

OUTPUT T2.2

Pilot Action (P13)

Report

Title Output T2.2
Pilot Actions for preserving and management of natural and cultural heritage and resources developed and/or implemented

Date January – June 2022

Venue Cannabiaca / Zeiselmauer

Implementing partner(s) University of Continuing Education Krems
(Danube University Krems – DUK)

Name of Pilot site Cannabiaca / Zeiselmauer in the pilot region of Tulln

Project ID DTP3-1-359-2.2

General description:

As small town, but nevertheless important Roman site in the Austrian pilot region Tulln, Zeiselmauer (the Roman *Cannabiaca*) had been selected to become the object of the Austrian small investments planned in Living Danube Limes in order to increase its visibility and its touristic attractiveness through promoting its Roman heritage and past.

Agenda:

13 January 2022	Meeting between representatives of the Municipality Zeiselmauer, the association “Freunde von Zeiselmauer” and the University of Continuing Education Krems
	Visit and inspection of the heritage site and the archaeological remains
09 February 2022	Joint selection of characteristic small archaeological finds appropriate for laser-scanning and 3D-modelling
	Visit at the Kulturfabrik Hainburg (workshops of ASP Lower Austrian Provincial Government) and laser-scanning of the selected finds
10 February 2022	Processing of the data and calculation of the models by the ASP
25 February 2022	Photo documentation of the selected finds
March 2022	Texturing of the model surfaces (STUBA)
April 2022	Visits and inspections of Zeiselmauer done by a building researcher employed by DUK assessing the best options for the physical installations as well as further visibility measures for Zeiselmauer.
May/June 2022	Consultations between the association “Freunde von Zeiselmauer” and their partner 7reasons on the integration of the virtual 3D models into other virtual formats and tools and their implementation on-site.
	Development of an information video on the Roman site Cannabiaca/Zeiselmauer and its archaeological finds.
June 2022	Installation of an information board with QR codes making the VR models and the resulting video accessible for the public.

Participating Partners and Stakeholders:

University for Continuing Education Krems (Danube University Krems)

Municipality Zeiselmauer

Association “Freunde von Zeiselmauer” (“*Friends of Zeiselmauer*”)

Preparatory phase:

In a **first phase (preparation)**, there have been several meetings, joint inspections and preparatory activities organised before the VR models could actually be calculated, developed and implemented on-site. As indicated above, a meeting between representatives of the University for Continuing Education Krems (Danube University Krems – DUK) and the association “Freunde von Zeiselmauer” (*friends of Zeiselmauer*) has taken place on 13 January 2022. In its course, the participants brainstormed about and discussed possible synergies between the efforts of the highly-engaged association and the project Living Danube Limes. The local stakeholders guided the researchers of the university through the Roman remains still visible and those invisible within their town and described their endeavours of the past to strengthen their local Roman heritage as well as their plans in this regard for the future. They showed the researchers of the project their Roman Showroom where the most important and interesting archaeological finds of Cannabiaca/Zeiselmauer are displayed and which is annexed to the Municipal Office and, thus, only opened during specific time periods.

Therefore, the researchers of the university and the stakeholders of Zeiselmauer jointly developed the idea to create 3D models of the most important archaeological finds and to make them virtually available for visitors by scanning a QR code displayed on an information board at the entrance of the Showroom.



Fig. 1. Archaeological remains of the Late Roman Burgus of Cannabiaca/Zeiselmauer
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Implementation and Testing approach:

At the beginning of the **second phase (development of the VR models)** the final selection was made which archaeological finds should be scanned and virtually recorded. Therefore, a member of DUK's project team met representatives of the association "Freunde of Zeiselmauer" (*friends of Zeiselmauer*) on 09 February 2022, they had identified the finds most appropriate for 3D-laser-scanning, packed them and the project member of DUK took them to the workshops of ASP Lower Austrian Provincial Government at the Kulturfabrik Hainburg, where the 3D-laser-scanning could be accomplished.



