthened transparency are also defined as objectives by 2015 in the Ministerial Declaration of eGovernment of Malmö 2009 [European Union 2009].

In Austria, paragraph 4 of the Austrian Constitution describes the obligation of national, provincial and community agencies as well as all other institutions of public law to disclosure information, as long as it does not underlie the obligation of secrecy. At the moment, the demand for information itself is not constitutionally covered as a subjective right [Parycek et al. 2010]. In addition various legal provisions provide exemptions on information disclosure. Vague wording

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<sup>3</sup> As authors concentrate on the element transparency and related discussions in this paper, the Austrian context will be discussed broadly from this perspective. For a more detailed analysis of other elements and stages of Open Government, more information on institutionalised and informal participative procedures in the country would be necessary, but clearly go beyond the scope of this paper.

<sup>4</sup>Mapping Cultures of Public Trust: Open Government and Open Society in Northern Europe and the European Union. Workshop held at the University of Helsinki, 03.-04.06.2010, Helsinki (accessed January 28<sup>th</sup>, 2012)

of the legal text further gives room for a large margin for interpretation on the side of the authority. Whilst it might be true that we live in an area of unprecedented transparency on the global level, Austria has not yet confessed unrestricted accessibility to information from a legally binding perspective. Whilst some advocates and parties are actively promoting Open Government values and projects, most of these initiatives are yet on the local level and bottom-up driven.

## 2.2. Initiatives on the national level

Initiatives to foster Open Government in Austria and their first achievements include the following activities. They can be seen as a first attempt to stimulate communication exchange between political stakeholders, researchers and technical experts in the field, and some of them already lead to practical output in the form of citizen services. The association Open3 seeks to foster debate on modern state philosophy and new possibilities of cooperation between citizens and the government since the beginning of 2010. Open3 is an open, non-profit network acting as intermediary between politics, administration, economy and citizens with the aim of enabling knowledge transfer in each field. Applications and data visualization, e.g. a visualization of budgetary data 2011-2014 are a first output of the project. The Austrian network Open Government Data(<http://gov.opendata.at/site/>) seeks to promote Open Data as part of the Open Government philosophy with the aim to provide free data (e.g. micro-census, census, traffic or environmental data), readable by machines and humans to the public and economy. The private initiative is cooperating with the public sector, Federal Agencies and other organisations. Another success of Austrian Open Data advocates was the publishing of the Viennese Open Data portal OGD Wien (<http://data.wien.gv.at/>) in May 2011.

It has to be pointed out that most of these initiatives are, quite contrary to the public image of the implementation process in Australia, America or Great Britain, bottom-up driven, although they are gradually entering the domain of mainstream politics. A first top-down initiative is the Austrian Open Government Strategy of the Federal Chancellery. The aim of this working group is the evaluation of the potential and risks of Open Government in the Austrian context. Another initiative is the Austrian project group eDemocracy and eParticipation (PGEDEM), an interministerial group of external experts that is also working on Open Government topics [Medimorec et al 2010]. Beside these initiatives and projects, the (affiliation deleted) has been conducting several stakeholder workshops on Open Government and Open Data in spring 2011 focusing on the notions of transparency and Open Data implementation strategies.

## 3. Survey results

### 3.1. Methodology and research questions

The online survey “Potential and risks of Open Government for Austrian MPs” was conducted in March 2011. Members of the whole National Council (The Chamber of Representatives of the Austrian Parliament) were invited to participate. The survey “Potentials and risks of Open Government for Austrian MPs”<sup>5</sup> was conducted as cooperation between (affiliation deleted) and (affiliation deleted). The aim of the survey was to provide initial data on the relevance of the topic Open Government, in particular on the notions of transparency, participation and collaboration for

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<sup>5</sup> (reference deleted in original manuscript)

members of the Austrian parliament. Another aim was to provide data for future comparative research and to relate the Austrian situation to the international standards and stakeholders' discourse.

The main research questions were the following:

- Is the topic Open Government already on the everyday political agenda for Austrian MPs?
- How do MPs evaluate Open Government elements like transparency, participation and collaboration? Which potentials and risks do they see in the Austrian context? Which elements do they show most enthusiasm for?
- Which solutions and measurements towards a more open Government do they prefer (e.g. with regards to legislation or data publication)?

The focus on the thematic triad according to the working definition of Open Government applied (transparency, participation and collaboration) was chosen due to two reasons: On one hand, it was expected that participants were be familiar with this concept discussed along the Open Government Directive of the American example as those gained high publicity on a global scale and was already used by Austrian Open Government Data initiatives and discussed in the National Assembly [Dax 2011]. On the other hand, these notions are often seen as the different stages of an open state philosophy, with collaboration symbolising the more advanced level of governance. The three-folded categorisation allows for a more detailed investigation of how stakeholders understand these levels. In the interpretation, authors present an overview of MPs opinions on these elements before focusing on aspects related to transparency and publishing strategies of governmental information. This was partly motivated by the fact that lack of transparency and corruption are currently frequently occurring topics in the Austrian media landscape.

### 3.2. Questionnaire, target group and response rate

The questionnaire survey was conducted online in March 2011 (from 15th March, 9 a.m. to 31st March 2011, 6 p.m.). All 183 Austrian MPs were invited to participate in the survey via the email address published on the website of the Austrian parliament ([www.parlament.gv.at](http://www.parlament.gv.at)). The turn rate was 22.95% respectively 42 questionnaires ( $n=42$ , 2 MPs went for an opt-out option). A session key guaranteed that a person could only fill out the survey once. Due to privacy reasons and the personal security of participants, it is not possible to subsequently personalize the answers. However, researchers are able to track the number of questionnaires filled out by the different parties. All respondents are representatives of the parliament as a whole and of all political parties. Due to the small population of the Austrian MPs and assuming that all MPs have read the invitation to the survey, the target population is identical with the actual population (as opposed to a random sample). Statistical inferences can thus be drawn on the basis of a representative sample).

The questionnaire consisted of 9 questions of an ordinal scale (questions A1-A3, B) or nominal scale (C, D, E, F, G). Section A focused on the general evaluation of the three Open Government elements. The other sections consisted of more detailed questions related to these three categories. The online survey comprised the following questions in detail:

A1 – A3: Open Government consists of three pillars: transparency, participation and collaboration: How important do you consider an implementation in these fields?



- B: What role does the theme Open Government play in your daily political routine?
- C: What chances do you see in the field of transparency, i.e. Open Government Data in Austria?
- D: Which risks do you see in the field of transparency (Open Government Data) in Austria?
- E: How should non-personalised data be published?
- F: On which legal basis should Open Government Data stand in the future?
- G: Are there currently enough direct democratic instruments for participation in Austria?

Questions C and D offered multiple choice options. The raw data of the survey can be downloaded on the website of [www.open3.at](http://www.open3.at). Data matrix and raw data can be downloaded for CSV, Excel, SPSS or R and are licensed under Creative Commons "CC BY 3.0".

Due to the positive connotations of the Open Government elements, researchers clearly expected a very positive evaluation of these notions. However, the survey provides a first chance to access the level of enthusiasm towards the different elements of Open Government as well as the relevant strategies in Austria as basis for further qualitative research and comparative studies.

The high chance of a non-response bias (some parties tend to advocate the Open Government concept more than others) can be relativised as representatives of all Austrian parties were participating. The survey results thus stand for the complete national political spectrum. However, interpretation still has to take into account a possible self-selection bias inherent in such surveys, as people responding could be more likely to be familiar with and favourable for Open Government. It is thus estimated that the survey cannot access the opinion of those who were not familiar with the term at all. The relatively high response rate (23%) for a self-administered questionnaire<sup>6</sup> however indicates that most participants were familiar with the terms across the political parties. Further democratic data like age, gender or experience with ICT has not been taken into account at this stage of research.

### 3.3. Main results

In the following, authors present the main results of the questionnaire related to the relevance of Open Government elements in the Austrian public sphere, the political work of MPs and their opinion on Open Government and Open Data (in particular legislation and publishing strategies) in Austria. Besides results on the general evaluation of the Open Government terms and as indicated above, authors focus mostly on aspects related to transparency and related strategies, but will relate results to findings about the other elements when relevant.

#### 3.3.1. Open Government in the political public sphere

Results show that, from a stakeholder's perspective, Open Government is slowly becoming part of the broader political public sphere in Austria. It is perceived as an important theme and thus relevant in the Austrian parliament. There was a general high evaluation of all key notions pointing towards a positive attitude towards Open Government (the majority of participants evaluated the three elements as important or very important: 71.43% for the item transparency,

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<sup>6</sup>For research on the association of response rates with democratic representativeness of a sample and accuracy of results see Holbrook et al. 2005. By examining the results of 81 national surveys with response rates varying from 5 percent to 54 percent, they found that surveys with much lower response rates were only minimally less accurate.



52.93% for participation, 66.67% for collaboration, additional figures below). However, only few of the survey participants (9.52%) state that the topic has already played a very important role in their working environment (scale value 5). 19.05% state that it has played an important role though (4). The majority of participants (42.86%) voted for the average value (3) (median 3). These results indicate that the concept is already well-known, but not of priority in the political landscape.

Open Government		
B: Influence on daily work		
	Number	Percentage
High influence	4	9.52
Influence	8	19.05
Average	18	42.86
Little influence	5	11.9
No influence	6	14.29
No answer	1	2.38
	42	100

Figure 1: Influence on daily work

Political stakeholders are, however, more familiar with the topic than NGOs: In a similar survey conducted by Open3, 41% of Austrian NGOs stated that they have not yet heard of Open Government or Open Data before. However, with view to the notion transparency, participants expressed a very clear opinion on the matter: for 42.86%, transparency is very important, for 28.57% important and only 2.38% voted for average. Collaboration received a very positive evaluation as well (38.10% very important (5), 28.57% important (4)), although 14.29% consider this notion as not important (median 4).

More surprisingly, 16.67% state that the topic transparency is irrelevant in Open Government and 7.14% see it as not important. A similar picture can be found with the evaluation of the element participation: Whilst for most parliamentarians this is an important topic (median 4), for 21.41%, the topic is less important (2) or irrelevant (1) (4.76% irrelevant).

Open Government		
A2: Importance of "Participation"		
	Number	Percentage
Very important	16	38.1
Important	6	14.29
Average	10	23.81
Not important	7	16.66
Irrelevant	2	4.76
No answer	1	2.38
	42	100

Figure 2: Importance of Participation

Whilst the general positive evaluation for the elements was expected, the finding that quite a large proportion of MPs evaluated participation as unimportant is striking. Whilst a vote for average could also mean that respondents give the topic about the same importance as many other political topics (it would not automatically mean that they consider it to be meaningless; also, a low evaluation of an item in an Open Government context does not automatically point towards a low evaluation in the broader political field), the relatively high number of votes for unimportance calls for further, qualitative investigation. In particular the notion participation would be expected to be seen as an integral and unquestioned part of modern democracies by politicians, even in times of democratic crisis. This is even more striking considering a possible response bias, as it was estimated that those MPs familiar with (and probably more favourable for) the Open Government concept were more likely to participate.

As for electronic forms of participation, the survey shows a significant relevance of electronic forms of participation: For 73.81% of participants, internet and participation are interwoven and cannot be separated. Nevertheless, 14.29% of them are unsatisfied with the current options for participation online.

### 3.3.2. Social potential and risks

When asked about the chances and risks of Open Government, it was expected that, due to the emphasis on the financial crisis in the political public discourse in Austria, economic reasons would be stated as the most promising effect. However, results showed a more nuanced picture with social factors as key arguments for Open Government strategies. Only 11.90% see the strengthening of Austria as industrial location as chance in the field of transparency. Significantly more important chances seen were the clarification of social dependencies through visualisation (40.48%), the evaluation of political or administrative results (57.14%) and more understanding and legitimacy of political activities in general (71.43%). Along a similar line, social risks were rated as very high by 72% of participants. The biggest risks chosen were the misinterpretation of information (55% state misinterpretation or deliberate manipulation) or the increase of a digital or social gap (38%).

### 3.3.3. Cost-free publication

Several principles for publishing official data have been defined by Open data advocates [Open Data Network 2011]. The characteristics of Open Data are continuously developed further (at present, there are 10 principles). Nevertheless, specialists have not yet come to an agreement as to which data publication options should be chosen in a particular context, especially since certain options will cost administrations time and money. Nevertheless, the majority of MPs were clearly voting for cost-free publication (64.29%). Another majority was speaking out for complete data sets (54.76%) to the full extent (vs. 30.95% voting for the publication of only selected administrative and official data). This indicates that half of MPs favour the publication along the defined Open Data Principles, a result that will hopefully contribute to the ongoing discourse on data policies and the “how” of publication in the field.

Open Government		
E: Publication of data		
	Number	Percentage
All data cost-free	19	45.24
Several data cost-free	8	19.05
All data partly cost-free	4	9.52
Several data partly cost-free	5	11.91
No opinion	4	9.52
No answer	2	4.76
	42	100

Figure 3: Publication of data

### 3.3.4. Freedom of information: the legal perspective

Regarding a legal framework on the way towards Open Government and Open Data, 85.72% speak out for a specific legal framework, either as separate law or as part of existing regulations. More surprising is the relatively high vote for a specific Freedom of Information respectively Open Government Data Law (45.24%), as Austria has, in comparison to other countries, no tradition of such a law. Another 40.48% favour the implementation of Open Government laws in existing regulations, and for 11.90% no own legal regulation is needed.

Open Government		
F: Legal basis for Open Government Data		
	Number	Percentage
Separate Open Government Data law	19	45.24
Open Government Data as part of existing laws	17	40.48
No legal basis necessary, only widely accepted conventions	5	11.9
No answer	1	2.38
	42	100

Figure 4: Legal basis

Results point towards a huge potential for closing the gap of a non-existing law describing a general obligation for publishing information and a modern information law re-regulating the procession of electronic data and information. If Austria seeks to keep pace with European law, legislative amendments will be necessary. Results indicate that Austrian MPs are already open to these changes.

## 4. Conclusion and outlook

International developments and understandings of state philosophy cannot be transferred seamlessly to cultural circumstances and Open Government advocates need to consider both national and regional differences when seeking to make new governmental concepts publicly

accepted. Whilst Open Government is already widely known and identified as an important field of policymaking by Austrian MPs, it has not yet reached the level of daily discourse or political work. In order to implement Open Government strategies in Austrian politics, MPs and also other political stakeholders presumably need more information, in particular on the various Open Government strategies as basis for decision making. Ideally, this information is provided by independent organisations or the educational sector.

The terms transparency, participation and collaboration are mostly seen as different stages on the way to implementing Open Government principles in the state. However, they can also be put into practice one after the other or separately. For advocating Open Government in Austria, emphasising the notion transparency is a recommended starting point as this was the element MPs showed the most enthusiasm for. A possible topic in this respect is Open Data and its societal implications on a personalized level, e.g. the advantages of Open Data services in citizens' everyday life. A first publishing opportunity is to initially open all data that already exists in machine-readable, structured form as raw data, preferably in a central portal. Advocating strategies should also focus on social aspects of Open Government, as highlighted by the results on social potentials and risks. MPs mostly see Open Government Data as a chance to overcome the democratic deficit towards more citizen-centric politics. A better and increased understanding of political activities was stated as one of the biggest chances in this context. The results also indicate that MPs are already aware of the social risks of Open Government strategies. Social arguments like increasing inequalities amongst population or a possible "Open Data Divide" have to be taken seriously and to be discussed on the national level, as the first Open Data projects are ready to be realised in Austria.

With respect to a separated Freedom of Information law, the investigation of and adaption to international examples is necessary. As Open Government is already on the political agenda of European information policies (eGovernment action plan 2011-2015 [European Commission 2011-2015]; Kroes 2010] the question is not whether Open Government will be implemented in current policies, but how the topic should be legally treated. The current aims on the European level will challenge governments, especially those sticking to obsolete regulations. As the results show, MPs clearly vote for the implementation of a separate Freedom of Information law as against the integration of such a law in existing regulations. Such legislation could be seen as the necessary step towards modernisation enforced by the changing flow of information control [O'Reilly 2010] currently experienced on many levels of society.

More comprehensive and comparative research in different countries is necessary and relating the findings to socio-demographic data (like gender, age, ICT usage, further expertise) would enable researchers to assess further dependencies. A qualitative examination and confirmatory investigation of results, e.g. regarding the reasons for differences in the evaluation of the three Open Government elements, could complete the first findings of this survey.

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# Open Government in Mexico

*An Assessment Preview 2007-2010*

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***Abstract:** The idea of open government and accountability begins to develop in Latin America. Mexico's experience began in 2001 with the Law of Transparency and Access to Public Information, which requires all entities receiving government budget to publish their information electronically. This has created a large number of government websites to present transparency information. This research presents a measurement model on such websites. The result was assessed during three years: 2007, 2009 and 2010. In conclusion we can say that much remains to be developed in the area of transparent governance and that Mexico is barely in its infancy. This paper is organized as follows: the first introductory section that states the problem; a second section that presents previous research about assessment models on open government and the background of this proposal; a third section develops the model proposal for assessing open government portals; a fourth section that describes the main findings of the three measures 2007, 2009 and 2010, and the final section, which presents conclusions and future research.*

**Keywords:** metrics, evaluation, open government, rankings, benchmarking

**T**he open government has become a global trend in public administration in these early years. This collection of concepts and activities surrounds the idea of transparency, accountability and openness but has created confusion about the concept and the limitations of the field. The Obama Memorandum on Transparency and Open Government (White House, 2009) rises this discussion and promotes the idea of open government. Nevertheless the memo only encourages US administration to promote open government actions.

Open government is not new but a survivor with another name, disclosing and dispersing efforts into one common ground now called transparency or open government initiatives around the world. Under the name of Freedom of Information (FOI) (Morris, Sales, & Berman, 1981), the use of open data from the government begins, as the problems do that a researcher faces in gathering data from different government cases. Theoharis (1982) encounters the same problems as Morris, et al. (1981), but focuses on intelligence files such as those of the FBI and the CIA which are opened for research.

Another example outside the American continent is Bertil Wennergren (1983), whose contribution to assessing the freedom of information in Nordic countries shows the widespread idea of open government. Okudaira's (1983) research in Japan states the opacity of ministries and



agencies in the local government in those years. Hubbertz (1986) in Canada points to the freedom of information of the Canada Crown Corporation and analyzes its limits. In the meantime Relyea (1986) mentions some important concerns about US information access.

In 1997, Birkinshaw (1997) raised the topic of freedom of information when the European Union made reforms to be more open to community members and stated that an open government could produce a successful union. Chandler (1998) also proposes more open government data for citizens in the European Commission sites. Continuing this effort, an assessment of open government policies and laws has been issued in the UK (Birkinshaw, 2010) (Shepherd, Stevenson, & Flinn, 2010) and in the US (McDermott, 2010) as well as Gordon (Gordon, 2010) on the National Security Directive Declassification. But more important in assessing is to understand and to promote the freedom of information using open government. In this direction, Dawes' (2010) proposal to introduce stewardship and usefulness as a paradigm to balance transparency of information is relevant. Another study that helps this understanding is McClean' (2010) who points to economic interests as a relevant condition to promote or compel open government policies. Bertot, Jaeger, & Grimes (2010) analyze the use of social media for transparency and accountability.

Despite the fact of the importance of open government initiatives, very little research has been made for understanding the evolution and advances in this field. Most research has been directed on operation, an ambiguous and undefined concept for an open government and very few understand the outcome that this trend is producing in the public administration.

Recent research measures the impact of freedom of information on the political tool of open government. Hazell & Worthy (2010) focused their research of freedom of information comparing on the impact in Australia, New Zealand, Canada and Ireland.

The Socrata Open Government Data Benchmark Study is one of the few efforts to research open government initiatives. This study reveals strong support for Open Data among citizens and government employees alike. 67.9% of citizens and 92.6% of government employees believe that if data is public, it should be available online. Moreover, citizens, by a 3 to 1 margin, are more likely to vote for politicians who champions Open Government (Socrata et al., 2011). The study also shows that progress has been made with 55.6% of government organizations reporting they have a mandate to share public data with their constituents and 48.1% already publish data in some way.

In the Mexican case very little research has been made on the open government performance, most of it focused on the assessment of website portals - (Sandoval, 2010) - rather than understanding the problems of open government in Mexico. The work of Lopez-Ayllon (2005) is a preliminary research study that promotes this field.

This research is focused on the contribution to assess open government performance, especially in open government websites, now called transparency websites. In order to achieve this goal the main objective is to assess open government online efforts by Mexican agencies to provide them with a comparison or benchmark to improve effective websites and useful information for citizens. Two contributions are expected: the first one is a model of analysis of open government website portals, and the second one is to present evidence of the use of this model on the three year benchmarking: 2007, 2009 and 2010 evaluating the 32 Mexican states.

This paper is organized as follows: the first introductory section that states the problem; a second section that presents previous research of assessment models on open government and the background of this proposal; a third section develops the model proposal for assessing open

government portals; a fourth section describes the main findings of the three measures 2007, 2009 and 2010, and the final section presents conclusions and future research.

## 1. Previous Research

The research of Morris (1981) on freedom of information is the first of its kind. Later on, the research about open government files from Henry H. (1997) and Jeremy R.T. (1995) was closer to analyze this field beyond the legal aspects and which was consider the unique perspective.

Research advances from Chapman & Hunt (2006) measure the impact of open government measures on a municipal level in Asia. More recent research over open government integrates the use of ICT tools and web 2.0 (Parycek, 2010) stating that transparency can be a flow of information and is more related to the digital natives that seek information producers and requests. The book of Lathrop & Ruma (2010) compiles an important number of works related to this stage of open government studies, from the perspective of the web 2.0, using crowd sourcing, wikis and blogs to open the government to understand the theoretical perspectives of the field.

Bertot, et al. (2010) suggest the use of different features of web 2.0 to promote collaboration and cooperation from citizens with governments, creating a more efficient open government. Jaeger & Bertot's (2010) work complements Bertot's opinion, (2010) promoting the use of non-governmental channels to disseminate information and the links with the e-government and a digital-born government.

However research on web sites and government strategies does not start until 2011. The NGO's have taken the initiative in Europe and the UN, for example. The Martin, Kaltenbeck, Nagy, & Auer (2011) survey presents a contribution to the field, pushing the analysis on the data stake-hold with a regular basis and linked as an integrated work and not a separate one.

The study of the Socrata consultancy (Socrata, et al., 2011) about open data is another important effort to measure the quality and quantity of the data released by the governments. Finally the changing attitude of citizens using government 2.0 and open government are analyzed by Nam (2011) with the PEW data, allowing us to know that citizens are more willing to cooperate with open governments rather than with closed ones.

In the case of Mexico, research of open government started in 2001 when the freedom of information appeared. The first known study of open government websites in Mexico was made in 2005, when Lopez Ayllon (2005) compared the transparency law of local governments with the federal law's requirements of enforced subjects, and noticed that only six states fulfilled such regulations in their websites. Ramos-Priego (2005) assessed the website by directing interviews with those responsible for open government websites. The main findings are similar to those of Lopez Ayllon (2005).

Later on, in early 2010, the non-governmental organization called Index of the Right to Information Access in México (IDAIM) researched the 32 state legislations to compare which one promoted an information access. They designed an instrument to compare: normative regulations, institutional designs and procedures for information access and diffusion, with 31 indicators. The study was held on February, 2010. Their findings were that the majority of the state regulations had no punishment against public officers or agencies who did not accomplish the open government regulations.

The Mexican Conference of Information Access (COMAIP) that groups all the Transparency Institutes of the country, hired the Center for Economics Studies (CIDE) to design another national open government study in 2007, and also in 2010 (López-Ayllon, Zavala, Cázares, Cejudo, & Arellano, 2010). This study sample is the most comprehensive because it measures 32 state transparency portals, federal government portals in the three levels: executive, legislative and judiciary and also some government agencies that are related to open government. The methodology includes an interview with the responsible of the transparency department, a request on open data and a questionnaire for the websites content and format.

The COMAIP-CIDE study finally analyzed 592 websites, interviewed 127 people and collected 1,810 information requests, with an instrument of 202 variables organized in 132 indicators of the normative dimension – legal aspects – 12 indicators for the website dimensions and 2 indicators for the simulated user – information requests – and 56 indicators of institutional design. The sample was conducted during November 2009 and July 2010 (López-Ayllon, Zavala, Cázares, Cejudo, & Arellano, 2010).

Previous research in US, Europe and Mexico assessed the open government initiatives. Very few of them focused on designing a model to assess the open government framework. The following section details this idea and presents a first model and a revised one.

## 2. The Open Government Model Background

Previous research in Mexico was focused on the legal perspective. Evaluation was only considered for accomplishing legal issues and not for providing information for the citizen's needs. Because of this, the model objective was focused on citizen access or interaction, website portal and facilities and basic legal issues.

