

tourism 4.0 HERITAGE+

**Creation, preservation,
reuse & promotion of
3D models of
monuments and
tangible cultural
heritage**

Matevž Straus

Heritage+ Lead, Arctur d.o.o.

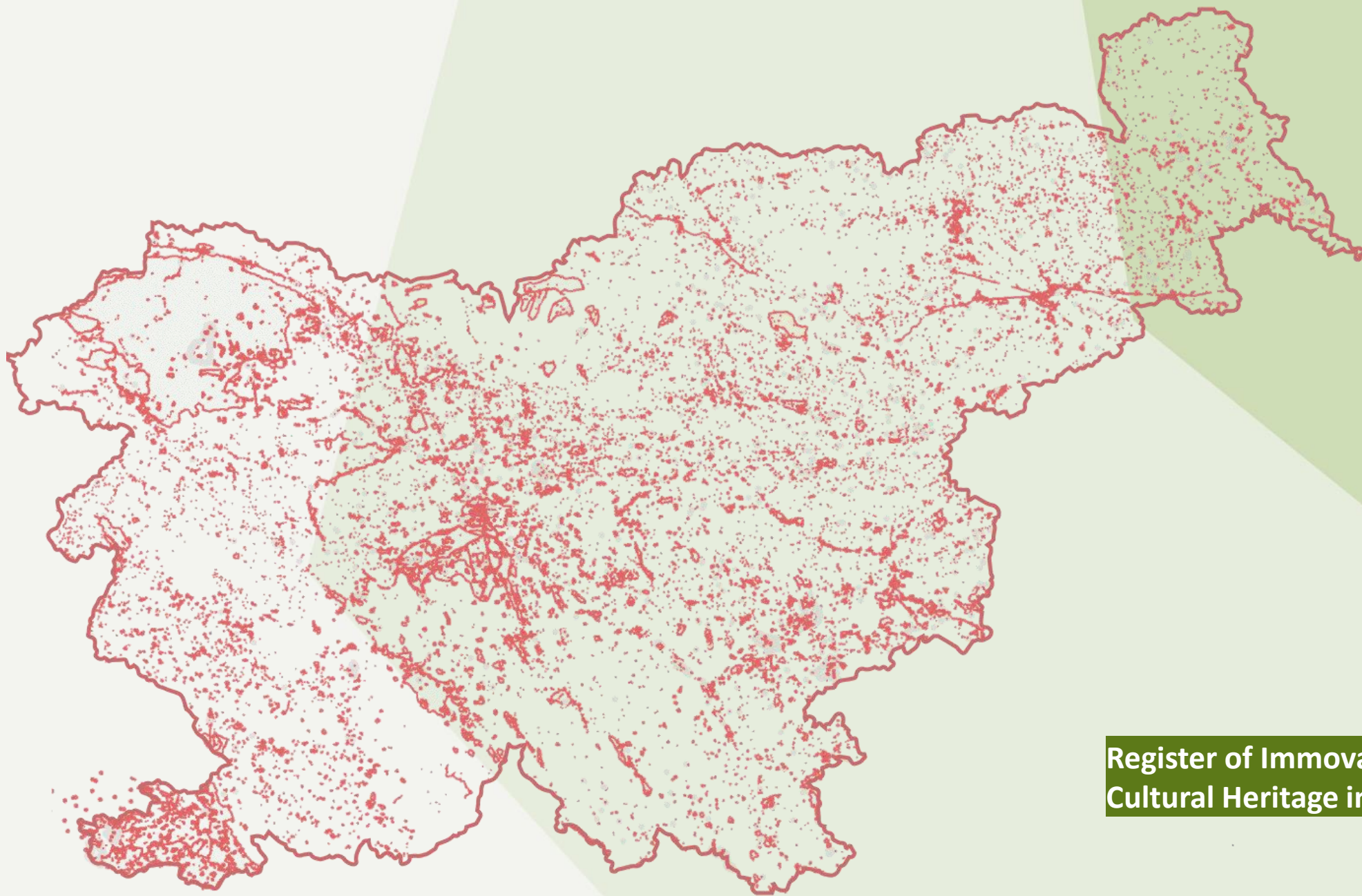


*Widen European Access
to Cultural Communities
Via Europeana*



Co-financed by the European Union
Connecting Europe Facility

Žale Cemetery, Ljubljana (UNESCO World Heritage)