Fig. 2. The selected archaeological finds are 3D-laser-scanned by experts of the ASP Lower Austrian Provincial Government at the Kulturfabrik Hainburg.

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During the following days, the experts of the ASP Lower Austrian Provincial Government calculated the VR models, but so far, the models did not have any surface texturing but were uniformly greyish coloured. Thus, it was necessary to produce a detailed and high-quality photo gallery of each of the selected finds taking a number of overlapping pictures from each angle which could then be projected to the models' surfaces by a number of defined fixed points.

Therefore, a team member of DUK once again met with representatives of the association at the Roman Showroom at Zeiselmauer and jointly produced the necessary photo galleries. The high-quality photos were then sent to PP10 STUBA whose experts projected them to the

surface of the models and therefore finalised the professional virtual 3D models of the archaeological finds of Cannabiaca/Zeiselmauer.

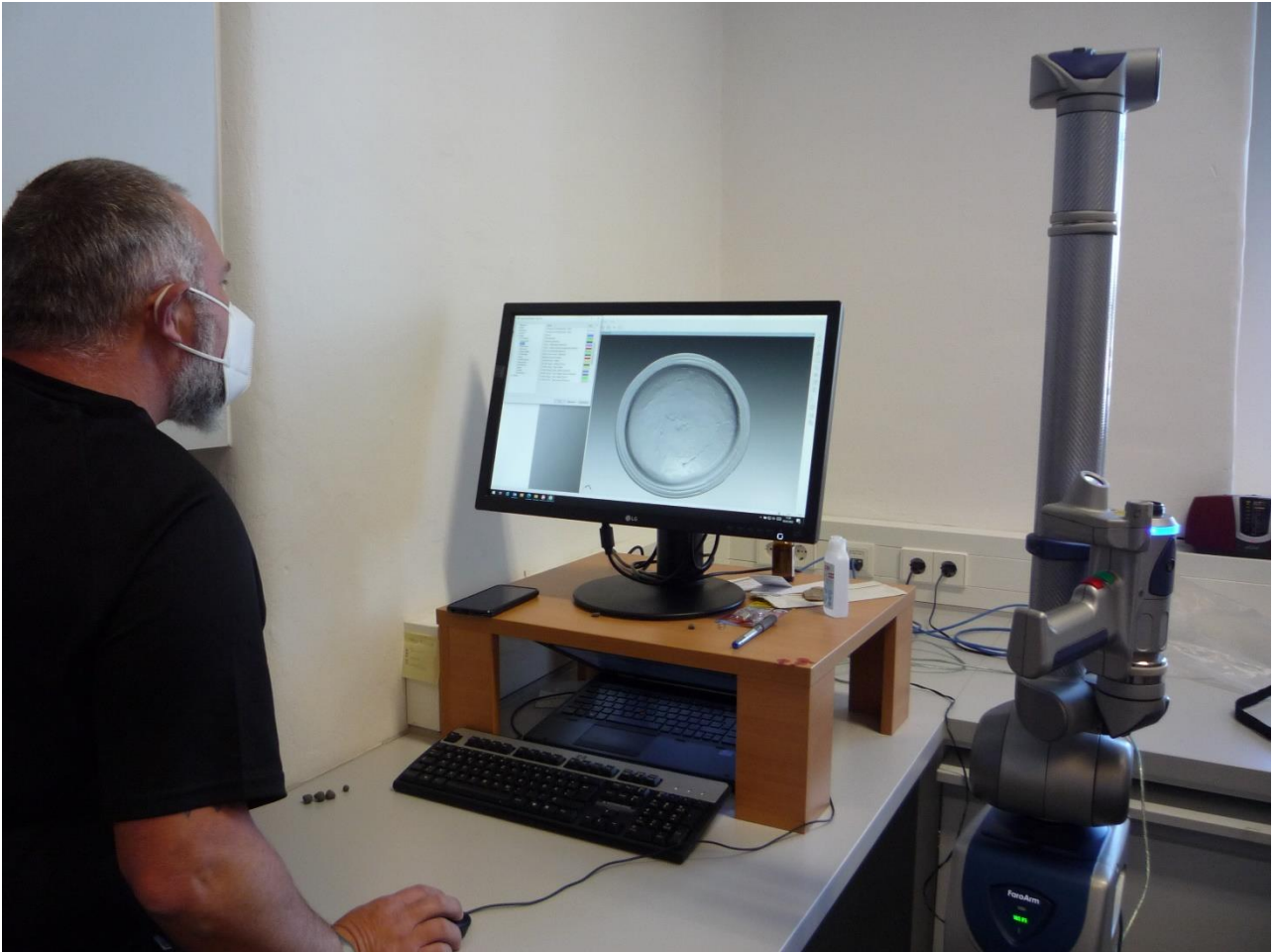


Fig. 3. Calculation of a first test model.
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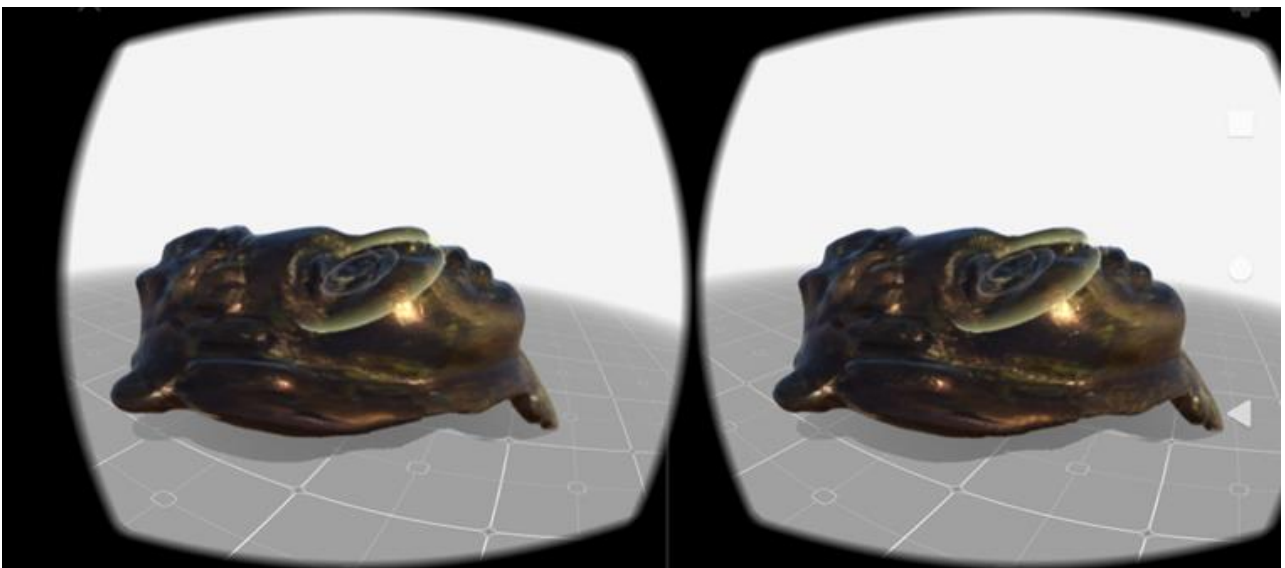


Fig. 4. Example of a finalised virtual 3D model. Roman handle attachment.
© STUBA 2022

In a **third phase (implementation on-site and efforts to increase the visibility of the Roman heritage)** the local stakeholders of Zeiselmauer evaluated the best and most effective possibilities to implement the VR models on-site and make them accessible for visitors. They consulted with the company 7reasons that is specialised in animating, illustrating and promoting heritage structures that are not visible anymore. Together they developed the concept of a Virtual Showroom mirroring the actual physical Roman Showroom at Zeiselmauer. Into this Virtual Showroom the VR models of the selected finds are embedded which has been assessed the most appealing format for visitors to learn about local heritage remains. The Virtual Showroom is made available either by directly visiting the webpage www.cannabiaca.com/en/roemischer-schauraum/ or by scanning a QR code displayed on an information board at the entrance of the Roman Showroom, so that visitors can examine the archaeological finds of Cannabiaca/Zeiselmauer at any time and any day – either physically or virtually.

