

v-must

EXPERIENCE
THE FUTURE
OF THE PAST

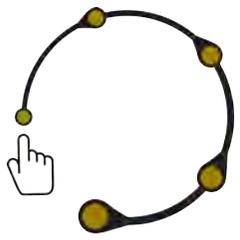


V-MUST is funded by the European Commission under the Community's Seventh Framework Programme, contract no. GA 270404.



Cultural heritage, multimedia and beyond

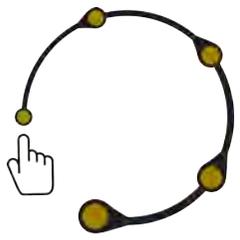
Daniel Pletinckx
Visual Dimension bvba
Belgium



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V-MusT.net

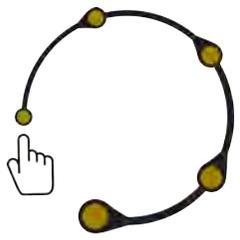
- Virtual Museum Transnational Network
- European Network of Excellence on Digital and Virtual Museums (2011 - 2015)
(<http://www.v-must.net/>)
- In the domain of museum technology
 - bring together museums, research and companies
 - apply the available knowledge and technology to the cultural heritage (CH) domain
 - improve the way ICT is used in the museum and CH domain
- Partners
 - 18 core partners
 - 50+ associated partners



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V-MusT partners

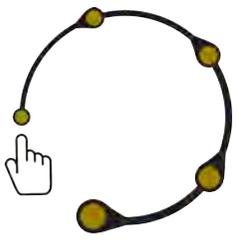
- Research Centres
 - CNR (National Research Council of Italy)
 - APRE (Italy)
 - CINECA (Italy)
 - INRIA (National Research Institute on ICT, France)
 - STARC (Cyprus Institute)
 - Foundation of the Hellenic World (Athens)
 - CultNat (Egypt)
 - Fraunhofer IGD (Darmstadt, Germany)
 - Sociedad Espanola de Arqueologia Virtual (Sevilla)



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V-MusT partners

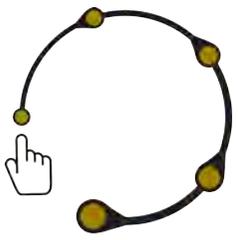
- **Museums**
 - Allard Pierson Museum, Amsterdam
 - Hellenic Cosmos, Athens
 - Musea of the Imperial Fora, Rome
- **Universities**
 - King's College London, UK
 - University of Sarajevo, Bosnia-Herzegovina
 - University of Brighton, UK
- **Companies**
 - VirtualWare
 - Visual Dimension



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V-MusT focus and scope

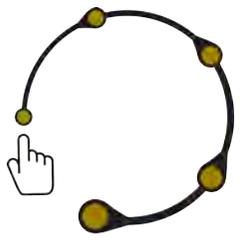
- V-MusT is about
 - Fitness for use
 - Affordable technology
 - Sustainable implementation (maintenance, updating, robustness)
 - Portability, re-use & exchange, re-purpose
- Not only about technology but also about
 - Methodology & design guidelines
 - Appropriate communication processes
 - Trained experts
- And about INTEGRATION in the CH/museum domain
 - Link research with public presentation
 - Provide insight in the workflow to obtain QUALITY
 - Support the domain => Competence Centre



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Digital technology in museums

- Digital technology
 - Is embedded in a wider change in society
 - Easy and ubiquitous access to information
 - Easy creation of image based information
 - Costless sharing and re-using information
 - Communities without borders
- What society expects from heritage
 - Own it (paid by tax payer money)
 - Understand and enjoy it
 - Participate in it and share it
 - Put it in the context of today

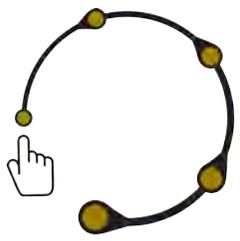


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The old museum



Bologna archaeological museum

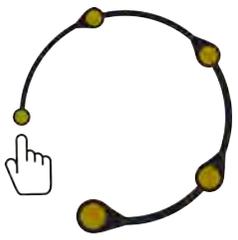


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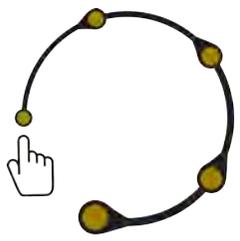
Bologna archaeological museum