Register of Immovable
Cultural Heritage in Slovenia

Digital technologies can be of help

Digital layer of audio-visual information can narrate an engaging and interactive story

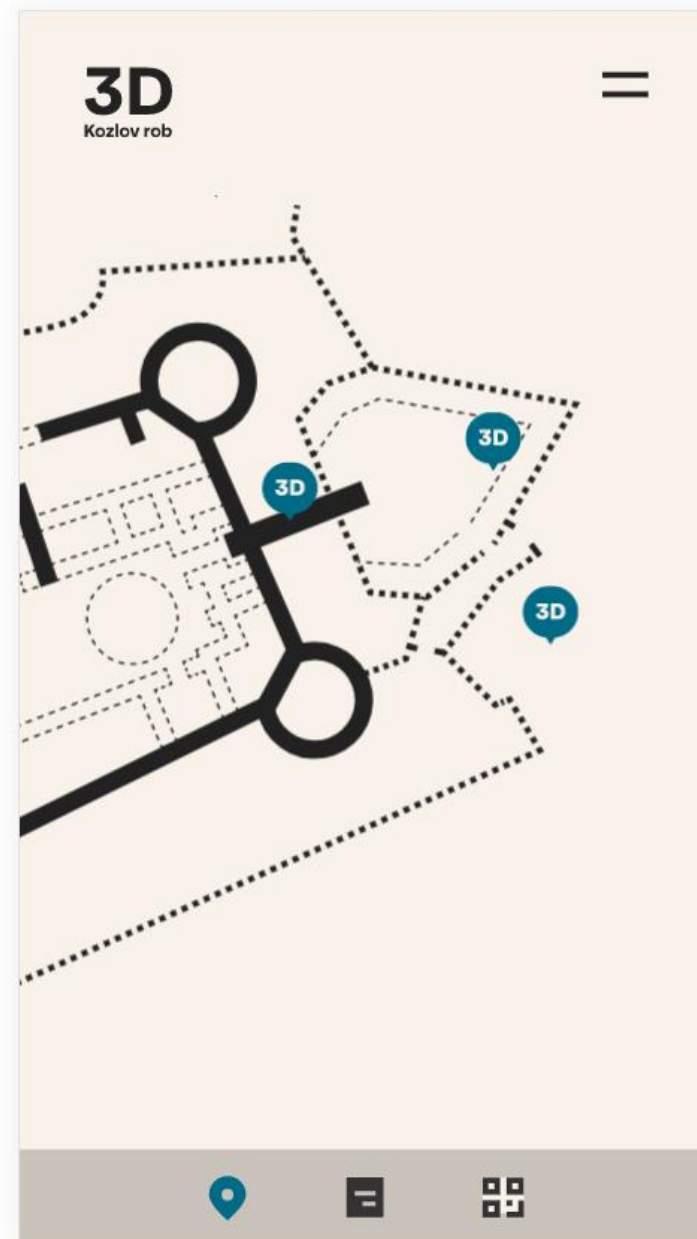
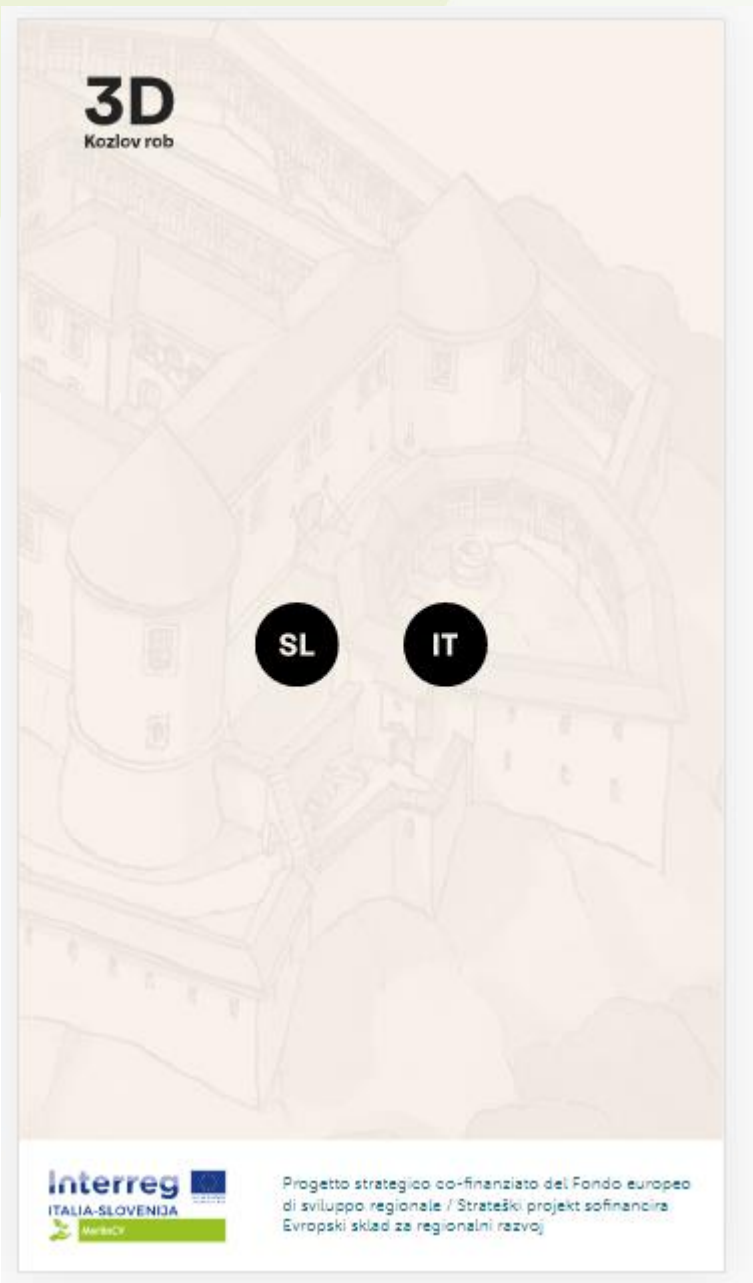