After an open government conference in 2005, ten webmasters were interviewed to develop and to explore questionnaire components. After this feedback, the instrument was opened to Mexican webmasters involved in open government portals, during a four-month period, to receive recommendations to change or improve the instrument. Only very few recommendations were received. In 2006 a first instrument was developed to assess open government portals from the citizens' perspective. The first obstacle was to define and to create limitations over the e-government and the open government portals. Table 1, proposes this perspective.

**Table 1. E-government Portal vs. Open Government Portal**

Feature	Open Government Portal	E-government Portal
Objective	Clarifies, explains information to make it transparent	Government statements. Diffusion of data, Promotes a government online image
Transaction	Transaction = request for no public information	Promotes online transactions (tax, rights). Receives information about services
Search	Finding information that is not on the Government Portal	Publishes information online as a different channel
Type of Interaction	Two-ways direction people-transparency	One-way interaction: citizen - government

According to Table 1, the main objective of an e-government portal is to provide a complementary communication channel with citizens and to promote an online image. On the open government, the portal seeks to explain, in a colloquial language, terms, procedures and government policies. It also enables citizens to contact public officials.

The transaction feature for the e-government portal is focused on providing tools, interfaces to promote online transactions about taxes, and receiving suggestions, complains or feedback from the citizens' perspective. For the open government, the main goal is to produce information and to disseminate information to a large amount of citizens through the portal.

The search function for the government only enables officials to provide information but from the open government perspective this is important because it is one of the main goals to allow citizens to explore and to find as much information as they want and it leads to this type of interaction. Normally the e-government portals are focused on sharing information and providing data in different formats and profiles, but this only. The difference on the open government portal is that this portal is linked with the government site and enables citizens to improve their access or to have petitions on certain information that is not published in normal channels.

With this difference in mind, the model was developed to provide webmasters with an understanding about the citizen's uses or needs. It was developed on open government websites as a checklist for different items by a researcher or a team of experts previously trained in the instrument. Finally, a seven-component metric was created (see Figure 1). The focus of these components is to have an integrated view from the citizens and webcasters' perspectives, and a long-term analysis tool. The model provides equal importance to seven components such as information value, accountability and trust which are mainly important for an open government portal and a different metric from any other e-government portal. The variables are described in Table 2.



Figure 1. General Model of Open Government Assessment 2010

On the other hand, the internal agencies' performance will promote – or enforce – the opening of files and information more easily for these sites' webmasters. A search system is a transcendental tool in this kind of sites because it enables citizens to have easy access to documents, data or files.

Finally, measuring the legal obligations is only a part of the whole method, and very different from previous studies that only measured this variable. A 5-point Likert scale measured the components in the first study in order to produce a ranking. This first survey states that more points mean more problems, so number 5 on the Likert scale indicates the worst performance.

**Table 2. Components for Assessment Tool of Open Government's Local Portals**

Component	Description	Component	Description
Trust	Citizens' perception of trust in information. Measured by the web site logic, use of citizens' language, easy access.	Accountability	Tools provide scrutiny and performance of individual public officials or agencies
		Internal Agencies Performance	Publishes internal metrics (benchmarking) of internal agencies' willingness to open their files, data or information.
Information Value	Citizens' perception of value of information in decision-making or usefulness.	Search	Measurement by search engine performance or systems for improving search of files or data.
Continuous Improvement	Citizens' perception of website improvement. Measurements through feedback and interaction with the webmaster.	Legal Obligations	Measurement Article 9 of Federal Law of Transparency; fulfills the basic requirements for obliged subjects.

The open government assessment model has been maturing during 2007 to 2010. Because it did not reflect the performance and the gaps in the open government local portals that were measured, a second evaluation was performed in 2009, and has two important changes.

On the evaluation of 2010, the instrument underwent a slight update according to new technological changes: more use of web 2.0 tools. The assessment continued with dichotomic answers and added some questions to the information value section. A pilot survey was made among five randomly-selected states and improved the final instrument to apply on the local government websites. Changes on the 2010 instrument made it impossible to compare with the results from 2007 – more questions and different scale of measurement – however, there is an obvious advance in open government portals in these three years.

## 2.1. Research Design and Methods

The object of study was the open government web sites of local governments in Mexico. The sample was the 32 websites of the 32 states of Mexico. The first stage was to select the correct URL of the open government site, or the e-government site. Once the sites were located, the questionnaire with the items was applied.

A maximum of 30 minutes was decided for answering the questionnaire. This time was selected from previous studies about the evaluation of e-government portals (Sandoval, 2010) and it has proven to be an average time to find information and features of the portals. The dates for the three studies were different. The study of 2007 was held in February, the one of 2009 during January and February and finally the 2010 study was held in February and March.

### 3. Findings

This section will be divided in three subsections, each one related to the year of the assessment: 2007, 2009 and 2010. The results show the total of the ranking components but not the detail for each one, as they were mentioned before. It is important to remark that comparison between 2007 and 2010 studies is not possible because research instrument and scores are different. The studies are placed here to show the evolution of the measurement model and the construction of the different kinds of measures to achieve this proposal.

#### 3.1. Evaluation of 2007

This first measurement of open government portals took place in 2007. The sum of all variables and weight of each component of the 32 Mexican states in 2007 are presented in Table 3. However this kind of measurement changed later on, because it did not reflect the performance and the gaps in the open government local portals; some changes in the question order and new questions will better measure the component. A Likert scale of five points determined results and ranking positions, where a ranking closer to 1 is a better portal, because it has fewer mistakes. On the contrary, closer to 5 means the portal has more mistakes, gaps and a worse performance.

Results for 2007 show that most local governments have a homogeneous development; there are small differences between local states. The best local website for transparency was Guanajuato with fewer gaps or problems. It is worth mentioning that five states were placed at number 28 in the ranking because they did not have an official open government website. Also, the average grade was 3.9. None of these websites pass in the Likert scale; they were in the middle of the scale.

#### 3.2. Evaluation of 2009

The second evaluation was performed in 2009. This evaluation provides a more accurate assessment of open government portals, because measuring could be done with more detailed components. We also found great differences among the different places in the ranking. This evaluation changed the likert scale for a dichotomic 1 or 0 and added all results of each component. The general average was 18.20 points and 62.5 percent of the local portals were above this measure.

It was found that at least half of the local open governments fulfilled the variables of trust components. Twelve local websites were below average for the information component and three states (Coahuila, Durango and Colima) obtained only one point in this component.

In relation to the continuous improvement component, the portals analyzed obtained a low average of 2.66 points. 58% of the open government local portals do not have any accountability tools. Puebla, Yucatan, Sonora, Jalisco and Veracruz have a mechanism to provide certain accountability to their citizens.

#### 3.3. Evaluation of 2010

The main findings of the 2010 ranking granted Jalisco with a new first place. Global average was 49.5 points with 53% of the portals above this average. Methodology was the same as the previous year: dichotomic assessment was made, with One meaning existence of the component and Zero absence. Results were added and the result is this ranking average. Results of this assessment are shown in Table 3.

The results by component show that sixteen portals show a relative improvement in the perception of trust and 16 have fewer elements in this perception. Regarding the value of the information component, only two states' portals show complete coverage of all the variables and elements of this section, 15 states fulfill this partially and the rest have no information value elements.

**Table 3. Open Government Local Portals Ranking 2010**

State	Rank	Average	State	Rank	Average
Jalisco	1	71.181	Campeche	17	50.347
Chiapas	2	70.868	San Luis Potosí	18	47.049
Oaxaca	3	69.583	Tamaulipas	19	45.972
Quintana Roo	4	67.535	Guerrero	20	44.826
Hidalgo	5	66.215	Morelos	21	44.549
Yucatán	6	65.972	Zacatecas	22	43.125
Coahuila	7	65.313	Tlaxcala	23	42.361
Guanajuato	8	64.583	Veracruz	24	42.014
Baja California	9	64.41	Chihuahua	25	38.889
Aguascalientes	10	63.09	Nayarit	26	37.222
Sinaloa	11	62.014	Distrito Federal	27	33.333
Sonora	12	59.167	Colima	28	31.146
Michoacán	13	59.132	Puebla	29	26.597
Tabasco	14	56.354	Estado de México	30	17.431
Durango	15	55.104	Querétaro	31	15.417
Nuevo León	16	51.424	Baja California Sur	32	13.681

In the continuous improvement section, eleven open government portals have none of the variables measured by this section. Only two states completely fulfill this section. The accountability section is worse: 84 percent of the portals fulfill one or two variables and five states have nothing to report on this section. For the Internal Agency performance component, only 34% percent of the local open government sites present some metrics to implement this task.

These three measurements can only be compared by the ranking place of every state, but not the scores they receive every year. Results of the three-year measurements are presented in table 4. As we can see, most of the local government websites have changed along the years, but none of them maintain the same position in the study period. Except for Baja California Sur that maintains two consecutive years in the last position of the ranking, the rest of the websites show changes.

Some open government sites to be analyzed are the ones in Jalisco. They started on the eighth position and climbed to the first place in 2010. Chiapas started on the 29<sup>th</sup> position and climbed up to the second position. Chihuahua maintains almost the same position, starting on 23 and maintained the 25<sup>th</sup> positions in two years.



Table 4. Comparison Ranking Place by State 2007-2010

STATE	YEAR 2007	YEAR 2009	YEAR 2010	STATE	YEAR 2007	YEAR 2009	YEAR 2010
Aguascalientes	17	28	10	Morelos	25	11	21
Baja California	4	26	9	Nayarit	10	9	26
*Baja California Sur	24	32	32	Nuevo León	3	10	16
Campeche	21	27	17	Oaxaca	30	14	3
Coahuila	23	29	7	Puebla	26	20	29
Colima	16	30	28	Querétaro	27	8	31
Chiapas	29	23	2	Quintana Roo	7	15	4
Chihuahua	23	25	25	San Luis Potosí	15	17	18
Distrito Federal	18	24	27	Sinaloa	6	16	11
Durango	2	31	15	Sonora	13	2	12
Guanajuato	1	5	8	Tabasco	31	3	14
Guerrero	20	21	20	Tamaulipas	14	6	19
Hidalgo	22	13	2	Tlaxcala	32	22	23
Jalisco	8	4	1	Veracruz	11	19	24
México	19	12	30	Yucatán	5	1	6
Michoacán	12	18	13	Zacatecas	9	7	22

These results of the three-year study presented a model for benchmarking open government portals in a basic form. They also provided comments for best practices or pitfalls but were not enough to measure the government direction on open government efforts. Another model is proposed using previous experiences and gaps (See figure 2). It needs to be validated for empirical research.



Figure 2. General Model of Open Government Assessment 2011

The improved model is based on a combination of the ontology of Open Government concepts from the Obama's Memorandum (White House, 2009) and Tapscott & Williams (2006). The main idea is to redirect previous components in a more systematic scheme directly linked with open government concepts. Components of the revised model are described below.



The open data component's main idea is to make the government data public in two ways: 1. Generate trust in the government. 2. Using information technologies such as information systems, to make this open data of easy access, friendly interfaces and with usability standards.

The leading idea of collaboration is to produce improvements in the open government portals. The previous component focused on measuring tools or sections on the website, directly related to improving the open government portals; linking different collaborations in order to strengthen the idea of promoting citizens participation obtaining improvements for the portals.

The coproduction component creates a more directed relationship citizen-government to produce, to share and to create data for the public decision-making. The idea is to link two previous components: information value and accountability in this component is to promote citizen participation in the task of generating more value to public data and at the same time to improve tools and sections for the accountability area.

Finally the main objective of the institutional arrangements component is to measure the different organizational outcomes, agency changes and transformations as a result of open government tasks. This component is directly linked to the legal obligations, because both share law as a common basis to make changes in the public administration.

#### 4. Conclusions and Future Research

This open government website study over three years reveals at least two general findings: (1) Mexican open government portals try to fill a legal gap but at the same time they try to hide information by context, comparison or substantial information for decision making; and (2) Freedom of Information (FOI) strategies in Mexico must go through Open Government policies. This means that in order to open data, a preliminary legal change must be made, and later on, using technology such as the web 2.0 tools in order to achieve the goal.

Regular evaluation of open government initiatives, websites, and policies show that this is the correct way to push and promote transparency and responsiveness of government officials and agencies. Many gaps and lacks appear with this method and it did not satisfy webmasters, according to the feedback they provided. Another important weakness is the fast changing environment. This leads to the necessity of adding questions about the features of web 2.0 during the yearly assessments.

Some important strength needs to be considered. The first one is that the model focuses on open government information, not solely as a tool for filling legal requirements. Second, the model measures components on equal degree, no matter if they are law components or quality information; both have the same value for Mexican citizens. Another strength is that the model provides some directions in the components, which can help webmasters or CIO's to improve the portal and become more effective to reach citizens.

A new trend in open government has arrived (Bertot, et al., 2010). The use of web 2.0 features to make a more cooperative relationship with citizens using information tools must create a change in the open government portals. Nevertheless the change towards open government requires certain steps, and there are phases in producing real changes and improvements. The Mexican government is just starting. The case of Mexico implies this line of reasoning: open government law is a painful medicine for a longstanding government that wants to keep its information private and become a powerful gatekeeper. The long walk for Mexican transparency is just beginning.

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# Founding an E-government in Algeria by 2014

## *Prospects and Constraints for Implementation*

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**Abstract:** *As modern technology has been improving nowadays, major countries have started to invest in building e-governments so as to connect citizens, governmental institutions, business, and civil societies with a unique electronic mode. As far as public service in Algeria is concerned, they are very complex. Therefore, we are now in a great need for system of management which is flexible and contributes effectively to the consolidation of the process of development and modernization. This system is best known as e-government has been adopted for years; It relies on technology and invests best in human capabilities. The purpose of this paper is to highlight the most significant constraints to success and achievement. It also discusses the application requirements in order to find out a real platform project to establish an e- government in Algeria and to*

**Keywords:** ICT, e- government, Internet, digital economy, business.

**E**lectronic government or digital government refers to the initiative taken by governmental agencies to use Internet technology so as to increase their working effectiveness and efficiency. It is a permanent commitment made by the government to improve the relationship between the private citizen and the public sector through enhanced, cost-effective, and efficient delivery of services, information, and knowledge. Moreover, electronic government includes the use of all information and communication technologies, from fax machines to wireless palm pilots, to facilitate the daily administration of government services and expertise to ensure citizen participation in and satisfaction with government process (UN and ASPA, 2001).

As far as e-governments, Maghreb countries are following the lead of other nations throughout the world by working towards making government transactions online. Benefits of electronic government include saving time, money and resources ("E-government" par. 1). Tunisia has the most advanced e-government in the Maghreb, though technology mostly benefits the educated elite. As systems become more affordable, user-friendly and accessible, rural residents may benefit by being spared trips to major cities ("E-government" para. 4).

Our country, Algeria, lags far behind neighboring countries in the use of information technology. This conclusion was drawn in 2005 by the representative of mb-Soft, Mohamed Chibani, during a workshop on e-government solutions held at the Mercure Hotel. He said that the number of companies with a website is insignificant. This system will develop public services,

modernize government and business. It is not limited only to the introduction of IT tools in the institutions but will improve the internal management and relations with citizens (Amalou, 2005, para. 1).

However, he said the latter being called a business portal, allows for the organization of the information society, to better manage employees, suppliers and customers in record time. Speaking at the opening of the seminar, the Minister of Post and Information Technology and Communication, Mr. Haïchour Boujemaa, said that the gradual transformation of Algerian society in an information society is a major objective of his department. Although he said that the e-Government launched in 2004 will be operational in 2006, it seems that the project is still far-reaching (Amalou, para. 3).

Although it was supposed that the e-government project in Algeria would be operational in 2006, there exist some obstacles behind the implementation of an effective e-government in Algeria. The purpose of this paper is to highlight some of the problems and obstacles which make real constraints to adopt an e-government in Algeria. Although theoretical considerations are the basics of this paper, the aim is to find practical solutions that will help in founding an operational e-government in Algeria.

## 1. The Literature Review

E-government has its roots in Britain when, in 1957, the British government directed the technical support of the telecommunication service to evaluate and give advice to government on the use of computers in government offices (Koontze, 2003). Mnjama et al. (2008) noted that since that directive from the British government, many countries have gradually introduced computers into their public administration. In Europe, e-government became more pronounced in 1990s because of the development of the Internet and World Wide Web. In the USA, the Congress enacted the Paper Reduction Act in 1980, which served as a single framework for federal government management of information resources. Since then, several acts ; such as the Paperwork Reduction Act of 1986 and 1987; the Computer Security Act of 1987 and the Clinger-Cohen Act of 1996, were signed and set into motion the transition from paperwork to electronic. The act of elimination required government agencies to provide the public with options of submitting, maintaining and disclosing required information electronically. It aimed at implementing sound information technology architecture and enforcing technology management policies that would lead to strong leadership and integrated approach to information provision. The purpose was to foster citizens' access to government information and services (Reyea and Hague, 2003).

In Asia, Africa, and other developing countries, governments have been using computers in their administration for many decades now. In Africa, the use of internet services in government and private business started on a more serious note in the 1990s. Mnjama et al. (2008) revealed that the implementation of e-government in Africa was carried out in line with the various national and regional declarations. For example, the concept of e-government was declared in the continent first in the 1980s when the Organization of African Unity (OAU), now African Union (AU), recognized the importance of access to government information as a way of solving Africa's development problems.

Another early e-government initiative in the region was "The United Nations Economic Commission for Africa" whose assignment was to create an enabling environment for Africa's e-government. The UN General Assembly's emphasized the need for African countries to create

indigenous technology for adapting and adopting information technologies to the African environment. The computer for Africa (CFA), an ICT project (<http://computers4africa.org/>) with the goals of sharing the wealth of the US technology with people in the least developed nations; providing good technology environment to Africa; and building US-African partnership (Well and Well, 2007).

In Algeria, e-government is still in its infant stage. The UN survey on e-government for 2012 reveals out that Algeria is still located further as far as governmental services related to ICT directed to the citizens. Accordingly, Algeria is ranked 132 worldwide in the "United Nations E-Government Survey 2012" on a set of 159 countries studied. In North Africa, Tunisia is leading, followed by Egypt, Morocco, and Algeria. But, what is taken into account in this study is the ability of the countries to develop e-government to strengthen citizenship and businesses, allowing greater access to information of public service and greater transparency in government management (UN, 2012).

Although the field of e-government does attract much research, few examples can be seen. Warda Allouche and Abdelaziz Khedraoui (2011) proposed two models for identifying and constructing e-government services formalized by using MAP formalism. These were applied to construct such services provided by the Algerian health insurance.

Assia Tebib and Mahmoud Boufaïda (2009) defined an approach to developing the mechanism of interoperability of information systems of the e-government. They proposed an applicative protocol named EGP (for, Electronic Government Protocol) that permits technical interoperability by ensuring the exchange and data sharing between public administrations. The proposed approach is based on the intelligent agents.

## 2. The Benefits of E-Government

The development and implementation of electronic government brings about impacts and changes to the structure and functioning of the public administration. Unlike the traditional bureaucratic model where information flows only vertically and rarely between departments, electronic government links new technology with legacy systems internally, and in turn, links government information infrastructures externally with everything digital (Tapscott, 1995).

E-governments possess the potentials to hasten ICT literacy and encourage the development and application of e-agriculture, e-commerce, e-health, e-education e-library, and the rest. It impacts will empower citizens and improve governments' citizens' relationships (Kitaw, 2006).

Electronic governments make government processes more accountable, responsive and transparent. It improves governance and the quality of life of citizens and offers a number of compelling benefits; such as better quality services, increased citizenship satisfaction, higher efficiency, reduced costs and lowers processing time (Sudan, 2005). Electronic government will create a public administration that is less hierarchical. It will also offer potentials to increase access to information and services, and make it easier for citizens to participate in to governmental issues. The benefits of electronic government can be summarized as follows:

Removed boundaries : E-government will help break down agency and jurisdictional barriers to allow more integrated whole-of-government services across the three tiers of government. The provision of seamless access will be taken much further.

- **Accessibility** : Electronic government offers the potential to dramatically increase access to information and services.
- **Improved Quality** : Electronic government represents convenient and reliable services, with lower compliance costs as well as higher quality and value.
- **Improved Reputation** : Electronic government helps build an image of a country as a modern nation, an attractive location for people to visit and businesses to invest in.
- **Citizen Participation** : Electronic government makes it easier for those who wish to contribute ("E- Government Benefits", Commonwealth of Australia, 2003).

### 3. ICT Policies in Algeria: Overview

The Algerian government has mandated the Ministry of Post and IT to implement and manage the national ICT policy (Hamdy, 2007, p. 3). At the same time the government has also initiated collaboration with a number of international agencies to enhance the ICT status in the country. In 2002 the World Bank also co-operated with the ministry to develop and implement projects for the creation of the enabling environment and improving access to ICT while making it affordable for all. Table 2 provides a snapshot of the state of national ICT infrastructure in Algeria.

The level of ICT integration is still ongoing and at an early stage. The programme aiming at providing access to ICT through the Computer for Every Home Initiative was launched in 2003. Some forms of media, such as radio and television, have achieved high penetration rates. Mobile phones are commonplace and the number of Internet users is increasing rapidly due to the number of Internet cafés, shops, and access centres that are available — particularly in urban areas. In 2000, a regulatory law was passed where the old public institution in charge of national telecom was split into two commercial organisations and two operators emerged: Algeria Poste and Algeria Telecom. The law also created an independent regulatory authority of posts and telecommunication. Currently, there are three operators: Algerie Telecom (mobile and fixed lines), Orascom (Djzzy and Lacom for fixed lines), and Alwatanya (Nedjma and Internet access with mobile phones),

To facilitate the entry of Algeria into the information society, the following national ICT initiatives have been designed (Hamdy, 2007, p. 4):

- • The project of the Ministry of Education to equip all schools with computers by 2005
- • The distance education project
- • The virtual university project
- • The research network to be put in place by the Ministry of Higher Education and Scientific Research
- • The health network developed and maintained by the National Health Development Agency (ANDS)
- • The Djaweb Internet platform

Furthermore, for the Algerian authorities, promoting high level of ICT integration is the most important key to founding up the e-Algeria 2013 strategy which is a program that aims to provide e-government and e-business solutions and nearly 300 on-line services for Internet users in Algeria. The e-Algeria strategy is based on several goals:

- Boosting the use of ICTs in public administration and businesses;



- Developing incentive mechanisms and measures to give citizens access to ICT equipment and networks;
- Stimulating the development of the digital economy;
- Strengthening high and very high speed telecommunication infrastructure;
- Developing human capacities;
- Strengthening research, development and innovation; updating the national legal framework;
- Recognizing the value of international cooperation;
- And establishing e-monitoring and evaluation mechanisms.

#### 4. E-government readiness in Algeria

Since the advent of information technology; empowerment in the 21st century is anchored on the ability to use information, technology and the knowledge economy to broaden individual and collective choices. The development imperative today is to employ Information and communication technology ICTs to level the playing field for all. This means ICT capable of being applied in all spheres of human activities and of solving the problems of all irrespective of discipline or profession.

The dramatic advances made by ICT have transformed much of the world into a digitally interconnected community, and the predominant drivers of change have been the Internet and the World Wide Web and both have added new electronic dimension to academics, commerce and now the e-government.

E-government readiness is the capacity of the government and the governed to deploy ICT for the provision and improvement of knowledge and information in the service of the public. Capacity here encompasses financial, infrastructural, human capital, regulatory, administrative and systematic capability of the state. It also includes the willingness of the state to provide information and knowledge for the empowerment of the citizens (United Nations, 2004).

Algeria, as in other emergent countries, suffers from the bad quality of e-government services and sometimes the required services are not put forward. Recently, some projects to introduce ICT into Algerian public institutions was realized through the creation of web portals to some institutions. However, these projects concern only the information and communication issues and do not reply to the main citizen wish which is the best quality and transparency of services. To assess Algeria's e-government readiness, as compared to other African countries, some criteria should be taken into account for analysis. These are: transactional presence, and connected presence which are illustrated into the following tables.

**Table 1 : Transactional stage of e-government readiness of 12 African countries.**

S/n	Country	2005	2008	2010	Total	%	Assessment
1	Mauritius	27	13	0	40	29	Very strong
2	South Africa	17	17	0	34	25	Very strong
3	Egypt	22	24	0	46	33,3	Very strong
4	Botswana	0	6	0	6	4,35	Strong



5	Seychelles	0	0	0	0	0	Weak
6	Swaziland	0	0	0	0	0	Weak
7	Mozambique	0	7	0	7	5,1	Strong
8	Senegal	0	1	0	1	0,07	Weak
9	Algeria	0	0	0	0	0	Weak
10	Morocco	0	1	0	1	0,07	Weak
11	Lesotho	0	1	0	1	0,07	Weak
12	Benin	2	1	0	3	0.22	Weak
	<b>Total</b>	68	70	0	138	97,1 1	

Source : UN E-government Report 2005, 2008, and 2010.