Further, a building researcher employed by DUK visited Cannabiaca/Zeiselmauer from April 2022 onwards and jointly with different representatives of the association “Freunde von Zeiselmauer” (friends of Zeiselmauer) consulted on possible combined installations for (a) the implementation of the VR models and (b) physical reconstructions or other measures in order to increase the visibility of the Roman heritage of Zeiselmauer (WP T3). But since the local stakeholders and the building researcher finally came to the conclusion that the site of Zeiselmauer is not as suitable as other Roman archaeological sites in the pilot region for the installation of a physical visibility measure, the idea was rejected in mutual agreement.

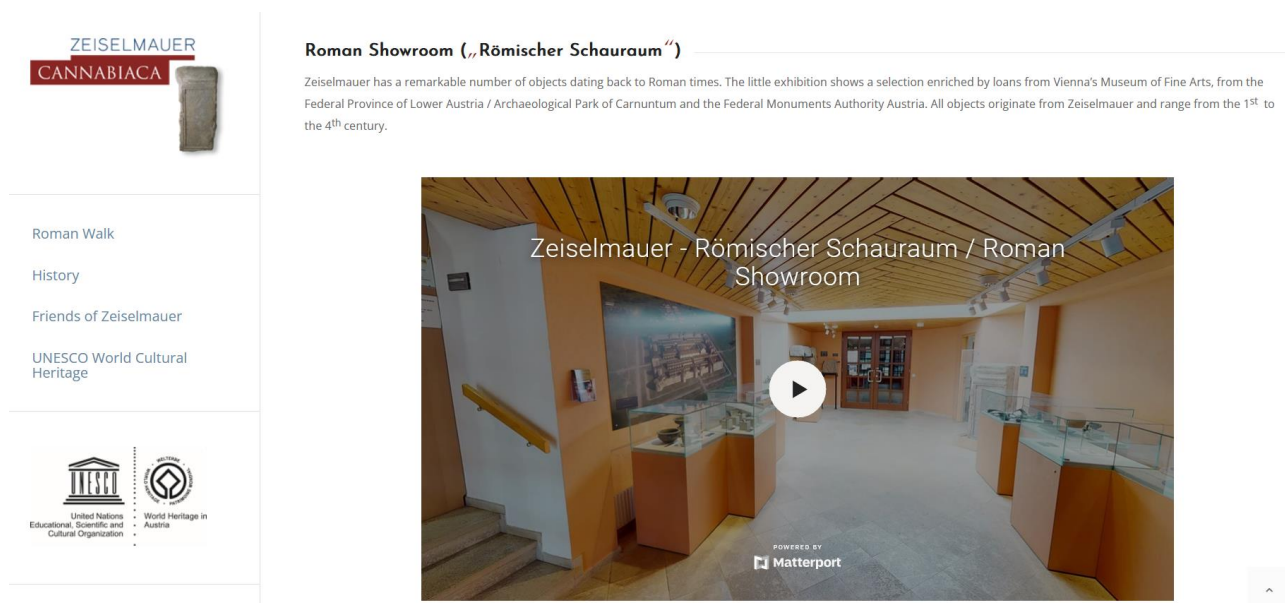


Fig. 5. Homepage of the Virtual Showroom of Cannabiaca/Zeiselmauer (www.cannabiaca.com/en/roemischer-schauraum/).