Kozlov Rob Castle, Tolmin



Kozlov Rob Castle, Tolmin





5 good reasons to digitise heritage

1. Attracting new audiences



2. Preserving heritage in digital world



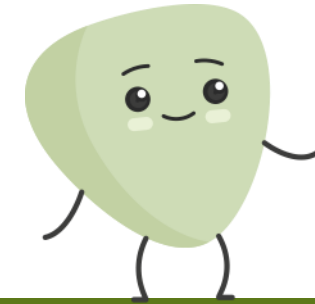
3. Increased interactivity and access



5. Managing of tourist flows to new locations



4. New opportunities for creative industries

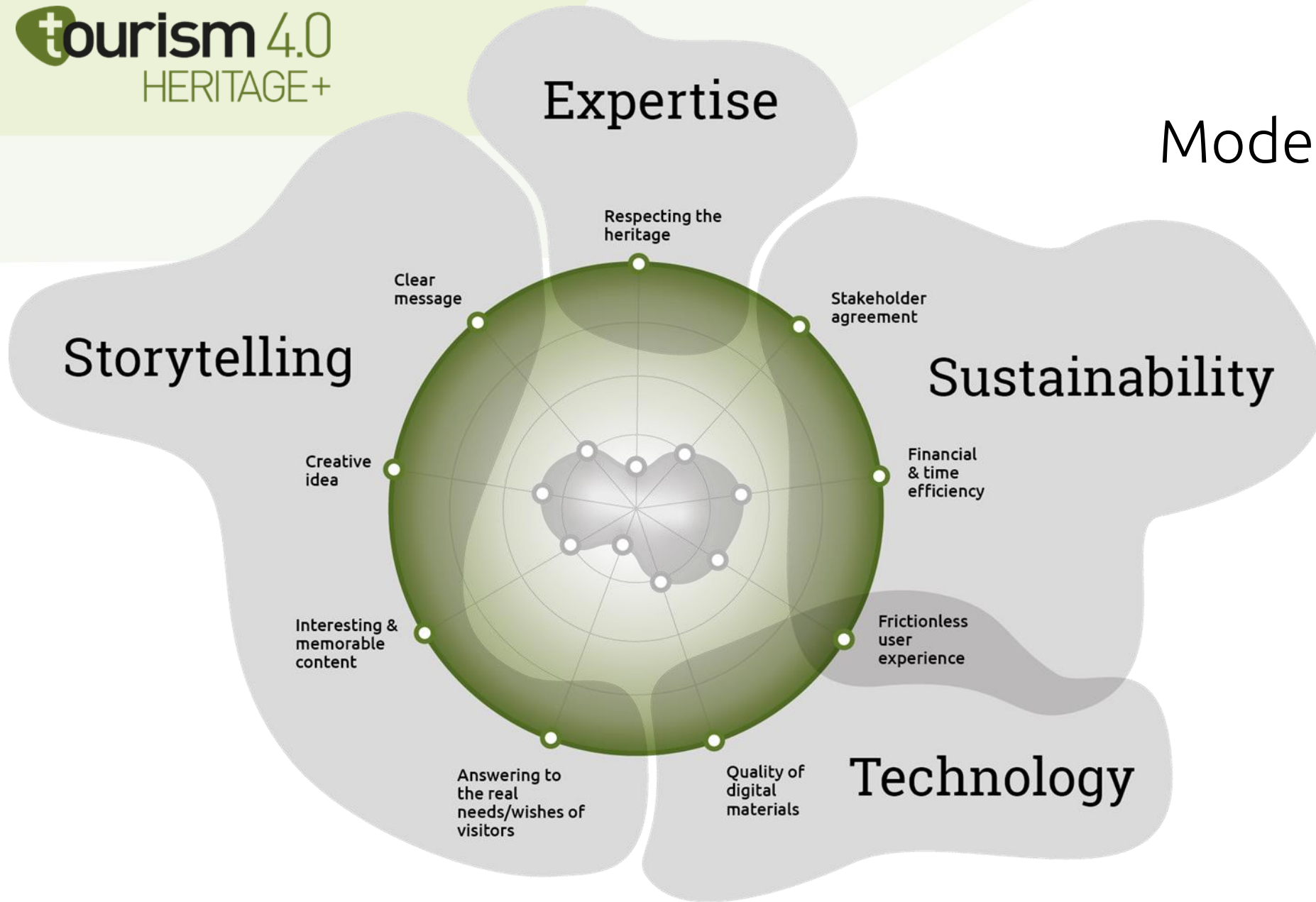




1. Trainings & Workshops

- **Interdisciplinary workshops and trainings** on idea development, storytelling, technologies and promotion
- **Toolkit on Digital Innovation** of Cultural Heritage
- **Technical guidelines** for 3D digital capture

Model Project Chart



Ideal project
should aim at
...



DIGITAL INNOVATION OF CULTURAL HERITAGE

Toolkit for tourist destinations

NEW: In English!





2. 3D Digital capture using photogrammetry and laser scanning

- **More than 40 monuments** of immovable cultural heritage have been 3D digitally captured (by the Arctur's Heritage+ team) into high quality and attractive 3D models
- All 3D models will be **added to the documentation by the Ministry of Culture** (permanent storage) and could be used for renovation
- 3D models could be **further used in gaming and film industry** as well as promotion



On-site 3D digital capture

ARCTUR's team uses **the most advanced digital technologies** and is able to **quicky and in high quality 3D capture** a monument of cultural heritage.