Table 1 shows e-governments service levels at a transactional stage and illustrates that the vast majority of African governments were not present at this stage. As can also be seen in the table, most African countries were not present. The scores of most countries were less than 5% while others scored zero. In 2010, all the countries, including Algeria, scored zero indicating that transactional activity between governments and the citizens did not exist completely. However, there were countries that were not only present but strongly maintained their position. They were Egypt, Mauritius, South Africa, and Mozambique. The governments of these countries have continued to maintain and update their online services up to transactional stage. The implication is that, though these governments have their official websites, there was limited informational flow between governments and the citizens and absence of opportunities for online completion of tax forms, birth registration, processing of travelling documents, payment of traffic violation fine, and other related online transactional services.

**Table 2 : Connected/ Networked stage of e-government readiness of 12 African countries.**

S/n	Country	2005	2008	2010	Total	%	Assessment
1	Mauritius	9	0	6	15	9	Very strong
2	South Africa	22	4	2	28	16,7	Very strong
3	Egypt	7	6	12	25	15	Very strong
4	Botswana	6	3	5	14	8,4	Strong
5	Seychelles	6	3	0	9	5,4	Very strong
6	Swaziland	4	3	0	7	4,2	Strong
7	Mozambique	9	4	6	19	11,4	Strong
8	Senegal	6	4	7	17	10,2	Weak
9	Algeria	6	0	2	8	4,8	Weak

10	Morocco	7	2	4	13	7,8	Weak
11	Lesotho	4	0	1	5	3	Weak
12	Benin	2	2	3	7	4,2	Weak
	<b>Total</b>	88	31	48	138	99,9	

*Source : UN E-government Report 2005, 2008, and 2010.*

Table 2 presents results about e-government readiness taking into account the connected/networked presence of e-governments. This stage is the apex of e-government framework and the online services assessment bus-stop. For countries to be considered present at this stage, they must have been fully integrated with the ministries, departments, agency and lines of demarcations between government and its workforce are removed in cyberspace, and services are clustered along common needs.

This phase is characterized by the capacity and the presence of enablement for the public to instantly access government information. Any service of ministerial, departmental, institutional and agency line of demarcation is obtained in cyberspace and services are clustered along common needs. Unfortunately, no country studied has fully attained this stage (United Nations, 2010).

However, the table presents a picture of African governments' e-services at the connected stage. They show that South Africa at 16.7% was the champion, Egypt at 15.0%, came second, while Mozambique, 11.4%, and Senegal, 10.2%, followed. Mauritius, 9.0%, Botswana, 8.0% and Morocco, 7.8% were present with very low percentage which cannot qualify them as having attained the connected level. Algeria is among the countries that were not present at this final stage because it scored below the minimum standard.

Though some of the countries present here have official websites, regrettably, networking between national government portal and states, ministries, local governments, and citizens was lacking. None of the countries, even the technologically advanced ones, has fully actualized this level because connected or networked governance has the task of providing better organized, aligned and integrated information flows, new transactional capacities and mechanisms for feedback, consultation and, above all, participative forms of democracy.

According to the tables above, Algeria does not have an effective e-government that acts as a mediator between the citizens and the government authorities. The provision and the improvement of services by the public administrations is a fundamental issue of e-government in terms of quality, efficiency and transparency. However, citizens and enterprises in Algeria still suffer from the bad quality, inaccessibility, and the lack of clarity of the different services provided by public institutions. Facing up to this problem, it appears necessary to construct an e-government system to provide necessary services whenever needed by the citizens.

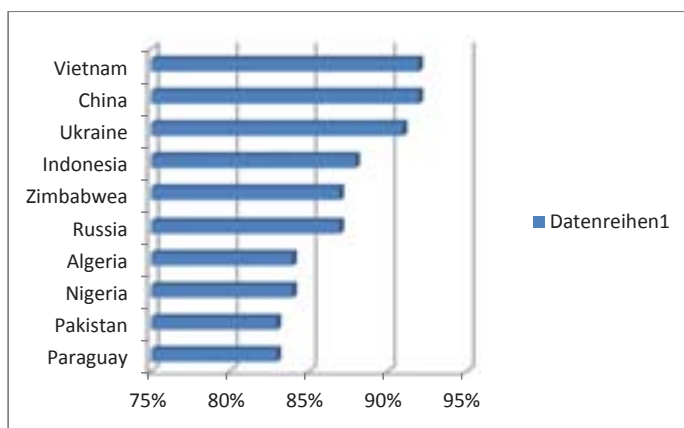
## 5. An e-government in Algeria: The Obstacles

We have highlighted the most important advantages and benefits of implementing e-government on various business institutions. Is it possible to implement this digital unique project in Algeria? What are the main obstacles to achieve its implementation? The e-government project in Algeria has been running for more than three years; it has not yet functioned well because of a number of obstacles which are mainly related to the environment.

Adopting and using ICT lie in the political and regulatory environment. With an uneven record in legal and regulatory issues, weak ICT strategies and implementation, and excessive reliance on foreign technology, Algeria is frequently lagging in its readiness for its e-government strategy. Generally, the obstacles are:

Software piracy rates: Algeria, as other countries in the world, suffers bad press and a lack of credibility, with looming restrictions in technology transfers (Moran, 2011, p. 3). It has been estimated that in 2010 Arab countries, including Algeria, lost \$376m to software piracy (Palmer, 2011, 122). The following figure shows how much Algeria is affected by software piracy. —

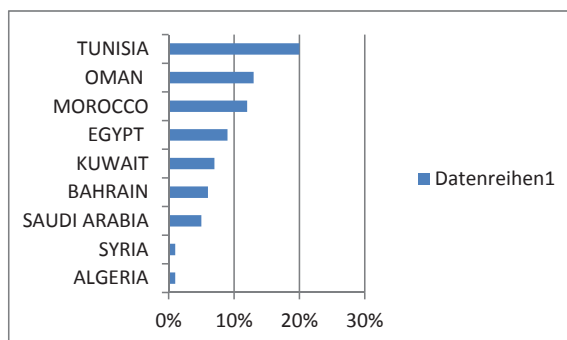
**Fig. 1 : Countries with High Software Piracy Rates.**



Source: Business Software Alliance, 2008.

Insufficient funding for ICT research and development: The absence of an effective ICT research and development funding commitments translates into a virtual absence of an Algerian national ICT policy and software industry. Thus, Algeria is structurally a net importer of technology and ICT. The figure below illustrates how much Algeria is investing in ICT.

**Fig. 2 : Diffusion of Recent Innovations, High and Medium Technology, 2001.**



Source : UNDP 2002.

Telecommunications are slow and limited: The telecommunications sector, though not the central factor in explaining ICT development, is one of its founding components. Deregulation has mostly applied to mobile telecommunications networks (GSM) and Internet Service Providers (ISP). The ISP sector is thriving but is mostly limited to dial-up offerings; a few offer broadband connectivity and digital subscriber lines. However, land lines, fibre optic connectivity, and most broadband offerings remain government monopolies, with little deregulation and privatization. Consequently, unless steered in that direction by the state, national incumbents have few incentives to promote connectivity. Government monopolies leave little room for private infrastructure funding. Also, connectivity charges remain high (Dutta, n. d. p. 123).

- Inability of the postal IT sector to supply customers with the delivery of telephones which is the most important channel of communication via the Internet.
- Inability to complete infrastructure for communications in all regions of the country.
- Internet promotion and usage in Algeria is still limited. The percentage of using of this technology is still low in Algeria compared to neighboring countries. In Morocco, for example, the percentage is 14.36% while it is only 5.33% in Algeria.
- Financial transactions online are still in their infancy despite the fact that Algerian authorities have started these operations three years ago. For example, many people are still afraid of using magnetic cards to withdraw their money because of the large errors resulting from the drawing machines.
  - Absence of legislations (Haichour, 2006, p. 14).

## 6. The Impacts of an Algerian E-government on Business

Despite these obstacles, an e-government project should be set up due to the aforementioned benefits and advantages generated by the uses and practises of modern technology. Also, some changes will be brought on both public service and business institutions in light of cyberspace and the transition to digital economy. These can be cited below:

### 6.1. Organization

The transition from traditional organizational structures, based on functional structures, to specific structures designed on the basis of information flows dynamically and constantly, interacting with external and internal variables. This organizational structure within the new model should be based on the following cornerstones:

- Activating the functions of strategic management in order to achieve higher added value through the exact wording of the institution's mission, strategic leadership, control strategy, and other approaches to achieve its objectives.
- Using other units that perform common functions of human resources and financial management, planning, and management of research and development.
- Including functional units that implement the operational processes of production, seeking to build high levels of integration and in dealing with customers, suppliers and owners (Selimi, 2002, p. 261).

## 6.2. Leadership

Within this context, leadership should be shared, exchanged, and integrated. Its central task is to direct the development and empower individuals towards the electronic model to achieve its advantages of currency, innovation and successfulness (Selimi, 2002, p. 262).

## 6.3. Human resources

Conducting business in the electronic model requires the ability to accommodate information and communication technologies and the opportunities offered by the methods of dealing with it through a high degree of activity and dynamism in the performance of the business, and high degree of reciprocal relationships (Riami, 2007, p. 8).

## 6.4. Financial and Accounting

Due to continuous 24-hour electronic connectivity with internal and external variables, companies can be supplied with financial data about financial markets, customers, suppliers and shareholders, as well as providing all financial and accounting documents that enable them to accomplish transactions within the framework of an easy-access, high-speed and high-tech environment and with the lowest possible number of staff (Selimi, 2002, p. 263).

## 6.5. Planning

Moving to an electronic style depends on a clear vision of what this new technology can contribute to in achieving the goals of companies, especially in long term through access to information so as to identify opportunities, threats, strengths, and weaknesses in order to formulate clear strategies and objectives and monitor resources, competencies, and human skills (Riami, 2007, p. 10).

## 6.6. Decision-making

Management in enterprises relies on the skills of diagnosing problems and determining alternatives due to information obtained within the electronic system. This also depends on the activation and strengthening of its decisions at all levels and taking necessary action in record time and to correct deviations (Selimi, 2002).

## 6.7. Control

Digital technology facilitates the discovery of errors and corrects deviations easily. People can also self-censor through training, rehabilitation and well-defined tasks, receiving and exchanging information through different channels of communication that are opened daily (ibid).

## 6.8. Production

Using design, computerized production, control and measurement systems through software, built-in production processes which depend on the use of digital information and the use of communication technologies enable institutions to benefit from the following advantages of accessibility to purchase sources of raw materials easily, accessibility to funding operations, guidance of various technologies and regulations, and easy access to technologies related to the

design and production engineering. All these elements enable the company benefit from production and delivery process on time (Selimi, 2002, p. 264).

### 6.9. Marketing

There is no doubt that e-government, through cyberspace with multidisciplines, enables businesses of various kinds access to different markets and to collect vital information. Besides, there are possibilities of promoting, distributing, and concluding transactions within e-commerce services. Here, the e-government represents a strong foundation to these services due to the link that exist between all ministries and governmental agencies (Selimi, 2002, p. 266).

## 7. General Perspectives

The core value of this paper hinges on using the e-government strategy in Algeria to improve decision making and resource allocation; in determining the effectiveness of e-government websites and the degree to which the websites add value to the education, research, and development needs of the nation; providing data to assess change over time; in identifying problems and possible solutions as well as the effectiveness of corrective action; in empowering organizational sectors to seek and enact solutions, develop accountability and organizational leadership and improving public sector information access.

The creation of official websites by Algerian government provides greater opportunities for researchers, document librarians, employees of government and private establishments, archivists, and policy makers and citizens to have speedy access to government information. It makes government policies and plans available simultaneously to millions of users and also to people. The bureaucratic bottleneck, devastating delays and weaknesses in the implementation or enforcement of legal deposit laws would be minimized as government documents librarians could easily acquire government publications online without waiting for depository copies from government printing officers.

Acquisitions of government publications are made more transparent and cost-effective if e-procurement or e-acquisition of these documents is made possible through Algerian government websites. Access to ICTs and educational infrastructures might remain limited if sustainable efforts are not invested, and this may pose serious impediments to e-government project to responsables.

## 8. Recommendations

Government in Algeria needs to understand the potential of ICTs as a tool for improving their public services and therefore, in enabling an environment for the attainment of connected governance.

They have to continually invest in improving e-public services and in providing access tools to ever demanding citizens. The importance of providing opportunities for participating in e-governance is the first imperative for them. To achieve this, there should be a realistic political vision and plan for action that completely grasps the strengths and weaknesses of its public sectors capacity.

There is a need for a regular organization of multi-stakeholders' workshops on e-government sustainability in Algeria. The purpose of this is to create awareness of e-government on

government officials. To be able to accomplish this task more efforts and resources needed to be invested if Algeria is not going to be left behind in the global e-information service delivery.

A growing number of research works on Algerian e-government should be conducted and published. The aim should be to raise further awareness among government officials on the e-government opportunities; share information on national approaches and practices. This will provide and promote collective efforts in the development of national e-government strategies so as to be involved in playing pivotal roles in implementing a steady e-government with best practices.

The need for effective investment in information and communication technologies and provide necessary infrastructure needed to found a strong e-government. This requires the wide promotion of the internet, provision of legislations to protect these technologies.

There is the need to mobilize citizens and make them aware of the benefits and advantages of these technologies and provide the necessary facilities so as to acquire of the necessary hardware.

## 9. Conclusion

The project of building e-government revolves around the basic idea that investing in information and communication technologies and linking citizens, government institutions, businesses and civil institutions, through different channels, together in an electronic model allows for different transactional operations to be conducted easily and gives companies many benefits to improve their performance in a digital economy.

The Algerian e-government that was initiated in 2004 is still out of effective operation because of a number of obstacles which center mostly on the lack of strong and necessary ICT infrastructure and support to it.

The e-government has been a result of multiple changes of information and communication technologies of which the traditional government has been performing the same functions but through an electronic model. The implementation of this project requires the provision of basic infrastructure for carrying out a set of requirements, such as the availability of a communications network, personal computers, internet promotion and specific legislation in this area.

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# The necessity of metadata for linked open data and its contribution to policy analyses

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*Abstract: Policy-analyses require a range of activities like relating data to each other, visualizing its impact and interpretation of the results. The linking of data can be done in various ways. In this paper we postulate that merely linking data is not enough to make use of open data and that metadata are key enablers for the effective use of linked open data (LOD) in policy-making. Metadata are computer-readable data about a dataset and contain information for the discovery, the context and the detailed use of data. We illustrate the value of metadata by presenting two use cases, derive requirements from the use cases and provide elements of an architecture. The paper shows that metadata help to fulfill the requirements for the use of LOD and that the Common European Research Information Format (CERIF) and LOD can be used to build the architecture for these metadata.*

**Keywords:** Metadata, linked open data, open data, policy analyses, metadata architecture, CERIF

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**O**pen data have gained considerable attention recently, but many aspects remain unexplored. This paper concentrates on a part of the process of converting PSI (Public Sector Information) data into LOD (see Figure 1) and in particular on the role and necessity of metadata in the process of making data available as information. In this process a public body produces anonymised (non-personally identifiable) data during the course of its ordinary business (1). These data become freely available to everyone on the Web of Data, also referred to as the Semantic Web (2) (World\_Wide\_Web\_Consortium, 2011a). The public sector data are then referred to as *open data* and can be used, reused and redistributed by everyone, without restrictions from copyright, patents or other mechanisms of control (3) (LinkedGov, 2011; Open\_Knowledge\_Foundation, 2011, unknown; Sweeney, 2009). A possibility of reusing open data is by linking it to other data to show relationships with these other data (Berners-Lee, 2009). The Linked Data that are the outcome of this linking are defined as “a collection of interrelated datasets on the Web” (4)

(World\_Wide\_Web\_Consortium, 2011a, <http://www.w3.org/standards/semanticweb/data>). Data which are both open and linked, referred to as LOD, are data that meet the requirements of open data and that also show relationships among the open data (5) thus providing information which may be defined as structured data in context. Of course the datasets may also be linked in traditional information processing environments, such as relational databases, and then be published as LOD.

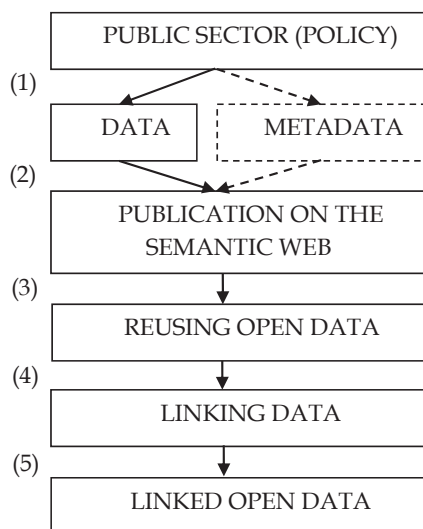


Figure 1: Process for creating Linked Open Data

When PSI is converted into LOD, it creates interesting possibilities for analyzing policies of public bodies. These analyses are important because they create transparency of policies and the possibility to validate the open data and to examine the open data for hitherto undiscovered relationships. On top of this, many other reasons are mentioned in literature to encourage the disclose of public sector information, like positive outcomes for the economy, creation of confidence of citizens in their government and cooperation between citizens and governments (for instance Aichholzer & Burkert, 2004; Pollock, 2008; Tolbert & McNeal, 2003; Vickery & Wunsch-Vincent, 2006).

But if one wants to use LOD to analyze policies, the understanding, use, and management of these data should be facilitated. For instance, one needs to know how the data were created and how they should be interpreted. This type of information is denoted as metadata. Metadata are needed to make sense of the open data (Berners-Lee, 2009). In this paper metadata are defined as “structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource.” (National\_Information\_Standards\_Organization, 2004, p. 1). In the information system context metadata may be classified (Jeffery, 2000) into schema metadata (which control the integrity of the described data), navigational metadata (which provide the access path to the data) and associative metadata divided into descriptive, restrictive and supportive categories. In the ideal situation for LOD, different types of metadata are provided: discovery (flat) metadata (which are descriptive and navigational), contextual metadata (which are

descriptive, restrictive and navigational) and detailed metadata (which cover schema metadata plus additional metadata to assure quality). These types of metadata describe among other things the following information about the LOD.

- Discovery (flat) metadata: identifier, title, creator, publisher, country, source, type, format, language, sector, subjects, keywords, relative information system, validity date (from – to), audience, legal framework, status, relevant resources and linked data sets.
- Contextual metadata: organizations, persons, projects, funding, facilities, equipment, services and pointers to detailed metadata.
- Detailed metadata: include quality (accuracy, precision, calibration and other parameters (Charalabidis, Ntanos, & Lampathaki, 2011) and domain or dataset-specific parameters that are used by software accessing and processing the dataset.

Nevertheless, the current situation is a long way from the ideal situation. There are usually few and insufficient ways of managing metadata and interpretation of LOD (for instance Hernández-Pérez, Rodríguez-Mateos, Martín-Galán, & García-Moreno, 2009; Schuurman, Deshpande, & Allen, 2008; Xiong, Hu, Li, Tang, & Fan, 2011). Adding meta-data is often viewed as an additional activity that only consumes resources.

In this paper we postulate that merely linking data is not enough to make use of open data and that metadata are key enablers for the effective use of LOD in policy-making. The next section provides an overview of arguments that are derived from a literature review and that subscribe to this viewpoint. The third section illustrates the statement by describing two use cases that appeal to the imagination and that show requirements that can be derived from it to provide elements for an architecture of metadata for LOD. The fourth section describes an architecture for the metadata that satisfies the use cases and that can be used for LOD in general. Finally, the conclusion section summarizes some important insights that can be derived from this paper.

## 1. Literature review

In this section we briefly describe the current use of metadata for LOD (section 2.1). Furthermore, we argue why the use of metadata is necessary for the use of LOD in policy-analysis (section 2.2). The insights that are described in these sections are derived from a literature review.

### 1.1. Current use of metadata for LOD

Websites with public sector information (PSI) that are being used by research communities are frequently context-specific in terms of time, application, provenance and nature. However, the original context of the dataset is often removed (Charalabidis, et al., 2011). Although for some datasets with LOD detailed metadata are available (e.g. geodata.gov.gr), usually there are only few and insufficient ways of managing metadata (for instance Hernández-Pérez, et al., 2009; Schuurman, et al., 2008; Xiong, et al., 2011). The current situation is a long way from the ideal situation, in which discovery (flat) metadata, contextual metadata and detailed metadata are all provided extensively to annotate and valorize the dataset. Contextual data are critically important for successful (re)use of PSI and not only encode the discovery metadata but also provide pathways into more detailed metadata for particular datasets necessary for their (re)use. Such an architecture has also been used elsewhere, such as in the EPOS project (currently the deliverable is restricted but information may be obtained from the authors) and in the ENGAGE-project

([www.engage-project.eu](http://www.engage-project.eu)). The three-layer metadata architecture that is used in both the EPOS-project as well as in the ENGAGE-project has advantages in the discovery, the contextualization and the processing of detailed data over simpler schemes, such as those which are proposed by Shadbolt (2010) and Koumenides et al. (2010).

## 1.2. Why metadata are necessary in analyzing LOD

Metadata for LOD can be useful in the following situations.

- *Metadata create order within datasets.* Metadata help to create order in datasets by describing, classifying and organizing information (Duval, Hodgins, Sutton, & Weibel, 2002).
- *Metadata improve storing and preservation of LOD.* Storing metadata and making them available to users of the data makes knowledge that can be derived from these data more explicit (King, Liakata, Lu, Oliver, & Soldatova, 2011) and in a good state of preservation (Taylor, 2003).
- *Metadata improve easily finding LOD.* Metadata improve the ability to find data, but they also increase the chances to be found. "Without quality metadata the chances of it being found and read by the person who wants to read it are significantly diminished." (McGovern, 2001, [http://www.gerrymcgovern.com/nt/2001/nt\\_2001\\_10\\_01\\_metadata.htm](http://www.gerrymcgovern.com/nt/2001/nt_2001_10_01_metadata.htm)).
- *Metadata improve the accessibility of LOD.* Metadata improve the accessibility of data by helping to describe, locate and retrieve the data efficiently (Duval, et al., 2002; Joorabchi & Mahdi, 2011; United Nations Statistical Commission and Economic Commission for Europe, 2000). When limited metadata are available, this will limit the ability of a user to search or browse a dataset (Pallickara, Pallickara, & Zupanski, 2012).
- *Metadata may make it possible to assess and rank the quality of LOD.* Users of the data obtain more information about different aspects of the data and this makes it possible for them to make assessments about the quality of data and rank different datasets (Taylor, 2003). Therefore, the extensive use of metadata may lead to better decision making.
- *Metadata improve easily; analyzing, comparing, reproducing and therefore finding inconsistencies in LOD.* Data can more easily be analyzed, compared and reproduced when metadata are available. Subsequently, this reproduction may help detect methodological differences and inconsistencies (King, et al., 2011; Taylor, 2003; United Nations Statistical Commission and Economic Commission for Europe, 2000) because other users may conduct the same process and then find other results. Making metadata available promotes the interchange of results and of the methods that are used to obtain these results. Therefore the user himself or herself can find out how conclusions are derived from a certain method so that the conclusions become more reliable.
- *Metadata improve chances of a correct interpretation of LOD.* Metadata are very important for the interpretation of the data (Foulonneau & Cole, 2005). Metadata create higher chances to ensure correct and proper use and interpretation of LOD. The interaction with the information base may help interpret the data better, for instance when data providers can be approached by E-mail (United Nations Statistical Commission and Economic Commission for Europe, 2000). "Metadata provides the essential link between the information creator and the information user" (Taylor, 2003, <http://www.library.uq.edu.au/papers/ctmeta4.html>).

- *Metadata improve the possibilities to find patterns in LOD to generate new hypotheses.* Data-mining algorithms can be used to find patterns in metadata. According to King et. al. (2011), “these patterns could then be used to generate new hypotheses, which could be tested using other annotated investigations, or through new empirical research” (p. 1447).
- *Metadata may improve visualizing LOD.* The use of metadata has shown to make visualizing data easier in certain domains. Metadata can, for instance, improve accuracy of mapping (Park, Kim, Seo, & Kim, 2011). Perhaps this finding can be generalized.
- *Metadata make it easier to link data* (United Nations Statistical Commission and Economic Commission for Europe, 2000). For instance, when data are provided about the accuracy, the precision and the calibration of a certain variable, these data can be used to decide whether or not to use this variable for the linking of data to other data.
- *Metadata avoid unnecessary duplication of LOD.* The interchange of results prevents the unnecessary duplication of results (King, et al., 2011), because similarities between data can be found more easily when extensive metadata are provided.