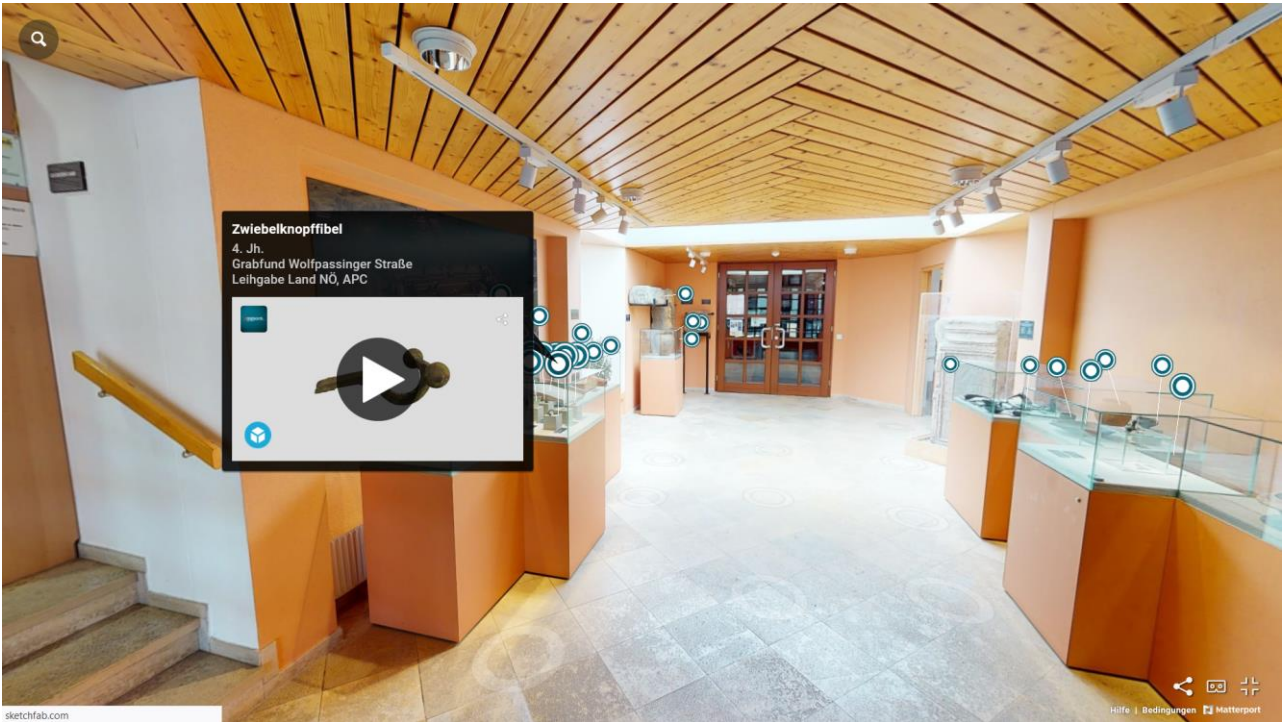


Fig. 6. Selecting individual finds in the Virtual Showroom (www.cannabiaca.com/en/roemischer-schauraum/).



Fig. 7. Information board at the entrance of the Roman Showroom in Zeiselmauer.
© Freunde von Zeiselmauer 2022.



Dissemination:

Information on the Roman site Cannabiaca / Zeiselmayer as well as the virtual 3D models are prominently displayed via the Living Danube Limes mobile and web application linking also to the site's official website www.cannabiaca.com.

There are several videos shared via the site's Youtube channel @ *Römerkastell Zeiselmayer* where also the new video on the small finds will be available soon.

Target groups:

Target groups reached through the pilot action:

Target groups (in accordance to AF section C.2.2)	Target value	Institutions/interest groups/key persons present at the event
local public authorities	1	Municipality of Zeiselmayer
regional public authorities		
national public authorities		
higher education and research		
education/training centres and schools		
SME (small and medium enterprises)	1	7 reasons
general public		
interest groups including NGOs	1	Association "Freunde von Zeiselmayer"
international organisations under national law		
international organisations under international law		
sectoral agencies		
infrastructure and (public) service providers		