Olimje Monastery, Podčetrtek

Off-site 3D processing

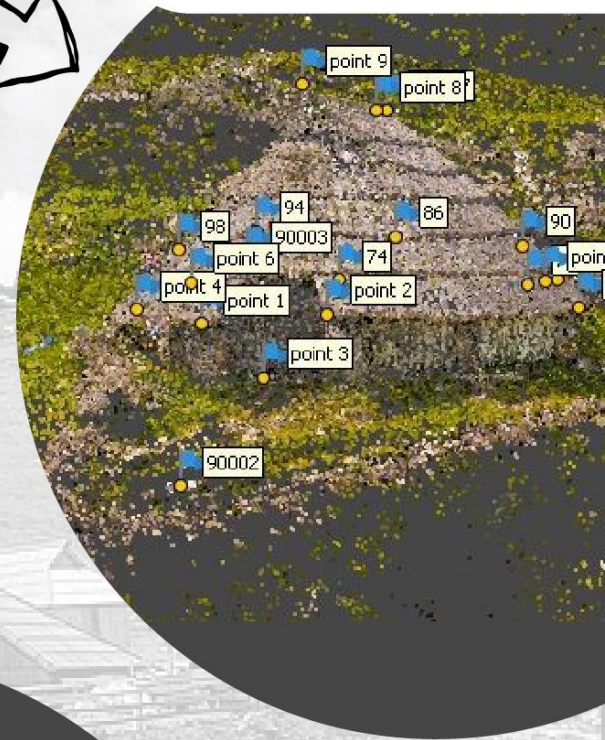
Each registered object of immovable cultural heritage conveys **a value and learning** that could be interpreted digitally – and thus presented to new audiences in **new engaging ways.**

Field visit at Velika Planina
high above town Kamnik

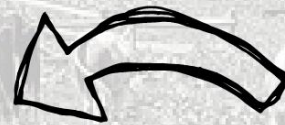


Digital capture
of 3314 photos

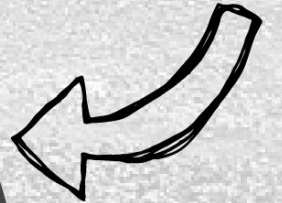
Point Cloud with
45.124.485 points



86'' interactive wall
at castle in Kamnik



3D model with
3.208.692 polygons



creative magic & storytelling skills



Vuzenica Castle, Vuzenica

3. Attempts of 3D reconstructions using 3D modelling

- **Attempts at 3D reconstructions** based on available archive resources
- Useful tool to **spark imagination and raise awareness** about the importance of protecting cultural heritage

4. Digital interpretation using new media

- VR experiences
- AR apps
- Holograms
- Interactive walls
- Interactive screens
- Object recognition tables
- Web apps
- Digital and interpretation rooms and spaces



Digital room, Čatež Spa Resort



5. Digitally enriched tourist experiences

- Each product should involve a **digital tool/new media interpreting 3D captured** cultural heritage
- Products ought to be **developed according to Slovenia Unique Experiences standards** (local, authentic, unique, experiential, green, boutique, premium, added value, de-seasonalisation, five-star character)

Videomapping, Saint Jurij Church, Slovenj Gradec

Report on the

EXPO Digital Innovation



More than visible

114+ 3D models of Slovenian cultural heritage (+ 360° photos and videos, photos, videos, animations ...)

31+ new tourist products

200+ new digital contents about Slovenian cultural heritage

31+ re-discovered stories and legends

Presentation at conferences and fairs (EXPO 2020 Dubaj, WTM London, Conventa, Alpe-Adria Fair, ...)