From the foregoing we can conclude that the use of metadata comes with many benefits. On the other hand, some authors mention disadvantages of the use of metadata for LOD. They state, for example, that providing extensive metadata for databases is costly, that this provision requires high investments and that the provision of considerable metadata makes it difficult to create consistency between metadata (Duval, et al., 2002). However, this section showed that the use of metadata is necessary for the use of LOD in policy-analysis.

## 2. Use cases

The following section describes two use cases. The first use case shows important limitations that are caused by the insufficient provision of metadata. The insufficient provision of metadata is representative for most of the use of LOD (for instance Hernández-Pérez, et al., 2009; Schuurman, et al., 2008; Xiong, et al., 2011). The second use case is less representative, because it describes the use of LOD with the provision of related metadata, but this use case is chosen since it shows some advantages that the provision of metadata may have.

### 2.1. Use case 1 (NARCIS)

The aim of this first use case is to find out which disadvantages the lack of metadata may have for the reuse of data and which advantages the provision of metadata may have for this use. The disadvantages and the advantages will be described by means of a use case about a researcher that works for a national bureau that researches crime statistics. This researcher already possesses a dataset that describes the nature of certain types of crime as reported by citizens for the years 2009 and 2010. He would like to find another dataset that shows the same type of information, but then for other years, so that he can compare these and find out whether there have been changes in the results from crime reports in former years. On the website of the Dutch National Academic Research and Collaborations Information System (NARCIS; [www.narcis.nl](http://www.narcis.nl)) the researcher finds a dataset named “POLS Delict 1997-2004” (Permanent Research on Living Situation). This dataset describes among other things the nature of certain types of crime as reported by citizens. Some metadata are provided on the web site: title, creator, date, summary, access rights, dataset persistent identifier and repository. To be able to link this dataset to the dataset that is already in

the possession of the researcher, he needs more metadata to understand, for instance, the variables that he will use for this linking and to find out what the quality of the data is (e.g. are there many missing values that would cause problems for the linking process?). The researcher would like to know which metadata are available and clicks on 'metadata' (<http://easy.dans.knaw.nl/oai?verb=GetRecord&metadataPrefix=didl&identifier=oai:easy.dans.knaw.nl:easy-dataset:39597>). He gets to see an HTML version of the XML OAI response of an unknown metadata format. Considerable data are provided here, but although some data are understandable, the researcher does not know how to make sense of most of the data. The researcher cannot read the technical language that was used to describe the metadata. He clicks on 'identify' and some other buttons, but this does not provide him with more useful information about the dataset.

## 2.2. Use case 2 (DANS)

The second use case describes the use of data from the Dutch Data Archiving and Networked Services (DANS). A researcher who works for the Dutch Ministry of Social Affairs and Employment got the assignment to conduct research on changes in the quality of different types of education in the last four years. One of the indicators that he wants to use to measure quality is the type of competences that people obtained that are educated in different ways. On the website of DANS (<http://www.dans.knaw.nl/>) the researcher finds a dataset that he may want to use: the "HEGESCO – Higher Education as a Generator of Strategic Competences". This dataset contains data about higher education and is linked to data about competences in different countries. The researcher clicks on it (<https://easy.dans.knaw.nl/ui/datasets/id/easy-dataset:34417>) and sees three tabs: 'Overview', 'Description' and 'Data files (8)'. The first tab provides the researcher with a general description of the research. Further, the second tab shows more extensive and structured metadata in a structured format: creator, title, description, date created, access rights, date available, audience, subject, spatial coverage, temporal coverage, identifier, persistent identifier, format, relations with other websites and language information are provided. These metadata can be downloaded as an XML-file or as a CSV-file. The third tab shows that the HEGESCO-research resulted in eight data files, but users should register and log in before they can use the files. The researcher registers on the website and logs in and then sees he still only has permission to access four data files and that special permission is required to be able to access the other four files. One of the available files is the 'Codebook HEGESCO data file 20-03-2009.doc'. This file shows all questions that were asked during the research, the names of the variables that were created in the data file about this question, the value ranges for this variable, the meaning of values that are used for different types of missing data, the possible formats for the values and, if necessary, a remark about the variables. Other files show the final version of the survey and reports that were published about this survey. Considerable metadata are provided to the researcher, although there are still some questions that present themselves, such as, "Where can detailed metadata be found about the accuracy, the precision and the calibration of the data?" and "How was this dataset linked to other datasets?" Besides, the data themselves may present other questions, because the researcher cannot directly look at the data; access to the data themselves requires granted permission.



### 2.3. Conclusions from use cases

The use cases that were described above show some important limitations of LOD that are currently being used. The first use case shows important limitations that are caused by the insufficient provision of metadata. It shows that the metadata cannot be discovered easily by the user. The few metadata that are provided are described in an unknown format and do not show a clear representation of the data. This makes it difficult to interpret the data correctly.

The second use case describes the use of LOD when more metadata are provided, but this provision is still insufficient for the purpose of linking datasets. Although considerable metadata are provided and the provided metadata are structured, it is not extensive enough to use it for the purpose of linking.

Benefits of metadata according to literature overview	Challenges derived from the use cases
Create order within datasets	Provide structured and sufficient metadata.
Improve storing and preservation of LOD	Provide metadata so that explicit knowledge can be derived from the LOD on the long term.
Improve easily finding LOD	Provide search possibilities based on metadata and a persistent identifier of the LOD so that certain data/researchers can easily be found.
Improve the accessibility of LOD	Provide metadata that make it easy to locate and retrieve the data (e.g. search possibilities) and make it possible to request special permission to be able to access the data.
Assess and rank the quality of LOD	Provide metadata that can be used to assess and rank the quality of LOD.
Improve easily analyzing, comparing, reproducing and finding inconsistencies in LOD	Provide metadata about how the research was conducted: e.g. how were the data analyzed? Which choices were made during the research?
Improve chances of a correct interpretation of LOD	Provide metadata that explain the variables that were used for the research, the choices that were made during the research, show relations with other data/websites.
Improve possibilities to find patterns in LOD	Provide metadata in different formats (e.g. XML, CSV, etc.), so that their interoperability allows for patterns to be detected in different LOD datasets, even if the syntax and semantics are different.
Improve visualizing LOD	Provide extensive metadata about the quality (e.g. accuracy) of the data that make it easier to visualize data (e.g. for data mapping).
Make linking data easier	Provide metadata that describe the variables extensively and that provide knowledge about which variables could possibly be linked. Provide metadata about the data providers and make it possible to approach them for questions about the LOD (e.g. by E-mail).
Avoid unnecessary duplication of LOD	Provide access to data and metadata and show similarities with other data.

**Table 1: Comparison between benefits of metadata based on the literature review and challenges derived from the use cases.**



Table 1 presents challenges for the provision of metadata that can be derived from the use cases (column 2) compared with the benefits of the metadata according to the literature overview in section 2 (column 1). The table shows that there are discrepancies between the benefits that are described in literature and the benefits that are obtained according to the use cases. Based on the literature overview, the use cases, this table and the experiences of the authors of this paper we found that the basic capabilities that are created by adding metadata are as follows (between brackets is the type of metadata that is needed to accomplish these capabilities).

- The metadata should be easily discovered (discovery metadata).
- The metadata should interconvert common metadata formats used in PSI (discovery, contextual and detailed metadata).
- The metadata should provide a LOD representation of the metadata for browsing or query (discovery, contextual and detailed metadata).
- The metadata should maintain the capabilities of conventional information systems with structured query including convenient primitive operations (discovery, contextual and detailed metadata).

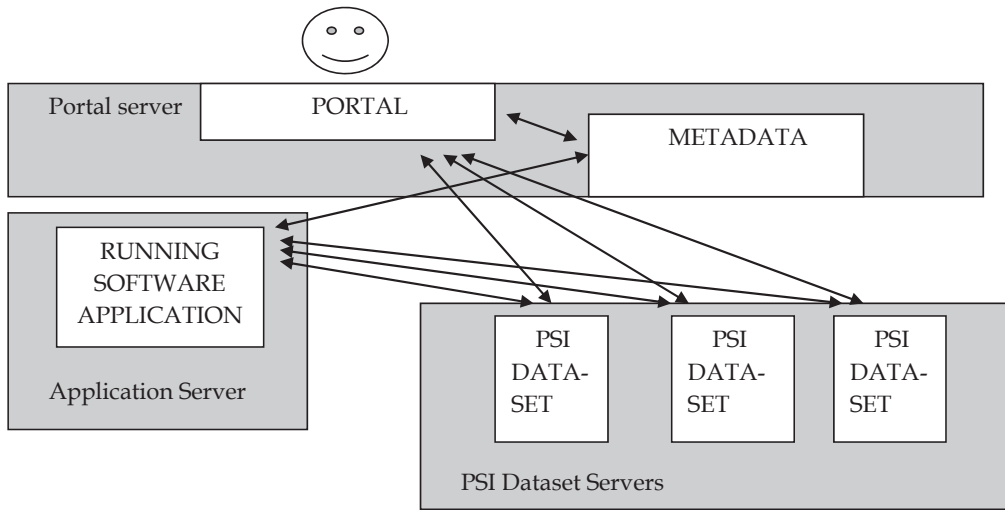
In the next section we describe how the requirements that were enumerated above, can be met by using an architecture that uses standardization and harmonization techniques.

### 3. Architectural considerations

The preceding sections showed which requirements are needed for the metadata. In the following section an architecture that fulfills these requirements will be outlined. Subsequently, the structure of the required metadata will be described, after which some design issues will be addressed. The section ends with a description of the benefits of the chosen architecture.

#### 3.1. Outline architecture

Given the use cases and requirements outlined above, the challenge is to design an architecture to allow (a) end-user “citizen” and “researcher” access via a portal supported by metadata to PSI datasets for download; (b) access – utilising metadata – to those same datasets via a service from a running program on another system to utilise the information in another context. This leads naturally to an architecture sketched in Figure 2.



**Figure 2: An architecture of a portal server for the provision of metadata.**

The processing steps are as follows:

1. For the end-user “citizen” or “researcher” accessing the portal: querying or browsing the metadata to find PSI datasets of interest then pointing and clicking to download the dataset(s) chosen from the source servers to the end-user’s own computing facilities;
2. For the running software application: querying the metadata to select appropriate PSI datasets then accessing them directly via supplied services to select appropriate instances within the datasets for further processing at the processing facility supporting the application;
3. For both cases: either from the portal interface or within the running software create new relationships between PSI datasets and record the relationships as metadata;
4. For both cases further process the PSI dataset(s) as required for the purpose including analysis (statistics), modelling and visualisation optionally storing the processed information on the user or application computing facilities and providing metadata to characterise it to the portal server.

### 3.2. Metadata

To implement this architecture, metadata should be used. A 3-layer structure for metadata is used: (a) discovery (flat) metadata; (b) contextual metadata; (c) detailed metadata. Of these layers, (a) allows discovery of relevant PSI datasets by browsing or query, determining any restrictions on usage; (b) allows rich information on persons, organisations, projects, publications and many other aspects associated with the dataset, provides interoperability (by ingesting and generating) among common metadata formats used in PSI and from (b) we generate (a) to ensure congruence; (c) is usually specific to a domain (e.g. healthcare) or even to a specific dataset, examples include the European Commission INSPIRE Dataportal (2011) or a Core Scientific Metadata Model (CSMD) (Matthews et al., 2010). In this environment (a) may be the Dublin Core (DC)

(Dublin\_Core\_Metadata\_Initiative, 2010), the e-Government Metadata Standard (e-GMS) (ESD\_Standards, 2004), the Comprehensive Knowledge Archive Network (CKAN) (Open\_Knowledge\_Foundation, 2007) or similar ‘flat’ metadata whereas (b) uses the Common European Research Information Format (CERIF) (EuroCRIS, 2010). CERIF is an EU recommendation to member states and is entrusted to euroCRIS ([www.eurocris.org](http://www.eurocris.org)) for maintenance, development and promotion. CERIF is chosen because it is highly structured allowing temporally defined role-based relationships between instances of entities and it is also adopted by several governments (for example the United Kingdom, Norway, Denmark, Sweden, Slovakia, Slovenia, Ireland and the Netherlands) and by European institutions including the European Research Council (ERC) and the European Science Foundation (ESF).

An example would be the representation of the fact “between 1 January 2008 00:00 hours and 31 December 2013 24:00 hours the organisation Ministry of Health produced the product known as DatasetX.” Here the date/time start and end are obvious, the role is produced, the subject is the Ministry of health and the object DatasetX. A form of formal representation is:

```
{Ministry of Health}{<produced><200801010000><201312312400>}{DatasetX}
```

Which is a triple of subject, relationship, object each enclosed thus: {..} but where the relationship has role and temporal duration with elements enclosed thus: <...>.

Implementations of CERIF usually utilise relational database technology (although it is implementation environment agnostic) and so in this environment we provide interconversion between a relational representation and a Resource Description Framework (RDF) representation (World\_Wide\_Web\_Consortium, 2010) of the contextual metadata. This allows the environment to be utilised in a semantic web / LOD context as well as in a typical information system context.

### 3.3. Design issues

In this section we discuss the rationale for the design decisions taken. The Semantic Web / LOD environment is usually the one preferred for PSI. Largely driven by enthusiasm from Web Science (WebScience\_Trust, 2011) and W3C<sup>1</sup> sources (World\_Wide\_Web\_Consortium, 2011b) – including Tim Berners-Lee and Nigel Shadbolt – governments have been persuaded that it is easy to make PSI available by this mechanism. However, the following aspects that are derived from a deeper analysis of the requirements described above challenge this view.

1. Firstly, although access to metadata via a portal followed by “point, click, download” to receive the dataset is easy, what is then done with the dataset? The end-user has to have adequate knowledge of the dataset and the metadata typically found at PSI portal sites (such as DC, CKAN or eGMS) is usually insufficient to provide this knowledge.
2. Secondly, representation of the metadata using RDF has intrinsic problems. RDF has the syntax of a simple triple <subject><link><object>, typically instantiated with Uniform Resource Identifiers (URIs). Although attributes may be added, this is already one level of indirection / complexity, and the simple <link> cannot adequately represent temporal or geospatial relationships (Perry, Sheth, & Jain, 2009) requiring multiple linked RDF statements.
3. Thirdly the usual query language over RDF triplestores is the SPARQL Protocol and RDF Query Language (SPARQL) (World\_Wide\_Web\_Consortium, 2008). Typically SPARQL endpoints are

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<sup>1</sup> W3C: World Wide Web Consortium

provided for the syntax of typical queries, the parameters of which can be instantiated by the user. Just as RDF is insufficient to carry the sophisticated semantics of relationships between metadata elements characterising the PSI datasets, so SPARQL becomes unacceptably complex (Perry, et al., 2009).

Conversely, the information systems environment that was put forward – characterised typically by relational database technology – provides the next improved facilities.

1. Firstly, CERIF provides a much richer metadata than the standards used commonly with PSI datasets and so improves greatly the experience of the end user (or the software) in processing the PSI datasets described by the enhanced metadata. Therefore, CERIF may be important in realizing the advantages of providing metadata that were mentioned in the literature review section.
2. Secondly, the representation of contextual metadata (CERIF) allows rich semantics to be represented simply over a formal syntax thus making the PSI datasets understandable to the end user (or software) through the enhanced metadata. Because CERIF has a structure of <entity><relationship><entity> it has outwardly a similarity to RDF. However, CERIF provides this structure at the entity (object) level as well as the instance level – a characteristic of data models based on the Entity-Relationship model (ER) (Wikipedia, 2011b) or more accurately the Enhanced Entity-Relationship model (EER) (Wikipedia, 2011a) paradigm. Nonetheless this similarity makes it easy to represent in RDF (subject to the problems discussed above under the heading metadata) metadata represented within CERIF. Similarly metadata represented in RDF can – with some manipulation – be represented in CERIF. Thus CERIF provides the “exchange” format for metadata allowing not only interconversion of common metadata formats as mentioned before but also between information system (typically relational) and semantic web / LOD (typically RDF) representations.
3. Thirdly, the Structured Query Language (SQL) (Wikipedia, 2011d) usually presented to the end-user through an easy-to-use Query By Example (QBE) interface (Wikipedia, 2011c) has a simpler structure than SPARQL and includes convenient primitive operations for simple statistical calculations such as sum, count, average.

### 3.4. Benefits of the chosen architecture

Thus we choose an architecture combining the ‘best of both worlds’. Because of the powerful expressive semantics over formal syntax of CERIF we can:

- Generate discovery metadata from CERIF;
- Interconvert common metadata formats used in PSI using CERIF as the superset exchange mechanism;
- Provide a semantic web / LOD representation of the metadata for browsing or query using SPARQL;
- While maintaining a conventional information systems capability with structured query including convenient primitive operations.

This combined architecture is ideal for both end-user via a portal access and running software via a service Application Programming Interface (API) access. Furthermore it helps in realising the benefits of providing metadata that were enumerated in the literature review section. The

architecture provides alternative mechanisms for integrating information from PSI datasets with subsequent benefits including creating order in datasets, improving find ability, accessibility, storing and preservation of LOD, improving easily analyzing, comparing, reproducing, finding inconsistencies, correct interpretation and visualizing of LOD, finding patterns in LOD to generate new hypotheses, making linking of data easier, assessing and ranking the quality of LOD and avoiding unnecessary duplication of LOD.

#### 4. Conclusions and discussion

Adding metadata to LOD is often viewed as an additional activity that only consumes resources. However, when a broader perspective of policy-analyses is taken, the need for metadata becomes clear. In this paper we showed that merely linking data is not enough to make optimal use of open data and that metadata are key enablers for policy-making. Adding metadata is a relatively small activity that can yield considerable benefits including creating order in datasets, improving find ability, accessibility, storing and preservation of LOD, improving easily analyzing, comparing, reproducing, finding inconsistencies, correct interpretation and visualizing of LOD, finding patterns in LOD to generate new hypotheses, making linking of data easier, assessing and ranking the quality of LOD and avoiding unnecessary duplication of LOD.

The literature review and the use cases showed some requirements for the use of metadata for LOD that were to a large extent fulfilled by describing a satisfying architecture. The architecture showed that discovery metadata can be generated from CERIF, common metadata formats can use CERIF as the superset exchange mechanism, a LOD representation of the metadata for browsing or query can be made allowing the use of SPARQL, while a conventional information systems capability with structured query including convenient primitive operations can be maintained.

In brief, this paper concludes with the recommendation to further implement the metadata architecture that was described and to examine to what extent the proposed metadata architecture is sufficient. This examination could lead to recommendations about adaptations, for instance about further extending the architecture with more metadata and is therefore helpful for the reuse of LOD.

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# Internal data monitoring for Open Government

*Enhancement of the Open Government Implementation Model by criteria for internal data monitoring*

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**Abstract:** *In order to be prepared to release data within Open Government Data initiatives, KDZ suggests a catalogue of ten criteria for internal data monitoring. These criteria can help to identify and prioritize internal data to be published. The criteria are non-disclosure/legal restrictions, personal references, company references, copyright, value, cost, content-related data quality, technical availability, synergy, and compliance with OGD principles. A description and a scoring grid are available for each of the criteria.*

**Keywords:** open government, open government data, ogd, implementation model, data monitoring

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**D**uring recent years the comprehensive topic of Open Government has gained both depth and a vast amount of public interest in German-speaking countries – in particular the aspect Open Government Data (OGD). From an international viewpoint, the US initiative of president Obama and some other initiatives (e. g. Great Britain, Canada, Australia, Scandinavian countries) have been first movers. Interestingly, the first countries to implement OGD were those in which OGD was high on the political agenda, whereas in German-speaking countries the topic was seen more reluctantly, which is due to differences in political and administrative culture. Preliminary work in the German-speaking area was carried out by the scientific community. Amongst others, von Lucke has published first definitions and analyses for Open Government and Open Government Data<sup>1</sup>. Müller published his view on implementation of an “open statecraft”<sup>2</sup> to actively manage Open Government. KDZ has emphasized the relation to aspects of public management reform and public governance.<sup>3</sup> Parallel to the expert discussion, NGOs have actively pushed the topic in Germany (Internet & Gesellschaft Collaboratory, Open Data Network, Government 2.0 Network) and Austria (OGD Austria, Open3)<sup>4</sup>. The administrations of the cities of Berlin, Munich, Vienna and Linz were the first to implement OGD initiatives. In Austria, public

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<sup>1</sup> von Lucke et. Al, 2010

<sup>2</sup> Müller, 2010

<sup>3</sup> Krabina, 2010

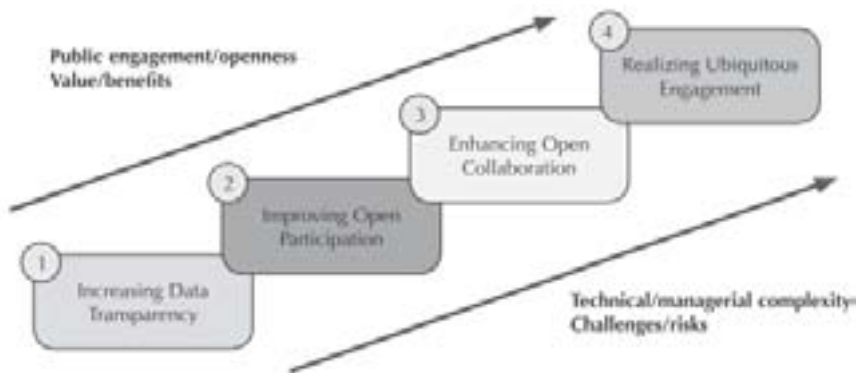
<sup>4</sup> see <http://collaboratory.de>, <http://opendata-network.org>, [www.gov2020.de](http://www.gov2020.de), <http://gov.opendata.at>, [www.open3.at](http://www.open3.at) (2011-12-12).



administrations are collaborating in an initiative entitled “Cooperation Open Government Data Austria” to share experiences and embed the initiatives in the Austrian eGovernment structures.

## 1. Open Government Implementation Model

KDZ – Centre for Public Administration Research has contributed to the Open Government strategy of the City of Vienna that was developed in parallel with the implementation of the award-winning Vienna Open Government Data portal.<sup>5</sup> A focal point was the quest for an implementation model that could constitute a strategic framework for Open Government initiatives. In order to further disseminate the results, KDZ has released an Open Government implementation model.<sup>6</sup> It is based on the “Open Government Implementation Model” of Lee/Kwak 2011<sup>7</sup> which is a generic implementation model for Open Government initiatives (see Figure 1). The model incorporates suggestions for step-by-step implementation of Open Government including metrics for measuring agency Open Government performance.



**Figure 1: Open Government Implementation Model (OGIM) by Lee/Kwak 2011**

The OGIM, however, does not go into detail on what concrete measures should be taken by government agencies. KDZ has therefore extended the model to include measures to be taken in the first phase that have been considered by the Vienna city administration.

In the first phase – increasing data transparency – focus is on increasing transparency of government processes and performance by publishing relevant data online and sharing it with the public. The two most important tasks at this stage are: Identifying high-value, high-impact data for the public and improving and assuring data quality in terms of accuracy, consistency and timeliness. Agencies at Stage One should not try to publish all the data they own, which is not only impractical, but also ineffective. As the Pareto Principle (i.e., the 80/20 Rule) suggests, agencies should focus on the top 20 percent of their data that would most benefit the public.<sup>8</sup>

The first data to be disclosed can be identified relatively simply by looking at international initiatives that have already implemented and by consulting civil society. For disclosure of further

<sup>5</sup> <http://data.wien.gv.at> (2011-12-12)

<sup>6</sup> Krabina/Prorok 2011

<sup>7</sup> Lee/Kwak 2011

<sup>8</sup> Lee/Kwak 2011

data it is advisable to implement internal data monitoring that helps to identify possible data records not externally but, rather, by internally defined criteria.

## 2. Criteria for internal data monitoring

Desk research was carried out in order to identify previously published criteria that could be used, but at the time of working on the strategy paper for the City of Vienna, no suitable criteria could be identified. Therefore KDZ suggested a first set of criteria including a scoring grid. Feedback from professionals in the Vienna city administration and the Environment Agency Austria has been taken into consideration for the published criteria listed in Table 1. These criteria can be used to obtain an overview of the data available in the government agencies. The metrics help to identify data that is suited to be released to the public. Evaluation of criteria with zero indicates that their disclosure is currently not feasible.

**Table 1: Internal Data Monitoring for Open Government Data**

Criterion	Description	Metrics (0 – 5 points)
Non-disclosure/ Legal restrictions	Is the data subject to non-disclosure obligations or other legal restrictions?	0: Non-disclosure obligation 1: Restrictions exist, are hardly changeable (e. g. EU restrictions) 2: Restrictions exist, changeable (e. g. regional or district council with extraordinary resolution) 3: Restrictions exist, easily changeable (e. g. regional or district council with simple majority) 4: Restrictions exist, very easily changeable (e. g. internal rules and practices) 5: No restrictions
Personal References	Does the data include personal references or can individuals be identified?	0: Personal referenced data 1: Data cannot be made anonymous, missing approval hardly obtainable 2: Data cannot be made anonymous, missing approval obtainable 3: Approval obtained (e. g. subsidies) 4: Data can be made anonymous 5: No identification of individuals possible
Company References	Does the data include company references or can individual companies be identified?	0: Company referenced data 1: Data cannot be made anonymous, missing approval hardly obtainable 2: Data cannot be made anonymous, missing approval obtainable 3: Approval obtained (e. g. subsidies) 4: Data can be made anonymous 5: No identification of individual companies possible

Copyright	Is the agency sole possessor of copyright?	0: Copyrights of third parties prohibit disclosure 1: Subject to license fees and approval 2: Subject to license fees, approval obtained 3: No license fees, subject to approval 4: No license fees, no approval needed 5: Sole possession of copyright ensured
Value	How high is the estimated value of disclosure (for the public, for companies, for other agencies...)	0: No value 1: Very low value 2: Low value 3: Medium value 4: High value 5: Very high value
Cost	How high is the cost of disclosure?	0: Unjustifiable cost 1: Very high cost 2: High cost 3: Medium cost 4: Low cost 5: Very low cost
Content-Related Data Quality	How high is the data quality? (timeliness, completeness, accurateness, faultiness)	0: Data quality unjustifiable 1: Data quality very low 2: Data quality low 3: Data quality medium 4: Data quality high 5: Data quality very high
Technical Availability	Available data formats, open standards, 5-Stars-Model, OGD formats	0: Data available on paper only 1: Data available electronically 2: Data available in machine readable format 3: Data available in OGD formats 4: Data available with URI / as RDF 5: Data available as linked data
Synergy	Is the data /are services being made available for other purposes?	0: Not yet published 1: Published on the agency's website 2: Published/to be published on external portals (e. g. Geoland.at, Centropemap etc.) 3: Published/to be published under regional/national laws (e. g. WGeoDIG) 4: Published/to be published due to EU regulations (e. g. INSPIRE, SEIS, Directive 2003/4/EG...) 5: Published/to be published for external customers due to contracts (e. g. economic chamber ...)

Compliance with OGD principles	Can the OGD principles be met?	0: OGD principles cannot be met (less than 5 principles) 1: OGD principles partly be met (5 - 7 principles) 2: OGD principles largely met (minimum of 8 principles), exemption not granted 3: OGD principles cannot be met (less than 5 principles), exemption granted 4: all OGD principles can be met by exemption to principle 1 5: all OGD principles can be met
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In this first set of criteria, there are no weights assigned to the individual criterion, thus implying that each criterion is of equal importance and e. g. 4 points in criterion 1 weigh the same as 4 points in criterion 4. However, the criteria for internal data monitoring are not intended to deliver precise mathematical metrics but, rather, a framework for an internal monitoring that can be adjusted to the needs of the individual organization. It would easily be possible to assign individual preferences to certain criteria by multiplying the scores by a weighting factor.

Further measures to be taken in the first phase are setting up an open government competence center as a virtual organization to act as an internal steering board and as an external contact point for open government and implementing an open data portal where data will be published.

### 3. Conclusion

The OGIM is a framework for a generic implementation model that can also be used by German-speaking government agencies. Internal data monitoring is crucial in the first phase. KDZ has suggested criteria for such internal data monitoring as a concrete amendment to the OGIM that have already been taken into consideration by the City of Vienna and the Environment Agency Austria. Further dissemination of the model for internal data monitoring and feedback from agencies in English-speaking countries is explicitly desired.

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## E-Democracy & E-Participation





# Social computing potential for citizen engagement in public sector services

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*Abstract: In this article we discuss the possibilities offered by growing the trend of social computing for improving citizen engagement and participation to services offered by public sectors. By the simplicity of its use, social computing seems to improve the ICT literacy of its users, therefore helping to involve a broader group of people in various e-Government applications. Social networks can serve as a backbone for information exchange and situation monitoring by offering new interpersonal communication means within a group of actively engaged concerned citizens. In our study we identified that concerned citizens were able to carry out the inception and maintenance of a web forum, documenting and observing the activities of a public housing institution on a project of constructing residential dwellings for a market.*

**Keywords:** e-Government, citizen engagement, citizen participation, housing, real estate

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**A**ccording to a study of e-Government arena in Europe (Capegemini et al., 2010), online availability and sophistication of services for citizens and business show stable improvement in the past decade. The actual average for online availability in Europe has reached an impressive 82% in 2010, while the sophistication measure, which denotes the degree of interaction between service provider and user, stands at 90%, exhibiting an increase of 7% since 2009. Although the online availability figure for Europe is remarkably high, citizen's engagement and participation do not display the same manners; surprisingly, indicators show that they still remain relatively low at 28%. It seems that there is much work to be done to understand and engage citizens, as well as to build their trust and confidence.

A technologically literate citizen is likely to participate in the decision making, whether by voting for a candidate or in a referendum, sending an e-mail to the editor of a local paper, participating in a public opinion poll, or supporting the work of a civil initiative group on a web forum. Democratic principles are therefore based on citizens' engagement and participation. Citizens as users of e-Government applications have long been observed as more or less passive



actors in the process. However, we believe that treating citizens as an active valuable resource is a more convenient option. One of the remaining problems might occur when citizens understand what they should do, but they just don't do it. Conveying the information in the way that influences behavior change is a hard to solve. Here, a question is in what form to present information to citizens so that it does not just educate or inform them, but instructs them to make better decisions and choices in the future as well (Kern et al., 2011).

While the field of e-Government applications exhibits relatively low engagement and participation figures, the field of social computing gained considerable momentum in the past years. Social computing includes web applications like email, instant messaging, forums, blogs, social network services, several kinds of wikis and other. Social network services like Twitter and Facebook embrace more and more users from various groups. For example, Facebook has more than 800 million active users from all over the World; an average user has 130 friends (Facebook statistics, 2011). Their statistics also show that about 50% of their active users log on to Facebook in any given day. An average user is connected to 80 community pages, groups and events. More than 350 million active users currently access Facebook through their mobile devices.

## 1. Supporting the housing projects in Slovenia

The Public Housing Fund of the Republic of Slovenia, was established by an Act to finance the National Programme and to promote housing construction, renovation and maintenance of apartments and residential houses in the state. In its first years, the Institution directly supported citizens' initiative in private housing building and non-profit housing organizations by offering loans under favorable terms. Then, after the first decade, the Institution took part also in stimulating citizens for housing saving introducing two novel projects: (1) the National Housing Saving Schema (Cestnik et al., 2011) and (2) Housing Subventions to Young Families (Kern et al., 2010), whose main goal was to improve housing status of citizens.

For the first project (1), the Slovenian government implemented the conditions of the National Housing Savings Schema (NHSS) (Cestnik et al., 2011) in resolutions passed in 1999 and 2000. The main motivation for NHSS was to promote long-term savings deposits and to increase the quantity of long-term housing loans under favorable terms to citizens. The National Housing Programme enforced in May 2000 established the NHSS as a continuing project, thereby imposing additional qualities like durability and tidiness. Note that, since its introduction in 1999 the NHSS received remarkable attention and was very popular among Slovenian citizens.

The second project (2) was intended as a supplement to the NHSS. The Housing fund has, according to the housing legislation passed in 2006, announced six consecutive yearly calls for granting subventions to young families (Kern et al., 2010). The eligibility of each applicant is determined according to the enforced legislative regulation. In order to obtain the yearly subvention, each applicant had to fulfill three criteria. First, the applicant's family had to have a young family status. Second, the applicant had to hold a contract for buying housing, real estate or a legally binding building permit for the construction of an individual house. And third, the earnings per applicant's family member should not exceed one half of the average salary in the Republic of Slovenia in the past year.

These data from the housing market in Slovenia reveal that and the end of 2010 there were 844,349 housing facilities in Slovenia. The average flat size was 78 m<sup>2</sup>. More than half of the housing facilities were constructed in the period from 1971 till 2010. Statistical data also show that

the share of young people in the age 25-29 that still reside with their parents increased from 44% in the year 2000 to 66% in the year 2010 (Eurydice Slovenia, 2010). What is even more alarming, they are quite content with such situation. New economic recession is expected to increase this share. The data also reveal that the progress in ICT contributed to the attractiveness of the youth decision to reside in a joint household with their parents. On the other hand, the prolonged inclusion of young people in the education system doesn't seem to affect their prolonged stay with the parents.

We found additional proof that citizens like to be better informed about the Fund's activities on the internet forum (Residential complex forum, 2011), shown in Figure 1. In this forum they follow the progress of the Fund's activities concerning the building of the largest residential complex in the center of the capital city. The demand for affordable housing (apartments) in the center, far outreach the supply. The forum contains valuable temporal information, since all the posts are dated and can serve to inspect all the phases of building construction from a time perspective. Note that the consequences of such new media are beneficial for both citizens and investors, since the latter can obtain many useful responses, opinions and suggestions for improvements.



**Figure 1: A forum for exchanging information between the potential users of the Fund's services.  
It contains written messages and pictures.**

When we analyzed the web forum user data we discovered surprisingly that their age structure was not biased towards young populations, as was often the case in similar past analyses, but that it was quite similar to the age pyramid obtained from state statistical sources. As a consequence we can assume that there is a tendency for the Internet to reach a broader more balanced population than in the previous years. We estimate that by posting relevant data on the web we were able to avoid a substantial amount of complaints and spare a lot of unnecessary effort. We believe that by introducing such important pieces of information, which are not required but are extremely handy for the customers, the overall usability of web communication channel increases substantially.

## 2. Conclusion

In this paper we showed that an active presence in social networks might not only improve citizens' literacy and internet skills, but also encourage them to participate more actively in e-Government applications and services. A case study is taken as one of the governmental actions to stimulate private and business endeavors, namely to give out incentives through the programmes of distributing funds and grants. The goal of such governmental actions is first to inform the potential target population and second to distribute the earmarked funds or grants objectively according to the principles and criteria published in the call.

In recent years the Fund has followed its strategy concerning information technology by attempting to model and re-engineer its high impact business processes (Cestnik et al., 2011). The first step towards business process re-engineering was to define and understand the processes. The results have shown that the use of a well-tried and trusted methodology is equally applicable across many of the Fund's sectors. One of the most interesting conclusions was that the real difficulty lies not in accepting and implementing new ideas but, strangely enough, in abandoning the old ones.

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# Obsessed with Facebook

*The Lessons New Social Media tell Political Communication in Romania and Serbia*

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**Abstract:** *In spite of a massive interest in new media in South Eastern Europe politicians seem to lack enthusiasm, risking to lose contact with many voters. Romania and Serbia serve as examples. Keywords: new media, Facebook, Twitter, election campaigns.*

**A** Serbian journalist observed that the Balkans were absolutely obsessed with new media like Twitter, blogs and, especially, with Facebook. It took some time until the public caught on and actually became interested in these new media. But then the figures went up. Nevertheless, the political class of Serbia still had confidence in the traditional ways of political communication. The young might be strongly attached to the Internet, but what counts are the votes of the older generation which still gets its information mostly through periodicals and the traditional media – radio and television. Serbia is a “regional leader in Facebook addiction,” as the Belgrade based journalist Siri Sollie put it. Serbia is in second place in Central and Eastern Europe when it comes to using Facebook. But most countries in the region have also seen marked rises in the use of social networking sites. Data provided by the Serbian Ministry of Culture reveal that Serbia is second in the region, after Turkey, in having most subscribers on Facebook. The Serbian blogger Marko Lazarević outlined that 91.8% of the young internet population – aged 16 to 24 years – have a profile on Facebook or Twitter<sup>1</sup>. The next three of the top five in Central and Eastern Europe are Bulgaria, Croatia and Romania. Jasna Matić, State Secretary of Digital Agenda in Serbia’s Ministry of Culture and also a very active member of the local Twitter community, told a press conference in Belgrade’s Dom Omladine hall that the sharp rise in the popularity of social network sites in Serbia reflected a growing hunger for communication among citizens and politicians alike. She noted that an increasing number of public officials use Facebook and Twitter to get their message across to voters. The issue of freedom of speech on the internet is a hotly-debated issue in the growing and predominantly young online community not only in Serbia and generally in the Balkan region. One of the initial reasons that the Internet quickly became popular

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<sup>1</sup> Total number of Facebook users in Republic of Serbia: 3,308,380. The total number grew by more than 396,260 in the last 6 months; position 45 in worldwide ranking, penetration of population: 45.04%, penetration of online population: 80.55%. Comparing the nearest countries by penetration of Facebook users shows that Serbia has 0.16% higher FB penetration than Macedonia and 0.03% lower FB penetration than Bahrain.

in the late 1990s in Serbia, was the political situation of Serbia. Rectifying the image the world had of Serbia, getting information in and out, criticizing the regime and having Serbs' voices heard outside of the walls of a damaged country and society were the driving forces behind the expansion of Internet usage more than a decade ago. Today more and more Serbian citizens demand that the current government and its politicians participate more actively in online conversations. This way they could face their voters and employ the web to their and the collective benefit. This is even more important as a majority of young and future voters in Serbia and the Balkans spend considerable time on the Internet. As previously mentioned, almost 92% of the generation between 18 and 24 in Serbia has an account on Facebook or Twitter. In June 2011 2.064.220 Serbian users of this network were registered, of a total population of about 7 million. So almost every fourth Serbian citizen is a member of Facebook. According to Serbia's Statistical Office 41.2% of the Serbian population now uses the Internet<sup>2</sup>. The figure was highest among those in employment and higher education. Almost all students are internet users in Serbia, apparently. When existing net users were asked to categorize their internet behaviour, 69.8% said they used social networking sites such as Facebook and Twitter. Other statistics confirm that the people of the Balkan countries are avid net-users and "Facebook" fans. Between 900,000 and 1.05 million of the 2.1 million Macedonians (50.9%) use the Internet, according to the International Web Stats web page. And what is more astonishing: in Macedonia, Montenegro and Albania almost 90% of the population active in the Internet have Facebook accounts. A staggering number of them, 878,300, have Facebook profiles, the statistics show. And out of 1.3 million Albanians that use the internet 1.05 are subscribed to Facebook. The popularity is similar among Montenegro's 303,000 internet users. The percentage of the population in the Balkans who has access to the internet varies from country to country. Slovenia tops the chart with 64.9% of the population having access to the web. Serbs rank second with 56.2%. Meanwhile, 50.1% of Croats, 47.9% of Bulgarians and 46.2% of Greece have access to the net. Montenegro has 45.9%, Albania 43.4% and Romania 35.5% Internet penetration. At the bottom of the Balkan countries are Bosnia and Herzegovina with 31.2% having access and Kosovo, where only 20.7% of the people use the Internet<sup>3</sup>. What started a debate was the fact that most of the 56.2% who have access to the Internet in Serbia, especially the younger generation, 79.2% of whom use the world wide web for communication – sending/receiving emails – used it for playing or downloading games, photos, films or music (64%); for sending chat

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<sup>2</sup> Republic of Serbia: 7,310,555 population (2011); 4,107,000 Internet users as of June/2010; 65,2% penetration, per ITU; 3,173,440 Facebook users on Dec 31/11, 43.4% penetration rate. According to a report on the use of information and communication technologies in the Republic of Serbia published by the State Statistical Office in September 2011 52.1% of the households own a computer, 41.2% of the households have an Internet connection, and during the last three months prior to the survey Internet was used by 42.2% of the population or 2.4 million people, out of which 1.9 million used it daily. 69.8% of all users said they use social networks, and 45.5% use Wikipedia.

<sup>3</sup> According to statistical data on Internet usage 58,3% of the European population has access to the world wide web, while Germans lead the way with 79.9% of the country's population browsing the net. Despite the high internet access, only 19.5 million of Germany's 65 million internet users are Facebook subscribers. Globally speaking, North America has the upper hand with 78.3% of its population using the internet. Africa has the lowest score with 11.4 percent. According to the Internet World Stats one third of Earth's population – 2.1 billion people – use the internet.

messages to groups or forums (42.3%), with only 26.4% using the Internet to search for information regarding education, training or courses.

When Serbia was still being shunned by Western Europe and the international community, blogs and internet radio stations were a welcome forum for political discussion. But that ebbed away. And the younger generation, many of them dissatisfied with party politics were keener to talk about the latest music than about the upcoming election. On the other hand, are the politicians, many of them belonging to a generation not really used to the Internet and new media. A generation which grew up almost living on the Internet is confronted with a political class that does still not really try to reach their present or future voters via the new media. There is little difference in this regard between Serbia and Romania. "Twitter", "Facebook" or the political blog which became a powerful political device in the recent U.S. presidential election campaigns could create a stronger interest in the election campaigns and generally in party politics in Romania or elsewhere in South Eastern Europe if only used more often, the Romanian media analyst Aparaschivei wrote (Aparaschivei, 2011). The evolution Facebook made in Romania<sup>4</sup> since 2008 makes this platform the most popular social network in the country. In June 2008, there were only 8,000 active Romanian accounts on Facebook, while in March 2011 there were already 2.95 million accounts in Romania and the distribution of men and women on the platform is more or less balanced. In February 2010, there were over 28,000 Twitter accounts registered in Romania, in March 2011 there were 44,000 active Twitter accounts. The first and only Romanian politician in the 2011 top 50 of public persons using Twitter was Traian Băsescu, president of Romania, who was on the 25<sup>th</sup> position, with 2,859 Followers. With regard to the political blogosphere in Romania in 2005 there were about 5,000 existing blogs, surging to 12 to 14,000 Romanian blogs in 2006. If one considered the presence of political parties in the Romanian blogosphere in March 2008 on top was the PSD (Social Democratic Party, 38 percent), followed by PNL (National Liberal Party, 22 percent) and PDL (Democratic Liberal Party, 17 percent). The fourth party was PNȚCD (Christian Democratic National Peasants' Party, 13 percent), while at the bottom were parties like the PC (Conservative Party), UDMR (Party of National Initiative) and independent politicians. Political commentators were the most numerous member of the Romanian political blogosphere, with 36%. In the second place came politicians and their parties (28%), followed by journalists (20%). The blogosphere kept growing over time but the Social Democratic Party (PSD) remained the party that was best represented, followed by the National Liberals and the Democratic Liberals. This ranking did not necessarily correspond with the activity in the social networks of the candidates in

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<sup>4</sup> Romania in March 2011 was, 9th in the European rankings of Internet users provided by Internet World Stats [[www.internetworldstats.com](http://www.internetworldstats.com)] with 7.8 million Internet users and a penetration rate of 35%. Belgium was in front of Romania with 8 million users, and the Czech Republic was a place behind, on the 10th position, with 6.7 million users. In autumn 2009 there were 7.4 million Internet users in Romania. As far as the rate of Internet usage by Romanians is concerned, a report regarding the Digital Agenda of the EU published by the European Commission shows that less than 30% of Romanian Internet users use the Internet on a daily basis. In this regard, there is a continuous decrease, evident in the daily Internet usage rate of 2010. Also, the Romanians' level of digital skills is not well developed, "compared with countries like Denmark, the Netherlands and Iceland, where over 80 percent of the population have digital skills, in countries like Romania and Bulgaria over 60 percent of the people do not have any kind of knowledge and skills to participate in the digital era" (Europe's Digital Competitiveness Report 2010).



the Romanian Presidential election campaigns of 2009. For instance, the Facebook page of Traian Băsescu – president in office, supported by the Democratic Liberal Party (PDL) – was never officially recognized, neither by the Romanian President nor any member of his campaign staff. It did not appear on the candidate's official site or on any other of the party's official web pages. Still, the Facebook page was active throughout the campaign, and the account administrator kept sending out pro-Băsescu messages. While Băsescu's activity on Facebook was somewhat lukewarm – seemingly not his official page – the winning presence on Twitter belonged to him. On his official Twitter account in less than a month he managed to gather 1,973 people, i.e. 45 percent of the followers of all candidates. Next in line, regarding blog entries, was Mircea Geoană with 37 articles, followed by Crin Antonescu with 18 articles. The independent candidate, Sorin Oprescu, was also leading on YouTube. At the end of the second ballot he had 112 video clips uploaded on YouTube, Mircea Geoană had 111, Crin Antonescu 77 clips, Băsescu just 61 and Kelemen Hunor from the Hungarian minority's party 49 video clips. But Băsescu's clips were in fact the most viewed of all – 17,487 views (57 percent of the total views) – compared to 7,498 views of Antonescu's clips, 4,147 views of Geoană's clips and Oprescu's with only 181 views. The big picture of the online election campaigns, as the figures indicate, was somewhat mixed. While Antonescu and Geoană obviously conducted a quite sustained campaign on Facebook and Băsescu's campaign team was quite active on Twitter, none of the candidates seemed to have a coherent strategy how to address the electorate via the new social media<sup>5</sup>. The traditional ways of communication were still more often used than the new ones, owing perhaps to the age of the active electorate, their minor interest in online political discussion or the traditional mindset of the active politicians. It says a lot that Băsescu who completely ignored campaign blogging turned his YouTube channel into a personal TV station. This somewhat retarded attitude towards the new media given the younger generation's media habits will certainly change when the generation which grew up with the new media will start determining political life.

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<sup>5</sup> See: Aparaschivei, P.A.: The Use of New Media in Electoral Campaigns: Analysis on the Use of Blogs, Facebook, Twitter and YouTube in the 2009 Romanian Presidential Campaign. In: *Journal of Media Research*, vol. 4, issue 2(10)/2011, p. 39-60.

# E-Participation Declined?

*Constituency Boundary Commission Review in Ireland*

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**Abstract:** *This article tries to identify the means of E-participation used by online newspapers, internet platforms and the Irish government to increase political participation on the important issue of amendments to the constituency boundaries in the Republic of Ireland in 2012. Due to the seemingly infinite possibilities of the internet, there is a general assumption that an increase of political participation can be achieved by providing online tools. This article will focus on the case study of the town of Swords, which was affected by a change of its constituency border in 2007 and campaigned in 2012 for the rerouting these boundaries to the pre-2007 situation.*

**Keywords:** Irish local politics, constituency changes, E-participation

**T**his article tries to identify why in the case of the redrawing of constituency boundaries in Ireland E-participation was limited to Email-submissions and why information provided on the Constituency Commission's website, online platforms and online newspaper was rather limited.

Online discussion forums/platforms (e.g. *politics.ie*, *TheJournal.ie*, *mySwords.ie*, *Dublin people*, *The Irish Times Online*), and the Constituency Commission's website were analysed based on Macintosh's (2004) definition of E-participation, which is defined as a three-level process consisting of (1) the provision of information, (2) the consultation process and (3) actual participation (Macintosh, 2004). A more precise definition suggests that E-Participation is confined to the process of information acquisition and the formation of an opinion, however excludes the actual decision making process, which is E-Voting (Prosser, 2004). The concept of deliberative democracies is putting an emphasis on initiating *discussions*, which "should deepen participant knowledge of issues and awareness of the interests of others, and help to instil the confidence to play an active part in public affairs" (Saward, 2003). In this paper I would argue that the voting process cannot be separated from the decision making process, which includes participation and forming an opinion by accessing information, engaging in discussions and active participation in either voting against or in favour of a topic or for a candidate. Klaus Kamps defines participation as voluntary activity taken by citizens to influence political decisions or by participating to make decisions on a specific issue directly (in: Siedschlag / Rogg / Welzel 2002). In the case of Swords it was the specific issue, which people wanted to decide on by demanding a rerouting of the dividing constituency border and unification of the town into one constituency.

## 1. Case Study

### 1.1. Online Information

Within the framework of this article the Constituency Commission's website was analysed on the basis of its site structure, layout, information provided, accessibility and elements of E-participation. Additionally, relevant articles in two local (*MySwords.ie*, *Dublin People*) and two national online newspapers (*The Journal.ie*, *The Irish Times*) were identified during a time period from May 2011, when the government announced a reduction of the number of TDs<sup>1</sup> in the Dáil, by the end of January 2012, when the results of the Commission's call for submissions were made known.

On the issue of the provision of information it can be concluded that over the nine-month period a number of articles have been published, although it would be less than two articles per month for the *Irish Times*, which extensively covered the topic in May, June, July 2011 and January 2012. *Dublin People* had published two articles over the same period and *TheJournal.ie* five articles. *MySwords.ie* had four references to the Constituency Commission on its online site. It can be argued that a certain amount of information on the topic was available and the Constituency Commission provided the necessary documentation for the people to consult and to inform themselves on the issue, but the question still remains, did the available online information led to an increase in political participation?