70+ representatives of destinations and museums for the first time involved in digital innovation

50+ SME involved in implementation of the projects

30+ creative and cultural industries involved in implementation, cooperation and consulting

New collaborations and partnerships

Bridging the divide between culture and tourism



1. prize:

Revitalisation and digitalization of Old Vine House in Maribor
(Maribor Tourist Board)

2. prize

Digitisation of cultural heritage throughout Slovenia
(Ministry of Economic Development and Technology of the Republic of Slovenia)



PRESKAR HUT

CULTURAL HERITAGE FOR FUTURE GENERATIONS

Slovenia is one of the leading countries in Europe in digital innovation of cultural heritage into enriched tourist experiences.

Between 2019 and 2022, 31 leading tourist destinations digitized at least three examples of registered cultural heritage and developed at least one new tourist experience.

We are proudly presenting the results!

FILTER AND DISPLAY UNITS 

KOSTANJEVICA NA KRKI –
MONASTERY

Čatež in Posavje



BRESTANICA – RAJHENBURG
CASTLE

Čatež in Posavje



ROGAŠKA SLATINA – SPA HOME

Rogaška Slatina



PREM – CASTLE

Zeleni Kras



BLED – WEATHER HOUSE WITH A
PLAQUE DEDICATED TO ARNOLD
RIKLI

Bled



SLOVENSKE KONJICE – CITY
CENTER

Rogla - Pohorje



ČRNA VAS – CHURCH OF ST
MICHAEL

Ljubljana



SEMIČ – CAMP AREA

Bela krajina

VELIKA PLANINA – PRESKARJEVA BAJTA COTTAGE

KAMNIK



Model owner: Zavod za turizem in sport Kamnik
Credit by: Arctur d.o.o.
Number of polygons: 3.208.668
Accuracy: 5.01 mm
Contact: [Contact form](#)


Preskarjeva bajta cottage is situated in the middle of the Velika Planina plateau as a monument to the local shepherding tradition and a museum. Over the years, it preserved its traditional oval shape and an open fireplace in the interior with no windows or a chimney. Learn about the shepherds' old way of life.



Period: Long 19 Century
Categories: Residential & Shelters
Destination: Kamnik
CH ID: 12033

Address:
Velika planina

Owner:
Zavod za turizem in sport Kamnik



3D model information 

Share:  

Assets

All categories



All periods



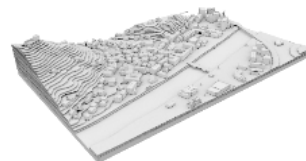
Q Search assets



Črnomelj - Castle

Slovenia / [Castles and fortifications](#)

Middle Ages (5-15 Century)



Laško – Market centre

Slovenia / [Residential & Shelters](#)

Middle Ages (5-15 Century)



Selo na Goričkem – Church of St Nicholas (Selo Rotunda)

Slovenia / [Sacral heritage](#)

Middle Ages (5-15 Century)



Murska Sobota – Keršovan Villa

Slovenia / [Residential & Shelters](#)

Interwar period



Ljubljana - Plečnik's Žale

Slovenia / [Sacral heritage](#)

Contemporary History / 20th Century



Kranj – Statue of France Prešeren

Slovenia / [People](#)

Interwar period

Our heritage makes us what we are. Our past shapes the perception of our present and on this present, we build the future. **The new generations are already living in a new mixed-reality world and it might happen that our roots and heritage will be left out of it.** We want to prevent this.

We help society pass on heritage in the digital, mixed-reality era.



European Competence Centre for the Digitalisation of Heritage

- Coordination and **community building in digital heritage sector**
- **Competence building and skills exchange** of public, private and NGO stakeholders
- **Technical services and support** for digitisation and digital interpretation
- **Research and development** of novel approaches and methods
- **Advising on policies and strategies** for digitisation and digital interpretation of heritage

Your thoughts and questions?

Join us!

Tourism 4.0 Partnership

Apply for membership:

<https://joinus.tourism4-0.org/sl>



190⁺ members of
tourism 4.0
PARTNERSHIP
Research, business and public sector

-  www.tourism4-0.org
-  info@tourism4-0.org
-  www.facebook.com/tourism4.0
-  twitter.com/Tourism4_0
-  www.linkedin.com/company/tourism4-0