### 1.2. Discussion Forums

*Politics.ie* is an online platform on Irish politics, where registered users can leave comments relating to a current discussion or start a new discussion. The topic of the constituency commission's task to amend the constituency boundaries in Ireland was discussed on the platform twice in April 2011 and in May 2011. The limitation of these forums is that first of all only politically interested people have signed up as users and secondly, that the same group of people carried these discussions, but these forums to not attract new people to participate. The same can be said about the people commenting on articles on online newspapers, as in general only users with an account can leave comments and these are already politically engaged and aware people.

*iCampaigned*, a privately initiated online platform, where people can leave comments online; sign up to an Email-list and to a twitter account, started a discussion on the constituency border changes. However, this site was only set up on the 15 January 2012 after the Commission's submission deadline and up to the 2 February 2012 no comments had been published.

These online platforms are useful to get access to information and to discuss it, but it is rather limited in attracting citizens, who are not already politically active, to participate.

### 1.3. (E-)Participation: Submission to the Commission

A total of 533 submissions were received by the Constituency Commission at the deadline of 10 January 2012. Nearly half of all submissions, 260 (48,78%) related to the case of Swords. Out of the 260 submissions, 95 were submitted by either Email, as letters or sometimes as handwritten notes, 143 signed forms and 22 submissions from politicians were received. The submissions made by

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<sup>1</sup> TD: Teachta Dála: Representatives to the lower house (Dáil) of the Irish Parliament (Oireachtas)

using a preformatted form amounted to more than half (55%) of all Swords' submission. Even if the majority of the 95 submissions were sent by Email, it still would be less than 36,54% of all Swords' submissions.

## 2. Conclusion

It can be summarised that certain information was provided by online newspapers and by the Constituency Commission website. The campaign of redrawing the constituency borders in Swords was mainly reported in the local online-paper *MySwords.ie*. However, additional information was provided online by the *Dublin People*, which is a regional online paper, and two national online newspapers, *The Journal.ie* and *The Irish Times*. The online platform *Politics.ie* had related discussions on the topic, with in total 204 comments in two threads and *iCampaigned* was started by a private individual on the internet.

Despite the fact that the actual website of the Constituency Commission was not attractive in terms of encouraging people to send in their submissions and failed to provide its Email-address at a more prominent section of the website, people became involved due to their personal interest in rectifying the constituency borders and due to the mobilisation by the local politicians. It is evident that the Constituency Commission's website was not E-participation-friendly, but it cannot be answered for sure, if it was deliberate to limit E-participation by the government or the government parties, as ministers and TDs from the government parties mobilised people and submitted recommendations themselves. The topic might simply not have been identified as an issue for implementing E-participation tools. This might be an explanation, why the government and the Commission provided the necessary information as required, but made no further effort to reach out to the population. It is questionable if an increase of participation could have been achieved by providing additional E-participation tools. E-participation does not necessarily increase political activism among people or encourage them to get politically involved, but it can create forums to provide information for discussions. The future of E-participation might need to focus on the provision of information and on online platforms, which will only attract already active and politicised part of the population. It seems to be difficult, however to reach out to the part of society, who is not interested in participating in politics at all.

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*"should deepen participant knowledge of issues and awareness of the interests of others, and help to instil the confidence to play an active part in public affairs"* (Saward, M., 2003, *Democracy*, Polity Press, Cambridge, p 121).

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# Implications of Open Access and E-Participation on Governance in Nigeria

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**C**laude Ake (1996:1) attributed the constraints to Africa's development to the "political conditions" of the continent. Several decades after independence, the political situation of Africa has been that of uncertainty, corruption and untold underdevelopment. The continent is largely underdeveloped because of the failure to articulate and stick to noble development paradigms resting on virile information systems and capable of creating a continental impetuous towards a beneficial development. To a greater extent, this failure of sound developmental paradigms makes governance the greatest problem of the continent. This is more precarious in a nation like Nigeria. The passing of the Freedom of Information (FOI) Bill in Nigeria marks the beginning of a new era of information transparency in the nation. Until the passage of this bill, the nation operated under an oath of secrecy.

The present Nigeria's democratic experiment is slightly over a decade and is quite unique in its operation. On its own, reflecting on the nation's cultural diversity, this uniqueness should make room for an integrative participatory *modi operandi* driven by information technology that can enhance governance and absorb different elements necessary for the success of the nascent democracy. It is common to see that conflicts linger between individuals in a state or between the state and its citizens or its institutions when participation is denied (Osaghae, 1994:1-5). Nigeria can always avoid conflicts or overcome them to achieve development by allowing for people's participation, which can engender transparency. This work discusses how transparency and open access to information can help Nigeria to realise the dividends of democracy.

## 1. Why is Democratic e-participation necessary?

Democratic e-participation is necessary for several reasons. Obviously, the different aspects of e-participation such as the internet, radio, mobile phone systems and televisions have their advantages. On the overall, if effectively used with a moral sense to eliminate corruption, they may contribute to general transparency in governmental operations and people's beneficial participation. For instance, e-participation by means of the internet may guarantee limited eye to eye contact and allow people to act without fear of others. The Nigerian 2011 election attempted electronic voting method but this was void of central online coordination during voters' register and voting processes. Though efforts were made to initiate electronic voting (e-voting), it was

limited and still capable of manipulation. This shows that the nation needs a lot of improvement in promoting e-participation through voting. E-participation through e-voting, e-monitoring and e-coordination may, to some extent, eliminate possibilities of party intrigues and rigging if well employed.

As is obvious, democratic e-participation may either have positive or negative consequences for Nigeria's democracy. While the latter may emanate from its successes, the former may result from its failures (though this statement seems questionable when viewed from a rigid angle.) E-participation can ensure good governance. Apart from this, democratic e-participation guarantees open access to governmental information. Although there may be information restrictions from leaders who wish to hide information from the people and who seek to perpetrate corrupt practices. This is the essence of the Freedom of Information bill.

## 2. Nigerian Freedom of Information Bill: Observable Anomalies

In line with keeping the demand by the world to ensure that every nation grants open access to information, the Nigerian FOI bill was signed into law in 2011, after over a decade of parliamentary debates and political intrigues. The "explanatory memorandum" of the said document states that:

*This Act makes public records and information more freely available, provide for public access to public records and information, protect public records and information to the extent consistent with the public interest and the protection of personal privacy, protect serving public officers from adverse consequences for disclosing certain kinds of official information without authorization and establish procedures for the achievement of those purposes. (<http://www.freedominfo.org/2011/06/nigerian-president-signs-freedom-of-information-bill/>)*

In the main body of the document, provisions were made for any citizen of the country needing information to get it by applying to the necessary agencies. He must not be denied if he is discovered to be personally disinterested in the information being sought or that he does not have interest to the extent of causing injury to others or the state. He may institute legal actions against the state or any agency if unlawfully denied. Also, the agencies saddled with the responsibility of providing information for the public must make it know the kind of information available "through various means, including print, electronic and online sources, and at the offices of such public institutions" (Nigeria's Freedom of Information Act, 2011. Article 3 (4), p. 2). It must also periodically update and review the information and publish such for the public.

As viable as the document should have been, its use is not without problems. First, public servants are sometimes restrained from volunteering certain information by the political office holders and their administrative bosses through intimidations and threats. It is common to see this happen, most especially because of the high rate of poverty in the society where people easily get threatened with job loss. In certain cases, the intimidation and threats may be more severe. In some cases, administrative bottlenecks may be created to ensure the applicant does not get the information at when due. Second, many of the uninformed and non-literate or semi-literate people in the country are still uninformed about the FOI bill while the government makes little or no real concerted and intensive efforts to make them to be informed. Instead, the government creates awareness about certain other areas they think will best attract people's attention while they are



kept in the dark about their rights to information. This is usually so as to gain the upper hand politically.

The result is that much governmental policies may be left unchallenged by the majority of the people. The bulk of those who really challenge governmental action-plans are the literate ones who understand both the short and long term implications of these policies for the nation. It is obvious that one of the ways by which the nation can make a headway and profit, promoting e-participation, is for everyone, as may be necessary - individuals, institutions or the state - to either gain or allow open and transparent access to the necessary information relevant for governance, citizenship existence, national security, and so on. If open access to information is not prioritized, the time spent on the passage of the FOI bill becomes a waste of efforts. Besides, the nationals may be left in the dark and never really be encouraged to seek, acquire and adopt relevant information to influence governance in ways that will allow meaningful national development. In strengthening this position, it is important to elucidate on the implications of open and transparent access to national information in Nigeria.

### **3. Implications of open access to information in Nigeria**

Open access to information in Nigeria has several implications which may be both negative and positive. On the positive side, it improves participation. In Nigeria, participation in democracy is not total. Participation is in different ways and at different stages: participation by voting, discussion and contribution to political debates and awareness, et cetera (which may be either through electronic or non-electronic means). There are many who contribute to debates but never vote. Some are passive actors while some incite others to actions. At different levels, participation is based on interest and persuasion and open access to information helps to give shape to this. Also, if allowed, it helps national and governmental transparency. One of the greatest problems with Nigeria is being able to keep transparency, hence the breakdown of trust. Transparency and honest dealings by governments in any nation breed and build trust in the people in a nation. To build trust and ensure people's widespread participation in governance, e-participation in its various facets should be more encouraged in Nigeria. This may not really be achieved without overcoming the negative socio-political and moral implications of e-participation on Nigeria's democracy.

### **4. Implications of e-participation on Nigeria's democracy**

This part of our discussion will focus on the socio-political and moral implications that e-participation has on democracy in Nigeria. First, any improper handling of the situation of open access to information could destroy the fiber of trust between peoples in a nation. For instance, in certain cases, the social relations between the different regions of Nigeria have been affected by diversity of interests resulting from the different information disseminated to the different peoples (Ayu, 1997:141-154). The literate regions may use propaganda to prosecute their cases while the elites in the semi-literate regions perpetrate their dominance on the people under them with blatant blacklisting and blackmailing the other regions. The aftermath of this kind of situation is usually that those over whom they rule become stooges in their hands to demonstrate violence against the other regions in their bid to retain relevance (Usman, 2008:62-73).

Also, any void created by lack of openness to right information may lead to anarchy and ruin people's trust in the government. For decades, this is the situation between the Nigerian



Government and the people, which hinders good governance and good followership (Ogundiya, 2010:201). A recent national deregulation effort made people think the government was insincere in dealing with them. On the 1st of January, 2012, the Nigerian government announced removal of fuel subsidy, as means of deregulating the downstream petroleum sector in Nigeria. This action led to protests, violent deaths and an unparalleled national insurgency that occasioned national economic paralysis. The situation would have been averted if FOI law was fully implemented and Nigerians gain access to information that could make them trust the government. Part of the problem is largely because concealed information later provided by the government to persuade the people ought to have been provided earlier, which cost the nation almost a week and half long crippling crisis that does not help its struggling economy and, also, caused the deaths of some innocent people. The government should have taken the advantage of e-participation to improve governance and people's welfare.

This leads us to the moral aspect. The reasons for the fuel subsidy removal discussed above may have been strong but the people did not buy into the reasons because they never trusted the government, based on the fact that similar procedures of deregulation never fulfilled the intention the government announced to the people. The funds realised for these deregulation exercises usually found their ways into other private pockets or projects that were not better than white-elephant ones. Resulting from this, on many occasions, a large number of the populace prefers to direct their attentions to profiting individually than to participate in governance. Apart from weakening people's trust, one moral implication of this kind of case is that it has possibilities of strengthening others to follow the same steps of corruption and misappropriation of public funds. Another consequence is that it may allow for a malicious national minority in the ruling class to dominate the majority without allowing them to influence governmental decisions so as to cater for their own interests (Harrison, 2003:759). A nationally all-inclusive e-participation in Nigeria may help curb this and provoke national positive moral change in governance, especially if the government is transparent in information dissemination and dealings.

## 5. Conclusion

Nigeria needs to consolidate its democracy and governance by creating room for its citizens to be involved in e-participation. This can enhance openness and transparency in governance. At the same time, it can lead to having a more cohesive and well integrated nation really benefiting from dividends of democracy. Most problems the nation has been experiencing can be solved when open access to information is really guaranteed. As part of the knowledge globalization process, a transparent e-participation will encourage seeking, acquiring and utilizing the necessary information to contribute to governmental proceedings and influence the government to take proactive steps towards real national development.

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# Development of e-democracy in Bulgaria

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**Abstract:** *This paper aims to provide an overview of the current development of the three main sectors of democracy in Bulgaria: legislative – electronic Parliament (e-Parliament), executive – electronic Government (e-Government), judicial – electronic Justice (e-Justice). E-Democracy also covers all levels of governance: national, regional, local; all kinds of stakeholders - citizens, businesses, non-governmental organizations, trade unions and others. It provides an opportunity for citizens to participate in political life, debates and solutions and can be applied to different stages in the development of democracy. By applying European Funds, Bulgaria is developing e-Governance for the entire country and is using information and communications technologies (ICT) as a tool for development and strengthening of democracy.*

**Keywords:** e-Democracy, e-Governance, e-Parliament, e-Government, e-Justice, European Funds, Operational Programmes.

**I**n the last few years, more and more international organizations and institutions are becoming aware of the role of information and communications technologies (ICT) as a tool for the development and strengthening of democracy. Today, broadband and ICT are becoming the basic infrastructure connecting global economy, and, when combined with other ICT applications, broadband could produce enormous economic impacts through boosting added value and creating more workplaces (Bloom, N, Draca, M., Kretschmer, T., Sadun, R., Van Reen, J., 2010). Some years ago, the Council of Europe took actions for the elaboration of standards for E-Democracy<sup>1</sup>. A number of legal publications were published in Bulgaria in this field within the past several years and this serves as proof that e-Democracy should be used in addition to non-electronic methods of democracy. Many Bulgarian authors examine the main aspects of the issues related to the main sectors of democracy in Bulgaria, state governance, administrative reform, information society, funding of the development of e-Governance and financial relations, etc. and other basic issues related to governance and e-Governance (Belov, M. (2008); Dimitrov, G., Manolov S., Blagoev, L., Kuyumdzhieva, A. (2006); Dimitrov, G.(2008); Dimitrova, E. (2010); Goleminova, S. (2002); Goleminova, S. (2002); Goleminova, S.(2011); Goleminova, S., Heil, P., Dobrev, K. (2010); Goleminova, S.(2011); Kiskinov, V. (2003); Dimitrova, E., Mihaylova, S.(1995);

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<sup>1</sup> The Good Governance in the Information Society Project (2004 – 2010) has been focusing on how new information and communication technologies (ICT) affect the practice of democracy in Council of Europe member states. For more information see at: [http://www.coe.int/t/dgap/democracy/activities/ggis/default\\_EN.asp](http://www.coe.int/t/dgap/democracy/activities/ggis/default_EN.asp)

Petkanov, G. (1993); Dermendjiev, I., Kostov, D., Hrysanov, D. (2001); Stoichev, S. (2002); Sivkov, Tz. (2002); Kuchev, Y. (2010); Simeonov, At. (2008), Penov, S. (2011), etc.).

## 1. E-Parliament

In June 2008 in the Bulgarian National Assembly hosted the Sixth General Assembly of the IPAIT on the subject of "Information technologies and ethics" with the support of the Global Centre for Information and Communication Technologies in Parliament. Parallel to the above initiative of the Assembly, the Regional Secretariat for Parliamentary Cooperation in South-East Europe, in collaboration with the Global Centre for Information and Communication Technologies in Parliament, held a regional conference on the subject of "E-Parliament". These initiatives of the National Assembly confirmed its leading position in this field in the region<sup>2</sup>. In order to face the challenges facing parliaments around the world and in Europe, the 40th National Assembly took measures which were carried out by the management of the 41st National Assembly. One of the measures was the preparation of a project proposal "Modern parliamentary administration in service of society" under priority axis III "Quality administrative service delivery and e-Governance development", sub-priority 3.1 "Improvement of the service delivery to the citizens and the business sector, including through e-Governance development", Operational Programme "Administrative Capacity"(OPAC). The project was awarded to the administration of the 40th National Assembly and successfully implemented by the administration of the 41st National Assembly, which is one of the few examples of successful succession and can serve as a best practice model for other parliaments. It was announced, at the Meeting of the Monitoring Committee of Operational Programme "Administrative capacity" in June 2011, that this project is one of the best practices under the programme<sup>3</sup>.

## 2. E-Government

E-Government in Bulgaria is an element of the transition from an industrial to an information society and is an instrument for enhancing the competitive power of Bulgarian economy as well as general improvement of the business climate. It is a process of change which allows an expansion of the opportunities for citizens and businesses to participate in a new, knowledge-based economy. Bulgaria falls behind the average results for the European Union but strategies do exist. In 2002 the Strategy for e-Government was developed and adopted. In the course of time there were a number of achievements in this field. March 2010 saw the adoption of the Concept for e-Governance in Bulgaria 2010–2015. An online e-Government portal was also introduced. The legal framework for the relations linked to e-governance was approved. It comprises the Electronic Governance Act, the Electronic Communications Act, the Electronic document and Electronic Signature Act, the Electronic Commerce Act, the Personal Data Protection Act and others. More recently, the e-Governance Council was established. The Ministry of Transport, Information Technologies and Communications (MITTC) is responsible for implementing the governmental policy in the field of

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2 For more information about IPAIT VI (programme, participants, documents and presentations) visit: <http://www.parliament.bg/ipait/?page=home&lng=en>

3 An Internet page for the project was created as part of the website of the National Assembly, where the entire information about the preparation and implementation of the project has been uploaded. Visit: <http://www.parliament.bg/bg/opak>

e-Governance<sup>4</sup>. Many challenges exist and need to be faced in the next few years and the Government is trying to solve them by making use of European funds, observing the European quality of standards, requirements for projects and producing best practices, which can be shared with other European Member states. In this respect, the MTITC is facilitated by the Operational Programme “Administrative Capacity”, being identified as a direct beneficiary of OPAC, and is currently implementing a project entitled “Development of administrative services by electronic means”, funded by OPAC. The project aims to improve the delivery of administrative services to citizens and businesses and increasing consumers’ satisfaction through utilizing the resources of e-Governance<sup>5</sup>.

### 3. E-Justice

With a view to the problems within the Bulgarian Judiciary system nowadays, the Government is trying to identify solutions using the OPAC as a policy instrument for reforms in this area, covering the priorities for development of e-Justice. A number of projects in this field have been implemented successfully. These can be found on official website of the programme<sup>6</sup> and can serve as a best practice model.

### 4. Conclusion

The fundamental objective of the Bulgarian administration according to the National Strategic Reference Framework (NSRF) is the introduction of e-Government as an aspect of the administrative reform for increased transparency and corruption control. One of the main goals of Bulgaria’s National Reform Program in the area of administrative reform is the improvement of administrative services by simplifying administrative procedures, the integration of administrative services and strengthening the role of e-Government. Bulgaria must also meet the EU Digital Agenda Targets as set out by the EU directives in the area of public services. The funding required for the achievement of these goals may be received from the budget Operational Programme “Regional development”, OPAC and other sources as well<sup>7</sup>.

Finally, Bulgaria will profit, to the maximum degree, by the unprecedented funding granted to the country for the 2007–2013 programming period, specifically for e-Governance. Bulgaria plans to defend its priorities and achieve even greater e-Governance funding for the next 2014–2020 programming period through the instruments of the cohesion policy of the European Union, in order to meet the challenges of the Strategy Europe 2020/Bulgaria 2020, which is crucial for all European Member States in the conditions of the current economic crisis.

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4 The information regarding the responsibilities of the MTITC and the strategic documents in the area of e-Governance can be found at: <http://www.mtitc.government.bg/page.php?category=454>

5 The relevant information about this project has been uploaded at: <http://www.mtitc.government.bg/page.php?category=451&id=4989>

6 Visit: [http://www.opac.government.bg/index.php?option=com\\_content&view=category&id=44%3A2008-12-06-08-27-46&layout=default&Itemid=2&lang=bg](http://www.opac.government.bg/index.php?option=com_content&view=category&id=44%3A2008-12-06-08-27-46&layout=default&Itemid=2&lang=bg)

7 The information on the Bulgarian Operational Programmes and strategic documents can be obtained from: <http://www.eufunds.bg/en/>

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# Open Government Data & Security





# Open Nuts!

*Open Government Data activities in Austria*

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**Abstract:** *The reflection paper discusses barriers of Open Government Data, activities to solve them and first results of Open Government Data initiatives in Austria.*

**Keywords:** Open Government Data Austria, Cooperation OGD Österreich

**Acknowledgement:** The paper derives from a shorter presentation of Gregor Eibl comparing Open Government with cracking the nuts. We describe our experience of one fascinating year with Open Government Data.

**H**ow does opening government data compare to opening nuts? Opening government data can be compared well with the act of opening a nut.

The kernel of the walnut for example, which is protected by the hard shell and is a valuable food for animals, is a calorie-rich winter food supply for birds, squirrels and other rodents.

Let's assume that government data is a rich supply for third parties (businesses, NGOs, citizens, universities, other government agencies...), this information resource is often protected well from third parties. Making this data available and easy to use is one of the core claims in the debate of open government. You will see later in this reflection that the principles of open government data all have the aim to make these valuable information resources easily available.

Just like cracking a nut to access the rich fruit.

In this reflection we will shortly talk about the hard shell, which the open government data movement will have to crack. First the activities, which shows what Austria has done so far to crack the shell and remove the barriers and finally the first fruits, which became available through the efforts of opening the nut itself.

## 1. The Hard Shell of Open Government Data

Figure 1 depicts some barriers encountered during the implementation of opening government data in Austrian public administrations. Only through the opening process of government data, data islands were identified, which had to be integrated and harmonized.

Other data sources are consciously kept secret, which explains the resistance of some data owners. Arguments were raised, that opening can have unpredictable results (overwhelming feedback, new requirements,...) about the quality of data or new technical features.



Figure 1: The hard shell of Open Government (B. Lutz, 2012)

On the other hand administrations have to deal with missing resources, like lower budgets in the time of financial crisis, additional distribution cost with the open data portals and missing human resources capable of handling the new tasks.

Raw data eliminates the possibility to publish only “censored” and non-critical data and information. Some administrations have concerns to publish their data in a quality that was sufficient for internal purposes, but not enough for the broad public audience.

## 2. The Nutcracker

### 2.1. Cooperation Open Government Data Österreich

The Federal Chancellery, the cities of Vienna, Linz, Salzburg and Graz together founded the "Cooperation Open Government Data(OGD) Österreich" on 13th July 2011<sup>1</sup>.

Federal, state, cities and towns want to prepare a fertile soil in cooperation with the communities, science, culture and economy for the future of Open Government Data in Austria. By agreeing on common standards a basis for effective development conditions which are for the benefit of all stakeholders are established. The Chancellor's Office provides the connection to the Competence Center Internet Society(KIG) and the Platform Digital Austria.

The cooperation in the area Germany-Austria-Switzerland(D-A-CH) is forced to be prepared for Open Government activities of EU.

<sup>1</sup><http://data.wien.gv.at/neuigkeiten/wege/cooperation.html>

## 2.2. Framework for Open Government Data Platforms<sup>2</sup>

This White Paper is the result of a working group of the Cooperation OGD Österreich. The document provides basic information on Open Government Data and defines legal, organizational and technical requirements of Open Government Data platforms in Austria.

Eight principles of open government data were supplemented in the U.S. in 2007 from the Open Government Working Group<sup>3</sup> and in the Austrian context updated and increased by two new ones: Documentation and Notice. Open government data is released under the license Creative Commons Attribution 3.0 Austria (AT CCBY 3.0)<sup>4</sup>.

Each record must be clearly identifiable by URI. The URL convention for Open Government Data Portals is: `data.organisation.gv.at` (e.g. `data.wien.gv.at`; `data.statistik.gv.at`).

Another White paper<sup>5</sup> describes the recommendation for meta data definitions.

## 2.3. Process model for organizations

In collaboration with the City of Vienna, the Centre for Public Administration Research (KDZ) has developed a process model for the implementation of open government initiatives<sup>6</sup>. It is based on a 4-phase model and has been adapted for administrations in Austria. In particular a model for an internal data monitoring.

## 2.4. Government priority

Open Government Data was one of 14 projects on the first priority list of the Competence Center Internet Society in 2011 and the open government data portal is now part of 12 priorities in the second list in 2012. The Competence Center Internet Society was founded 2010 by a ministerial declaration of the Federal Chancellery, the Ministry of Transport, Innovation and Technology and the Ministry of Economy, Family and Youth.

## 2.5. Awareness raising activities

- The Cooperation Open Government Data Österreich decided to base the data catalogue system on CKAN<sup>7</sup>. A whole day workshop with members from Austrian ministries, provinces and cities was conducted on 4th October 2011 with the aim to help technical employees to implement an open data catalogue system.
- A more general event<sup>8</sup> on open government data was conducted by the Internet Offensive Austria together with the Federal Chancellery in November 2011. The topics covered the open government data strategy of the federal state and the experience of the Vienna data portal, OGD technologies, the economic perspective of open government and the presentation of an open government data survey.

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<sup>2</sup>OGD 1.0.0 / Rahmenbedingungen für Open Government Data Plattformen

<sup>3</sup>8 Principles of Open Government Data, 2007: <http://www.opengovdata.org/home/8principles>

<sup>4</sup><http://creativecommons.org/licenses/by/3.0/at/deed.de>

<sup>5</sup>OGD Metadaten 1.1, 2012 / Cooperation OGD Österreich – Arbeitsgruppe

<sup>6</sup>Open Government Vorgehensmodell 1.1

<sup>7</sup><http://ckan.org/>

<sup>8</sup><http://www.digitales.oesterreich.gv.at/site/7642/default.aspx>

- The first open government data conference<sup>9</sup> was conducted on 16th June 2011, which gathered international and national experts from politics, administrations, civil society and economy in the field of open government data. It was a big forum of opinions and for international and regional networking. A second open government data conference will follow on 26th June 2012.
- Two gov2.0 barcamps were organized in 2010 and 2011 to cover the topics open government, open data and e-participation. The goal of the barcamps was to create an open space for the dialogue between administrations and the internet community, and to develop ideas to foster democracy with the help of the internet. The participants themselves developed and organized the presentations.

### 3. The first fruits of opening Government data

Open Government Data Catalogues are available since 2011 from the cities of Vienna and Linz, and just recently from the state Tyrol and the Austrian portal, the data can be downloaded and processed. Examples of these public data sources are geo-data, traffic data, environmental data, budget data or statistical data.

#### 3.1. data.wien.gv.at - Open Government Data for Vienna

With the launch of the open government portal in May 2011 the city of Vienna was the first Austrian city that opened selected, approved non-personal data using an Open Data catalog for general use.

The response to the start of OGD Vienna was enormous, and has emphasized the courageous steps to be very positive. On the same day of the activation the first application on the basis of open data was approved by the City of Vienna

In summer 2011 Vienna carried out an online survey to query specific data needs of the interested community. The further expansion of the catalog dataset was adapted to the desired priorities. "Traffic" is at the top of the expressed wishes of data. Other highly required data sets are about public facilities, recreation, education and demography.

The Technology Agency of the City of Vienna (ZIT) carries out a competition to boost the local economy of media and creative scene. Among the other special awards, ZIT pioneered for the first time an open data challenge in 2011 – the "Open Data Special Price".

#### 3.2. data.linz.gv.at - Linz Open Data

Data free of charge via the Internet to make accessible and possible the creation of new content is one of the most important goals of the project "Linz Open Commons area". As a gateway the city has created the platform [www.data.linz.gv.at](http://www.data.linz.gv.at). Linz started in October 2011 with 94 data sets in the areas of statistics, election results, geographical data and logs of the municipal council. A permanent extension is planned.

The aim is to support the re-use and recycling of urban data in business, academia, schools and for programmers, so as to raise the existing innovation potential therein.

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<sup>9</sup><http://www.ogd2011.at/konferenz/programm>

To provide additional incentives for the use of freely available data, Linz invites participants to take part in the competition "Apps4Linz".

### 3.3. data.gv.at - The National portal

The national portal has been launched by the Federal Chancellery and the Ministry of Finance in April 2012 as central catalogue of all open government data sets in Austria. A cloud service to host open government data will be offered by the Federal Computing center for administrations, which want to open their datasets, but do not want to create their own portal.

A survey between the ministries to get a first view of potential datasets was conducted in 2011 and identified over 60 qualified data sets ready for publishing.

This year an application contest will be launched to create an additional incentive to use the available open government data.

### 3.4. Transferability and learning

The City of Vienna provides several communication channels for the exchange of experts and interested parties, including public meetings and a forums on the topic. The Open Government Data Platform Vienna offers a lively exchange of information between government and interested citizens.

### 3.5. International Recognition

In the 11th eGovernment competition Germany-Austria-Switzerland the open government data catalogue Vienna won the first prize in the category "most innovative eGovernment project". An honorable mention was given to Open Government Data Vienna in the "PSIAlliance5 Stars" competition.

### 3.6. Useful Apps: Added value for the society

A few days after the launch of the Open Government Data portals several apps or visualizations using the data were available. The spectrum covers the implementation of mobile apps that can be accessed via the browser, as well as apps for a specific operating system(Android or iOS).



Figure 2: The application "Fruchtflye" (Thomas Thurner, 2011)

By February 2012 more than 35 applications have been developed and are offered to the public. These are listed on [data.wien.gv.at](http://data.wien.gv.at) and [data.linz.gv.at](http://data.linz.gv.at). One example is the application "Fruchtflye" which shows the nearest fruit trees.



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- Open Data Austira<sup>11</sup>
- Open Government Data for Vienna<sup>12</sup>
- Tiroler Open Data Portal<sup>13</sup>

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<sup>10</sup>[data.linz.gv.at](http://data.linz.gv.at)

<sup>11</sup>[data.gv.at](http://data.gv.at)

<sup>12</sup>[data.wien.gv.at](http://data.wien.gv.at)

<sup>13</sup>[data.tirol.gv.at](http://data.tirol.gv.at)

<sup>14</sup>[wien.gv.at](http://wien.gv.at)

<sup>15</sup><http://data.wien.gv.at/neuigkeiten/wege/cooperation.html>

<sup>16</sup><http://www.adv.at/>

<sup>17</sup><http://www.digitales.oesterreich.gv.at/site/6497/Default.aspx>



# The fitness of OGD for the creation of public value

*Indexing the fitness of municipal OGD for e-participation and data journalism*

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**Abstract:** *Innovative municipalities have started to provide Open Government Data. But the specifications of the OGD offered vary across municipalities in many aspects. Some municipal Open Government Data (mOGD) is more suited than others for the creation of public value. Public value can be drawn from mOGD in at least two ways: if mOGD is processed into e-participation innovations or if mOGD is used for data journalism. Indexing the fitness of existing mOGD provided by various municipalities for (1) e-participation innovations and (2) data journalism will reveal disparities in the empowering potential of the varying approaches to OGD chosen on local level. In the long run, the municipal Open Government Data Index (mOGD-I) will help shaping a standard of mOGD that provides best for the creation of public value.*

**Keywords:** Open Government Data, OGD, public value, e-participation, data journalism, index

**S**cores of innovative municipalities around the globe have started to provide Open Government Data (OGD). In the Austrian context Linz and Vienna are most advanced, Graz is catching up with its recent first OGD release and Salzburg is working on an OGD strategy. Many other municipalities of various sizes are closely following these developments, working out guidelines concerning municipal Open Government Data (mOGD).

This reflection first sketches the context of mOGD and the creation of public value on local level. In a second step, it proposes to elaborate an index that states the fitness of mOGD to be useful for the creation of public value by means of (1) e-participation innovations and by (2) data journalism.

## 1. OGD and the creation of public value on local level.

A factual way to understand Open Government Data (OGD) is to see it as the diffusion of public sector information. Diffusion is generally defined as “the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas” (Rogers, 1995, p. 5). Another way to understand OGD is to consider it a chunk of the collective intelligence of humanity. All through modern history, governments at local, regional, national and supra-national level have gathered information. An immensurable quantity of data has been collected over time. Releasing this data back into the public realm and providing it continually in machine readable and treatable ways is a

form of diffusion of digital information, that gives back to the current and future generations what has been gathered by people in the past or present.

The development of Open Government Data is a large-scale process of co-production and mutual shaping going on between governmental, social, technological, cultural, economic and institutional stakeholders. It represents an innovation that is unsettling the political culture prevailing in municipalities and the institutional culture of mass-media corporations. The latter are confronted with new forms of open-data-driven data-journalism that challenge the business plans of the classic printing press. Some municipalities, on the other hand, see their representative political culture confronted with mOGD being processed into e-participation innovations. In both cases, the classic way of creating public value is changed by Open Government Data.

In many contexts, e-participation is first and foremost understood as political participation. Here, innovations in e-participation are new ICT-based tools that increase peoples' capabilities to exert an active citizenship. In a broader sense though, to empower citizens may refer to aspects beyond politics, like social power, communication processes and the media. Castells states that

*"social power throughout history, but even more so in the network society, operates primarily by the construction of meaning in the human mind through processes of communication. In the network society, this is enacted in global/local multimedia networks of mass communication, including mass self-communication, that is, the communication organized around the Internet and other horizontal digital communication networks."* (Castells, 2011, p. 7)

In this broader approach, OGD is a powerful tool for the construction of meaning through processes of communication, if processed into e-participation innovations or used for data journalistic purposes. Situated in the center of a triangle (Kaltenböck & Thurner 2011, p. 12) between political decision-makers (who decide the conditions of the publication of OGD), the public administration (which is responsible for publishing OGD in the way defined by the decision-makers), and the public, OGD offers plenty of opportunity for the creation of public value. Developing an index for the fitness of municipal OGD to be used for the creation of public value in form of e-participation innovations or in form of data journalism will be helpful for decision-makers of all kinds of background to make their choices for the best mOGD strategy.

### 1.1. Creating public value in the context of OGD

The public value concept was introduced by Moore in 1995 in order to help public sector managers with their strategic challenges and choices. Ever since, the concept of public value was used by academics when working on proposals for public sector reform (Williams & Shearer, 2011, p. 1). In 2011, Benington limits the notion of public value to two main ways of thinking: First, what the public values (synonym: appreciates); and second, what adds value to the public sphere (Benington, 2011, p. 42). The first is meant to counterbalance the public administration's tradition to allow a limited number of experts determine the value of public service. The second part of the definition intends to bring the interests of the wider public (including future generations) into the game (ibid, p 43). With *the public sphere* Benington understands

*"the web of values, places, organizations, rules, knowledge, and other cultural resources held in common by people through their everyday commitments and behavior, and held in trust by government and public institutions"* (ibid, p. 43).

Like other values, public value is established through a continuing process of dialogue (ibid, p. 44). If OGD is processed into e-participation innovations or used for data-journalistic purposes that are

either valued by the public or add value to the public sphere, public value is created. As OGD-powered e-participation innovations are increasingly used by the public and data-journalists are increasingly using OGD, it can be said that OGD is used for the creation of public value.

## 1.2. OGD and Open Government:

Open government today means much more than just the right of people to access governmental information and proceedings. Influenced by the experiences of the open source software movement, the open government approach has incorporated claims for participation in the procedures of government (Maier-Rabler & Huber, 2011). Lathrop and Ruma (2010, p. xix) are very concise when they say that just

*“as open source software allows users to change and contribute to the source code of their software, open government now means government where citizens not only have access to information, documents, and proceedings, but can also become participants in a meaningful way.”*

The term “government as a platform” was coined by O’Reilly (2009). Open platforms allow capable citizens to experience authentic empowerment by enabling “anyone with a good idea to build innovative services that connect government to citizens, give citizens visibility [...] and even allow citizens to participate directly in policy making” (O’Reilly, 2009). OGD is therefore a key feature of open government: it allows capable users to recombine public service information and thereby to develop new perspectives on given problems as well as to raise awareness about new issues that have not been considered a political priority within representative democracy.

Coleman famously said that “media technologies are neither inherently participatory nor exclusive, but depend upon cultural practices and policy contestations” (ibid, p363). One of the special features of OGD is that its use is 100 % socially shaped. Therefore OGD-based applications and OGD-based data journalism have got the potential to both foster democratic empowerment, as well as its opposite. The only remedy against misuse is more open government and the strengthening of citizens’ media capabilities. The intended *mOGD-I* Index will help to raise awareness about this issue.

## 2. Indexing the fitness of mOGD for the creation of public value: the *mOGD-I on e-participation* and the *mOGD-I on data journalism*

Indexing the fitness of municipal open government data for the creation of public value is more than a technical challenge. The requirements for the *mOGD-I on e-participation* will be different from those on the *mOGD-I on data journalism*. Among the components that need to be taken into consideration for the *mOGD-I* are the following:

- Linked Data principles as defined by Berners-Lee and others (technical aspects)
- Quantity of OGD datasets provided by the municipality
- Variety, and Shattering power of OGD (e.g. budget data)
- Cost (if applicable at all) of access to the OGD
- Licensing of the use of OGD (e.g. Creative Commons, ODbL, others)
- Actuality of OGD, as well as the availability of recent and historic OGD
- Accompanying tools (e.g. data visualization tools, discussion environments, etc)
- Empowering tools (e.g. for user propositions, collaboration, decision-making)

- Accompanying measures provided by the municipality (e. g. public campaign, cross-media referencing, competitions for the best use of OGD, etc)
- Empowering strategies (e.g. online/offline participatory budgeting procedures)
- Geo referencing and other components

I propose to take an *open science* approach when discussing which of those components should finally be considered and which further ones should be added to the mOGD-I. It will be necessary to discuss weighing certain factors (i.e. multiply them by factor x) that deserve more significance than others in the mOGD-I. A first step can be made during the Austrian Conference on OGD in June 2012. In a second step, the components for the *mOGD-I on e-participation* are planned to be further refined in collaboration with the e-participation community. Similarly, the components of the *mOGD-I on data-journalism* will be chosen and weighted at a conference in the field of data-journalism. All along the process of discussing the final formula of the mOGD-I, open science principles should be applied.

Once finished, the application of the mOGD-I will reveal disparities between the fitness of various local OGD strategies for the creation of public value. Maybe some municipalities will further elaborate their OGD practice in the light of their mOGD-I score. In the long run, municipalities might follow the best practice examples set by those cities scoring best on the municipal Open Government Data Index. Thereby the mOGD-I could help in shaping a standard of mOGD that provides best for the creation of public value on local level.

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# Performance Measurement of MEMS Elements for Information Security of G-Cloud Channels

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**Abstract.** *A thorough examination of MEMS components and their place in human daily life has been done. To achieve adequacy and accuracy of MEMS performance measurement, a virtual pressure sensor was designed and simulated in advance. CoventorWare2010 software design and simulation suit presented in ECAD Laboratory at TU-Sofia was used.*

**Keywords:** MEMS, sensors, membrane, software design suits, CoventorWare, performance measurement, information security, G-Cloud, communicational channel

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**T**he evolving G-Cloud strategy enthusiasm worldwide needs enormous efforts to provide a reliable security of the information flow through Public Cloud channels. G-Cloud security includes a wide set of controls, technologies, and policies used to protect the associated infrastructure, applications, and data in the Public Cloud. One of these technologies is MEMS-based.

This procedure highlights the process of sensor performance measurement in compliance with minimal sensor quality requirements. The aim of the procedure is to give some directions for MEMS performance measurement as well as suggest some ideas for regulation and improvement of MEMS effectiveness. The procedure can be used for preparing a manual with the basic procedures needed for monitoring, investigating and preserving the quality of MEMS performance. Specific study refers to analysis based on PZR sensor design and simulation description. The procedure of the performance measurement aims at presenting the entire security process.

## 1. MEMS world

MEMS is a high-tech field that combines microelectronics and micro-production technology for micro component integration, micro sensors and devices (Sanchez et al, 2010). In a common silicon substrate, micro-hotplates are mainly built on a thin dielectric membrane that is suspended over a hole in the substrate. The sensors consist of a sensor module, measuring element in this module and the membrane (Xian et al, 2010), (Semancik & Cavicchi, 1998).

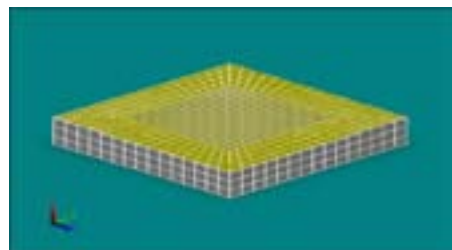
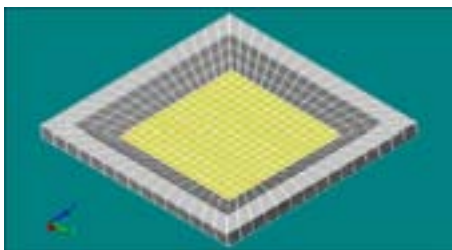
### 1.1. Design and simulation of MEMS

The main purpose of CAD is to allow creation of a prototype, which at the first real production could have defined characteristics, appearance, behavior, work and physical endurance (Beeby et al, 2004). The list of leading software companies in the last year that support products for engineering applications include great names as Coventor Inc., COMSOL, SoftMEMS, ANSYS and so on. Particular sensor was designed with "CoventorWare2010" that has free access for students in ECAD laboratory in Technical University of Sofia.

### 1.2. Piezoresistive (PZR) pressure sensor design with the MultiMEMS Preprocess in CoventorWare2010

The presented 3-D model of PZR sensor was designed by using "CoventorWare2010" (Kolev et al, 2010). in a tutorial practical course lead by Europractice. The approach is combination of diaphragm FEM analysis using Analyzer and PZR modeling using Architect. The sensor is based on thin silicon diaphragm bending measurement. Substrate is Silicon <100>, epitaxial grown (EPI silicon diaphragm at  $3.1\mu$  thick), followed by anisotropic material wet etching process ( $399.1\mu$ ) and mask offset of 15 microns.

To create diaphragm layout proper coordinates were set in the worksheet to form the membrane dimensions. External configuration defines overall dimensions of the sensor: 1200 microns in the X and Y directions. Internal configuration defines dimensions of the etch hole: it is 990 microns in the X and Y directions (including offset).



**Figure 1: Mesh Model of the membrane extracted from CoventorWare - top and bottom view.**

Generate Solid Model. It is automatic by import the 2-D layout mask information. 3-D model has to be meshed with the mapped mesh (Figure 1). Partition coordinates are the same and form bottom and frame parts. Device's bed is fixed and the diaphragm is movable (pressure goes in).

MemMesh undergo simulation, which calculates the diaphragm deformation under a varying pressure load. The MemMech results are automatically stored in the CoventorWare database. They can be visualized by either using the 3D Visualizer or accessing them directly in Architect (Figure 2).



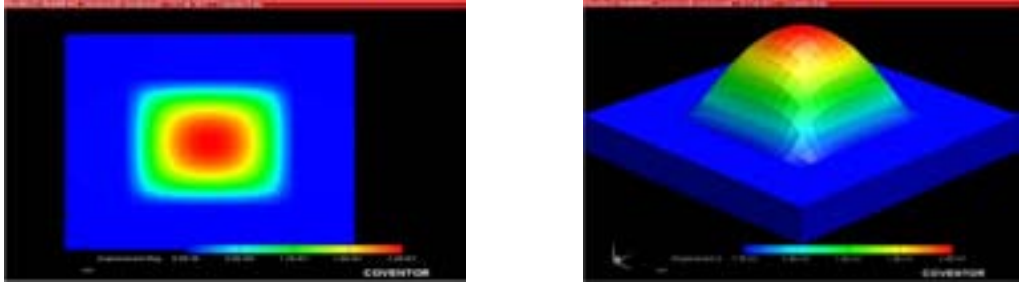


Figure 2: 2-D model (on the left) and 3D model (on the right) of PZR membrane. Model is under simulation that is presented in five deformation stages when pressure is applied.

## 2. Performance Measurement of MEMS Elements

MEMS Element transforms input pressure/ $F_{p,in}$ / into output electrical signals as it is shown on the model in figure 3.

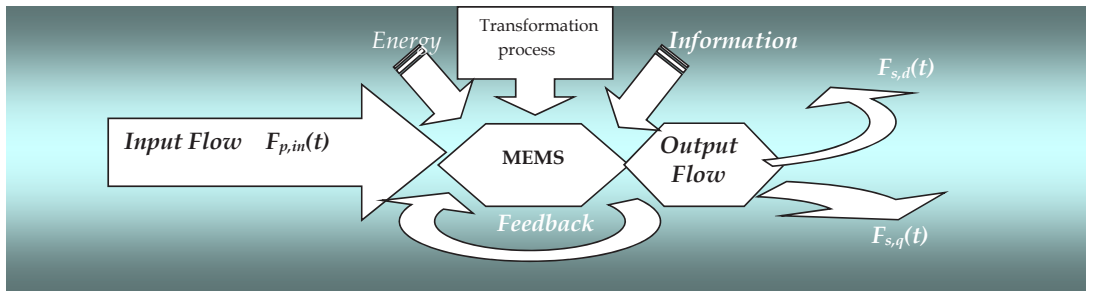


Figure 3: Microelectromechanical System macro model

These outputs have an added useful value compared to their input. The electrical signals flow at the output of the MEMS, in its turn, can be divided into a flow of qualified signals  $/F_{s,q}/$  and a flow of disqualified signals, waste and emissions  $/F_{s,d}/$ :  $F_{s,out}(t) = F_{s,q}(t) + F_{s,d}(t)$

After a lot of transformations in (de Ron & Rooda, 2001) under some conclusions and approximations the following universal measure for the technical performance is achieved:

$$(1) \quad \eta_T = \frac{\int_0^T F_{s,q}(t) dt}{\int_0^T F_{s,qm}(t) dt} = E \cdot \rho$$

where  $\eta_T$  is *transformation factor*, representing the ratio between the average quantity of qualified signal, obtained during the considered period  $T$  and the maximum quantity of qualified signal, that could be provided in an ideal situation during the same period;  $F_{s,qm}$  is *the maximum output flow of qualified signal* which can be achieved by the actual MEMS;



Interfering and/or confusing factors are those factors that reflect on the transformation process i.e. *effectiveness of the MEMS* which is defined by the ratio of the average real output flow of qualified signal  $\hat{F}_{s,q}$  and the average maximum output flow of qualified signal  $\hat{F}_{s,qm}$ :

$$(2) \quad E = \frac{\hat{F}_{s,qm} - \hat{F}_{s,d}}{\hat{F}_{s,qm}} = \frac{\hat{F}_{s,q}}{\hat{F}_{s,qm}} \in [0,1], \quad \rho = \frac{\hat{T}_{es}}{T_c},$$

$\rho$  is the ratio between the average effective service period  $\hat{T}_{es}$  and the considered period  $T_c$ . Feedback reflects on the final conclusion about the service performance.

### 3. Conclusions

Following the analysis and testing procedures general conclusion is provided for improving the G-Cloud Services performance and preventing any further problems to occur. It focuses on security utilization, increase of the signal transformation factor, reliability, quality and effectiveness. Several measures should be taken to improve the MEMS performance. Focal point of overall research and development of the future generation sensors and MEMS devices should go on and open a prospect to achieve high level of safeness in general and public security.

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# Workshops





# FUPOL - a new approach to E-Governance

*Combining Policy Simulation, GIS, Social Media and Open Government Data*

Peter Sonntagbauer

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**Abstract:** *The workshop outlines the design, current status and challenges of the FUPOL project (2011 - 2015), which implements a comprehensive new governance model for urban policy domains.*

*The proposed model combines simulation techniques, GIS, social networks, automatic text analysis, opinion mining and summarization. The first release of the software components will be available for the public in September 2012. The project has a strong political backing through the Major Cities of Europe group, which is taking care of dissemination and further exploitation of the research results. The transparency of the policy design process is enabled by multichannel social computing, policy topic sensing and extraction, multilingual semantic analysis, dynamic agent based simulation, cloud computing and an idea management system, (IMS).*

*The approach as well as the technical solution is validated with urban policy issues in Europe and China.*

**Keywords:** policy simulation, e-participation, e-governance, geo-simulation, agent-based modeling

**S**imulation techniques, GIS, social networks and automatic text analysis are components, to form a powerful e-governance system to facilitate e-governance. The project has a budget of 9,1 Mio Euro and is being funded under the 7th framework program of the European Commission (European Commission, 2010)., The FUPOL consortium consists of 17 partners from Europe and China. It has a good balance of research partners, IT-industry, local governments and political cluster organizations capable to ensure wide-spread dissemination and exploitation.

## 1. Policy Context

The focus of the FUPOL project are urban policy domains., because the vast majority of European citizens is already living in urban areas likewise on a worldwide scale the percentage of people living in cities is growing rapidly. After an evaluation of 19 urban policy domains the following have been chosen as a priority:

- Land use and related planning: It includes long-term land use policy, which is an intraregional topic beyond the city limits, area zoning, land use of larger open spaces and "Micro" construction project (e.g. changing a building or a small area) .

- **Housing:** The housing policies should seek to maintain and, where appropriate, increase the residential population and housing stock, while at the same time maintaining satisfactory standards of accommodation and environment. (Rees, 2002) A specific challenge in developing countries in this context is the spreading of slums.
- **Urban segregation:** Urban segregation is a concept used to indicate the separation between different social groups in an urban environment, which is a barrier for achieving social inclusion in cities.

## 2. An integrated approach

The FUPOL governance model (see Figure 1) has the following major steps:

### 2.1. Automatic "Hot Topic" Sensing

The political blogosphere in social media is searched to find-out current "hot" political topics within a predefined scope (regional, national, EU) and weigh them according in a subsequent automated analysis. "Hot" political topics are extracted from the raw text data and clustered.



Figure 1: Policy Design Workflow (simplified)

### 2.2. Deliberation and Stakeholder Involvement

After a "hot" political topic has been identified a deliberation on a possible new policy is initiated using multichannel social computing. This refers to an environment in which the various social Web 2.0 channels are integrated into a single social computing environment in order to reduce the workload of continuous interaction with large number of people. The contributions are automatically aggregated and summarized.

### 2.3. Scenario and Simulation

The deliberation loop contains a component to simulate the potential impact of a new policy. The result of the simulation is visualized and provided as a feedback to stakeholder. The scenarios and their potential impact over a timeline are simulated using available data and eventually data from other public administration obtained through data import facilities.

### 3. Technical Building Blocks

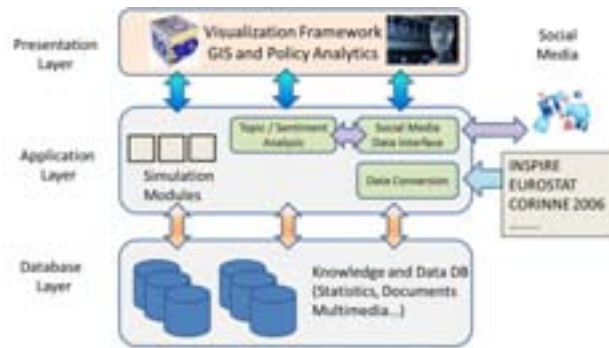


Figure 2: FUPOL Architecture

Fig. 2 shows an overview of the technical architecture consisting of the following components:

#### 3.1. Web 2.0 and Social Media

The capability of users to express opinions and generate content is appealing to an e-governance model. Social computing helps citizens to express views instantly. The social media interface communicates bidirectionally with several social media.

#### 3.2. Geographic Information System (GIS)

In the urban policy context GIS plays a significant role, because most of the policy decisions are related to the spatial infrastructure: The FUPOL system is based on the INSPIRE Directive in May 2007, establishing an infrastructure for spatial information in Europe. (INSPIRE, EC) and provides a compatible interface

#### 3.3. Open Government Data

Import of open government data are important to feed and validate policy simulation. It includes statistical data (e.g. from EUROSTAT) derived from e-government applications such as cadastre, central register of residents, car registration as well as other statistical data collected elsewhere (e.g. traffic statistics)

#### 3.4. Agent Based Policy Simulation

Typical policy modeling problems are characterized by complexity and dynamics. Because of the complexity, it is often difficult or even impossible to solve such problems mathematically. After an initial evaluation of available simulation methodologies the agent-based simulation approach is followed. The architecture has the capability to separate many different agent based modules in parallel.

#### 3.5. Automated Text Analysis, Opinion Mining and Summarization

In order to identify "hot" political topics the text data available on social media components dealing with automated text analysis, opinion mining and summarization are integrated into the



FUPOL framework. The favored approach are probabilistic models such as Latent Dirichlet Allocation LDA (Blei, 2003), because they are more or less language independent.

#### 4. Current status

The policy domains have been analysed including available data, domain specific policy design processes, stakeholders, challenges and policy impact indicators. The use cases for the software as well as the architecture have been defined in detail. Software development has started with a first focus on social media components.

The task to transform the policy domains into appropriate models, expressed as fuzzy cognitive maps and causal models has started.

Various probabilistic models have been evaluated and tested with some real data from social media.

#### 5. Challenges

The definition of requirements for the simulation models was found to be more challenging than originally expected as well as the the task to translate those requirements and policy domain knowledge into models.

Agent based simulation alone may not be sufficient to model reality. It might be necessary to use different simulation technologies and mostly non-compatible set of simulation tools (Gilbert and Troitzsch, 2006). Moreover most of the platforms are complex, and require special knowledge of programming and mathematics. It may be difficult in cities to maintain those simulation models and adapt to a changing political environment.

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#### About the Author

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# Open Linked Public Sector Data for Citizen Engagement

*A workshop about the benefits and restrictions of open linked public sector data and the role of metadata in citizen engagement*

Anneke Zuiderwijk\*, Marijn Janssen\*\*, Keith Jeffery\*\*\*, Yannis Charalabidis\*\*\*\*

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***Abstract:** Open data have been recognized as a strategic tool for governments all over the world, in their efforts to increase citizen trust, engagement and collaborative action. Despite their significance and the political support at EU level, many challenges remain open for member states in their effort to provide on-line services for the discovery and use of public sector datasets. This workshop is focused on obtaining requirements from (potential) users of open public sector data for the use of these data. The requirements are obtained by conducting a questionnaire and by presenting and discussing the first results of this questionnaire. Furthermore, the benefits and restrictions that are typical for currently available open public sector data that are used by scientific communities and citizens are discussed. In particular the role of metadata and their role for citizen engagement are discussed and paradigms for open governmental data annotation and provision are presented. Participants are asked to provide their view on benefits and restrictions of open governmental data and directions for e-Infrastructure projects.*

**Keywords:** Open linked data, open data, citizen engagement, benefits, restrictions, metadata

**Acknowledgement:** The authors would like to thank their colleagues of the ENGAGE project for their input for this workshop.

**A**s the proceedings of the International Conference for E-Democracy and Open Government of 2011 show (CeDEM11, 2011), during the last years considerable attention has been paid to open governmental data. This attention comes among other things from the point of view that "Information and Communication Technologies (ICT) have the potential to improve the responsiveness of governments to the needs of citizens" (ENGAGE, 2011) and of scientific communities. Nevertheless, it was shown that "significant barriers hinder the effective exploration,

management and distribution of the vast amounts of available public sector data" (ENGAGE, 2011) towards citizens and research communities (Geiger & Von Lucke, 2011).

## 1. The ENGAGE project

Because there are still significant barriers for the use of public sector data, in June 2011, the ENGAGE project (ENGAGE, 2011) was started by nine organizations, which is co-funded by the European Commission under the 7<sup>th</sup> Framework Programme (FP7). The main goal of the ENGAGE project is the deployment and use of an advanced service infrastructure, incorporating distributed and diverse public sector information resources as well as data curation, semantic annotation and visualization tools, capable of supporting scientific collaboration and governance-related research from multi-disciplinary scientific communities, while also empowering the deployment of open governmental data towards citizens (ENGAGE, 2011).

## 2. Questionnaire

To achieve the aims of the ENGAGE project, it is essential to gain an insight into the way data are used and re-used at present. A closer examination of current trends and practices of the use and re-use of Public Sector Information (PSI), will create consciousness of problems and gaps that are associated with these trends and practices. We therefore conduct a questionnaire. The purpose of the questionnaire is to find out the needs of (potential) users of open public sector data, such as deposit, access and use needs. Participants of the workshop are asked to fill out the questionnaire, because they might (potentially) use open public sector data. The results of this questionnaire will be used to develop and further specify the requirements of the ENGAGE e-infrastructure for open data.

## 3. Discussion about questionnaire and first results

The ENGAGE questionnaire also functions as a basis for discussion. The questionnaire will be discussed by presenting some first results of the questionnaire at the moment of presentation. This discussion and presentation provides participants with insight in the way that open public sector data are currently used and the requirements that they have.

## 4. Presentations

Two important aspects of the current use of open linked governmental data are the benefits and restrictions that are typical for currently available open governmental data that is used by scientific communities and citizens. Regarding the benefits and restrictions, in particular the role of metadata and its role for citizen engagement is discussed. In addition, paradigms for open governmental data annotation and provision are presented. The presenters provide an overview of innovative approaches, such as examples of the use of open data, and the participants are asked to provide their view on benefits and restrictions of open governmental data and directions for e-Infrastructure projects, including value-adding examples and best practices.

The following presentations will inspire a constructive dialogue:

- Anneke Zuiderwijk and Marijn Janssen, Delft University of Technology: "Benefits and restriction on the use of open linked governmental data from the ENGAGE project".

- Keith Jeffery and Anneke Zuiderwijk, Science and Technology Facilities Council (STFC): “The use of metadata for citizen engagement”.
- Yannis Charalabidis, University of the Aegean: “Paradigms for open governmental data annotation and provision”

## 5. Discussion

The rest of the workshop is dedicated to discussion, interaction and gathering ideas from the audience on benefits and restrictions of open governmental data and directions for e-Infrastructure projects.

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# Open Access, Preservation and eGovernment

*The Case for an Austrian National Data Service*

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**Abstract:** *We believe that Open Access to digital resources is vital for both effective research and healthy democracy. There are moral, pragmatic and economic arguments for providing such a central service on an Austrian national level. Austria presently lags other countries in this regard but could become a world leader in this area if the necessary requirements, policies, and investment are provided.*

**Keywords:** Open Access, Digital Preservation, Government Data, Research Data

**Acknowledgement:** This work was partially supported by the SCAPE Project. The SCAPE project is co-funded by the European Union under FP7 ICT-2009.4.1 (Grant Agreement number 270137).

**W**e now live in a digital Europe. The records of our culture, science, governments, and corporations are in digital form. This article will outline the case for an Austrian National Data Service for managing these digital resources. We review three arguments explaining why such a service should as far as possible support Open Access principles. We argue why this service should in fact be a **national** service, and present an overview of number of similar services worldwide. We conclude with our recommendations as to how to proceed with such a project.

## 1. The Argument for Open Access

We note that the accepted definition of Open Access was defined in the so-called “Bethesda declaration” in 2003<sup>1</sup>. Although these principles were conceived for the publication of scientific works, we suggest that any arguments supporting these principles must apply with even more force to democratic institutions. If the goal of eDemocracy is to make use of information and communication technologies to engage citizens, support the democratic decision-making processes and strengthen representative democracy, then Open Access is a core requirement.

We believe there are three main arguments for providing an Open Access Service: a moral argument, a pragmatic argument, and an economic argument.

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<sup>1</sup> <http://www.earlham.edu/~peters/fos/bethesda.htm>

### 1.1. The Moral Argument

The moral argument is that the results of publicly-funded research should be publicly available, that Open Access enables research findings to be shared with the wider public, helping to create a knowledge society across Europe composed of better-informed citizens, and that Open Access enhances knowledge transfer to sectors that can directly use that knowledge to produce better goods and services.

The same moral argument applies to eGovernment: democratic governments represent the public and are funded by the public; therefore the results of government (decisions, treaties, laws and regulations, policies, studies, etc.) should be freely and openly available, helping to create a better-informed citizenry and to provide the foundations for transparency and accountability.

### 1.2. The Argument from Utility

Utility-based arguments suggest that Open Access is a means to an end. The real ends are the improved creation, processing and use of information for the purpose of bettering our lives and the world around us. This includes finding a better way to travel to work, understanding and addressing climate change, finding better ways to cure and prevent disease, and deciding who to vote for. Open Access improves research efficiency by enabling re-use of research outputs, providing the basis for better research monitoring and evaluation [European Commission (2010)]. Preservation of research outputs ensures that the cultural heritage of Europe is protected and curated for future generations and those scientific outputs are retained in formats that ensure they are permanently usable and accessible.

Pragmatically speaking, the efficiency of government could also be improved through re-use of past decisions, policies, and studies, which could also provide the basis for evidence-based policy making. Preservation of government outputs is required for long-term re-use and accountability and also contributes to the preservation of European history and cultural heritage.

### 1.3. The Economic Argument

As information and knowledge become more and more central to created economic value, the availability of Open Data will provide new economic opportunities for future business models. Several studies have estimated the economic value of Open Data at several tens of billions of Euros annually in the EU alone. New products and companies are re-using Open Data. An analysis is provided in [Vickery (2011)].

Open data is also of value for government itself. For example, it can increase government efficiency and reduce costs. Examples are given in the Open Data Handbook<sup>2</sup>:

*"The Dutch Ministry of Education has published all of their education-related data online for re-use. Since then, the number of questions they receive has dropped, reducing work-load and costs... The Dutch department for cultural heritage is actively releasing their data and collaborating with amateur historical societies and groups such as the Wikimedia Foundation in order to execute their own tasks more effectively. This not only results in improvements to the quality of their data, but will also ultimately make the department smaller."*

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<sup>2</sup> <http://opendatahandbook.org/en/why-open-data/index.html>

## 2. Why a National Data Service

We believe there are some compelling reasons why an Open Data Service must be a National Open Data Service, based on the non-functional requirements of trust, preservation, and economics.

### 2.1. Trust

Trusted third-parties are organizations that provide preservation services without being publishers, owners or subscribers to the materials preserved. Although a private company could act as a third-party, it is unlikely that it would be trusted to act as an unbiased curator of such data by other private companies or public bodies such as universities.

In terms of economic incentives, the state is the ideal third-party because although it is a crucial stakeholder (with an interest in improving the economy and efficiency of the nation as a whole), it is not a direct beneficiary of the curated data. Furthermore, state institutions are more likely to endure over time, and more likely to be trusted to endure by potential beneficiaries of the service.

### 2.2. Preservation

Digital resources require considerable effort to safeguard them for the future and ensure that they are available for access and use. The value of digital resources will be significantly diminished if they cannot stand the test of time. In order to ensure that resources will survive and continue to be cited, scholarly and academic communities should be committed to the long term preservation of their repositories [Pasqui (2009)].

### 2.3. Economics

At present there is no return-on-investment calculation possible that would allow a for-profit entity to take this role, in particular in an economic culture where the most important time horizon is the next quarter and even the short-term future is heavily discounted if considered at all. In contrast, the state take a long-term view in order to enjoy the economic results discussed in [Vickery (2011)], as well as enjoy economies of scale in storage and administration costs. The latter applies particularly in the case where research data and eGovernment data are archived in the same platform and provided through a single service.

## 3. Existing National Services

Here we provide two international examples of national Open Access services:

### 3.1. Australia

In May 2010, the Australian Government accepted recommendations by the Government 2.0 Taskforce to encourage increased availability of government information, resulting in the foundation of Data.gov.au. This site provides an easy way to find, access, and reuse public datasets from the Australian and state and federal governments. The site provides both downloadable datasets or, in some cases, links to other data catalogues or sources. Further resources include catalogues of data sources, tool suggestions for analysis, visualization and interrogation of the provided data, and a section for apps that use the data to provide services for users.



The goal of the Australian National Data Service<sup>3</sup> (ANDS) is to create an infrastructure that enables national researchers to easily publish, discover, access and use research data. Its approach is to engage in partnerships with the research institutions to enable better local data management that enables structured collections to be created and published. ANDS then connects those collections so that they can be found and used. These connected collections, together with the infrastructure form the Australian Research Data Commons.

### 3.2. The Netherlands

Overheid.nl is the central access point to all information from government organizations of The Netherlands. Data.overheid.nl (launched 2011) is the central register providing links to all open government data sets, with a special section for geographical information (the *Nationaal Georegister*). As all Comprehensive Knowledge Archive Network (CKAN) based services (e.g. the UK, France, Germany) the site provides access both via web-access and via an API.

The Data Archiving and Networked Services<sup>4</sup> (DANS) encourages researchers to archive and reuse data in a sustained manner, e.g. through its online archiving system. DANS provides access to scientific datasets, e-publications and other research information in the Netherlands. DANS is an institute of the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organisation for Scientific Research (NWO).

## 4. Status in Austria and Next Steps

In July 2011 the Austrian Federal Chancellery (*Bundeskanzleramt* or BKA), and the city governments of Vienna, Linz, Salzburg and Graz founded the Cooperation Open Government Data (OGD) Österreich<sup>5</sup>. OGD Österreich currently has a beta version of its catalogue online.

Before OGD Österreich started, a community effort, *Katalog Offene Daten Österreich*<sup>6</sup>, began collecting openly accessible data from both governmental and science related sources. The community encourages anyone to add such sources to its CKAN-based register.

Although initial steps have been taken, Austria lags other countries in terms of scope and support for Open Access and Open Data. In order to make the vision of an Austrian National Data Service a reality, we must consider user requirements, technical solutions, policy requirements, and funding for such a project.

User requirements must derive from a broad spectrum of public beneficiaries, including the Austrian National Library, the OBVSG (*Österreichische Bibliothekenverbund und Service GmbH*), as well as Austrian universities and federal ministries. Document-centred concepts, as employed for example by the Austrian State Archive, should be expanded to include raw scientific data as well as structured data (databases) and applications (software). The latter extensions could make the Austrian service unique in the world.

Technical solutions should be selected based on the requirements, as well as on the lessons learned from other National Services including but not limited to those mentioned in this paper.

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<sup>3</sup> <http://www.ands.org.au/>

<sup>4</sup> <http://www.dans.knaw.nl/en>

<sup>5</sup> <http://gov.opendata.at/site/>

<sup>6</sup> <http://offener.datenkatalog.at/>

Policy requirements should be taken up in a high-level working group, preferably one chartered by the BKA. Policies to be considered would be, for example, that the raw data and results of nationally-funded (FFG, FWF) projects must be made available under Open Access principles. It will also be necessary to determine the relationship between the existing State Archive archiving services, the federal data centre (BRZ), and the proposed data service. Key social and political issues remain, including a commitment to preserve and provide permanent access within the scientific and technical community and society in general [Hodge (2004)].

Naturally such a project cannot be executed without a source of funding. Depending on the policy decisions, such a data service could be logically funded and maintained by either the technology ministry (BMVIT) or the ministry of science and research (BMWFW). Based on existing projects like that in Australia, we estimate the initial investment costs to be on the order of twenty million Euros.

We believe that by investing in and realizing an innovative National Data Service of this type, Austria will further secure its position as a world leader in the area of eGovernment.

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## About the Authors

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Ross King received his Ph.D. in physics from Stanford University. After moving to Vienna in 1995, he migrated to the IT sector, and joined AIT in 2002 to help found the Digital Memory Engineering working group, which he presently leads as Senior Scientist and Thematic Coordinator for Next Generation Content Management Systems. Dr. King serves as board member and financial officer of the Open Planets Foundation and he is also the Coordinator of the FP7 ICT project SCAPE. His research interests are primarily concerned with multimedia information management and digital preservation.

### *Joachim Jung*

Joachim Jung has an MA in the history of science and technology and English language literatures from the Technical University in Berlin. He entered the Cultural Heritage domain when he led a one year (2006/2007) digitisation/OCR project for the Zentral- und Landesbibliothek Berlin. He moved to Vienna in 2007 to lead the OCR work package in the TELplus project for the Austrian National Library. He has since been part of several national and international projects both as Project Manager and as researcher, first for the Austrian National Library and since 2009 for AIT. He is interested in research focused on giving and maintaining access to historical digital content.



# Open Government Data - Beyond the Hype

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*Abstract: While Open Government Data is on the agenda of the biggest administrations worldwide, it has experienced vibrant uptake by cities and regions. New York, San Francisco, Paris, London, Berlin, Vienna, just to name a few, managed to gather a community around their respective data portals, a community who creates applications and mashups for the benefit of a bigger part of the society. However, the valley of depression is well ahead.*

**Keywords:** Open Data, sustainability

**O**pen Data has become an unambiguous sign of a transparent and accountable administration – or at least an administration who tries to join a fast-moving band-wagon. Pro-active release of data in an unabridged, open, and machine-processable format is in line with major policy frameworks of the US Administration (Barack Obama 2009), that of Europe as a whole (EUROPEAN COMMISSION 2010; Anon. 2012) as well as major European countries.

## 1. Preconditions for Open Govt. Data

Effective use of raw and uninterpreted data requires a set of preconditions to be met:

### 1.1. Supply

Obviously, plentiful data, meeting the open data principles (Anon. 2007), is a precondition for envisioned positive political and societal effects (Fornfeld et al. 2008). This requires meaningful licenses to guarantee legal certainty, stability of data sources for those tailoring services around the data sources and instantaneous or nearly instantaneous availability once data becomes technically available. On the back-office side, information systems have to be redesigned to meet this timely criteria. Ideally, open govt. data should come directly from the government information systems, with little to no human interaction. To become true, organizational information flows have to re-assessed and tailored towards a friction free information flow throughout the organization. Uncertain data responsibility of agencies is an unmistakable sign for a potential of organizational change.

### 1.2. Uptake

Once the supply side has become open data ready, uptake by the community is required to create the hoped benefit of open data for a larger part of the society. The term “community” is opaque

and so is this the usage pattern. Usage can't be sensibly forced from the supplier side, only supported through "ecosystem" measures. For example, during the initial phase of the UK open data representation the portal data.gov.uk has been criticized for being complex to navigate and data hard to find (Everett 2010).

Thus usability from the potential users' perspective is an important aspect. First this requires tools to separate relevant data from noise by using a powerful search facility and second, perceiving the administration from the citizens perspective.

Beside technical aspects, organizational transparency and political trust is required, to foster usage. A corrupt and otherwise intransparent political system will not attract that many members of the "community" than an administration, which has a long and lively history of openness and transparency (Bugaric 2004). Thus an open data portal contributes to the *circulus vitiosus*, but can only be a part of other measures such as a transparent legal system, accountable public servants and a sound taxation system.

Another aspect contributing to usage is ability. Climbing the steps from data to information to knowledge towards wisdom requires increased levels of involvement and skills (Hey 2004). The required data literacy, thus the ability to meet the technical aspects (retrieving data and formatting into a sensible format suitable for further analysis) and provide the cognitive skills (statistics, analysis techniques and methodological setting), will not be evenly distributed among the "community". Depending on the curricular structure of university programs and secondary education majors, some countries will have a head start over others. This is where data journalists are hoped to jump in and fill that societal gap of knowledge (Davies 2010).

Another interesting strategy to assure uptake and usage is to declare certain datasets on a public data portal as the authoritative source, even for other public bodies.

### 1.3. Mashability

Aristotle coined the *principle of emergence* which got subsequently condensed to the more famous phrase "The whole is more than the sum of its parts". This principle holds especially true for open data. Isolated data sets, available on an open data platform, might contain novel information, which has not yet been identified by the formal accountancy office or the bureau of statistic. Yet much more potential lies within those data sets, which have never been put together before, because federal ivory towers or legacy reasons hindered government bodies to collaborate.

For data to be comparable, both the human users and, because of the sheer amount of data, computer systems have to have an understanding of what data is comparable and what otherwise similar looking data sets are not. From an organizational point of view this requires a clear and assigned methodology on how data was collected and processed, information which belongs to the metadata section of open data. For computer systems to match disperse data sets, data entities have to be assigned to an ontology describing real-world concepts and interlinked using a mashing technology as it can be provided by the RDF data format.

Establishing firm and trusted links between data entities is a major task, and it is uncertain, which body should and can do this. First, countries without a strong central authority like those without a prime minister simply do not have the organizational entity which has an overview which ministry produces data in which format. Even if this body is present, it has no formal power to take influence on data formats and data collection method. From an organizational perspective,

data sets of different ministries are often held by federal computing centers, which would make them ideal candidates to perform interlinking between data sets. This interlinking would have the great benefit that a.) Similar dataset can be identified, revealing potential for an improved information flow and b.) Automated reasoning and technologies stemming from big data and BI-analysis can be applied to automatically generate new information.

Another even more revolutionary approach involves the informed citizen as part of the “community”, who in his or her life situation has an understanding of administrative processes and may also link similar datasets on a government data portal. This user generated interlinking has to be clearly separated from the official ones. Currently, no tool provides this functionality in a user friendly way, leaving room for further research and development in this area.

## 2. We have Open Data - Now What?

The proliferation with open data has been growing at a breathtaking pace with new portals joining the data floor almost every day. Now what next? Citizen facing portals represent a view onto the administration, which seldom represents the inner workings, laid out by law or the constitution. It is getting obvious, that the citizen centric information flow does not represent the information flow of the administration, which raises the question of lost efficiency because of organizational structures laid out in the 19<sup>th</sup> century.

*“Our cities have the borders of the 19th century; they have the administration created in the 20th century and are facing challenges of the 21st century.” (Professor Michael Parkinson, Director of the European Institute for Urban Affairs)*

In other words, the supply side has been addressed, now it’s time to monitor the uptake and actual usage. Which data sets are of public interest, which not and why? Can the data and present usage patterns provide sustainable welfare for a larger subset of the society? How can the administration justify further expenditures in their open data portal at possibly staggering usage?

Those questions and many more are currently immanent in the open data community. The UK National Audit Office already criticized the government’s open-data policy for having no proven benefits and that it could actually be costing taxpayers more than it’s worth (Comptroller and Auditor General 2012). Eaves put it brilliantly by saying *we didn’t build libraries for a literate citizenry. We built libraries to help citizens become literate. Today we build open data portals not because we have public policy literate citizens, we build them so that citizens may become literate in public policy* (Eaves 2010); yet this benefit is hard to prove with factual data.

The valley of depression of Gartner’s hype cycle ahead, how can we transfer the open data hype into a sustainable public sector information management strategy?

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