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The new museum

- In the past
 - Univocal
 - One perspective
 - Undisputed
- In the future
 - Multivocal, uncertainty
 - Multicultural
 - Multiple perspectives
- Digital technology
 - It's not about the gadget
 - Brings fundamental change for management and workflows

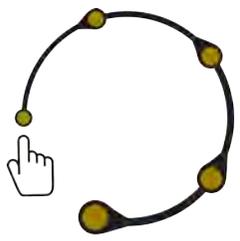


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The new museum



Bologna archaeological museum

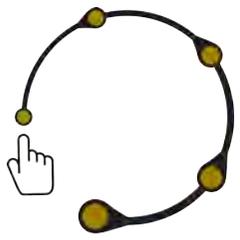


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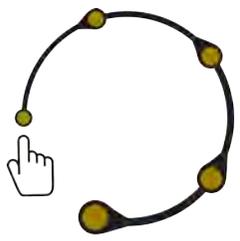
Bologna archaeological museum



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Narration in Virtual Museums

- What is our link with the past?
 - Our society of today is build on layers of history
 - 2 people out of 3 have no historical horizon further than their grandparents
 - What is different in the past, what is the same?
- Narration is the key to successful virtual museums
 - Better information transfer, better understanding
 - Edutainment: why spend time on cultural heritage
 - Experiences: spatial vs. emotions & human relations
 - The story behind the object:
why do we keep it, spend money & time on it, exhibit it
 - Visual reference of past cultures

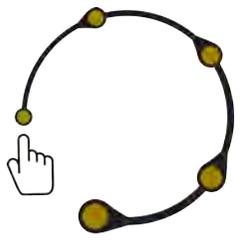


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Apa the Etruscan



Apa depicted on the Certosa situla, Bologna archaeological museum

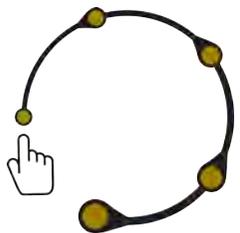


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Apa the Etruscan



Apa depicted on the Certosa situla, Bologna archaeological museum



Apa the Etruscan

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Apa movie - Apa in the archaeological museum of Bologna (CINECA)

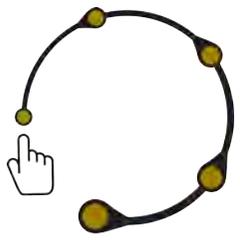


Apa the Etruscan

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Image by CINECA from Apa film at Palazzo Peoli (Bologna city museum)



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Apa the Etruscan



Images by CINECA from Apa film at Palazzo Peoli (Bologna city museum)

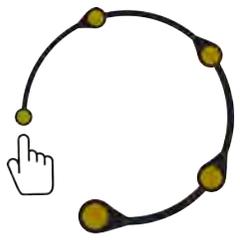


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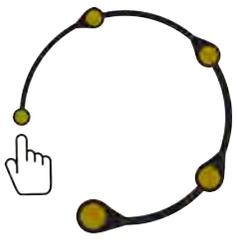


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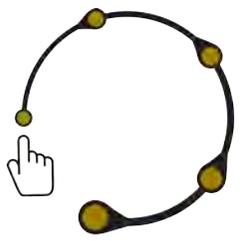
Fresco of medieval Bologna, Vatican



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Exploration of an information space

- “Collection” concept
 - How are objects, stories, people related to each other?
 - Unravel the links by exploration
- Bad example:
<http://www.youtube.com/watch?v=OAPvLsPBCkk>
- Online example: ARQUA (National Museum of Underwater Archaeology) <http://en.museoarqua.mcu.es/web/visita/>
- Stand alone (CD) example: Medieval Dublin
<http://www.medievaldublin.ie/>
- On site example: TimeFrame
- Museum example : Virtex (see section Documentation in <http://www.heritagetechnologies.org/>)

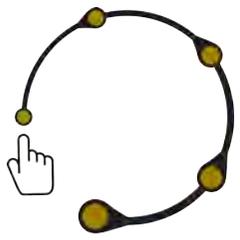


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TimeFrame 1 Ename



Timeframe at Ename archaeological site, Belgium

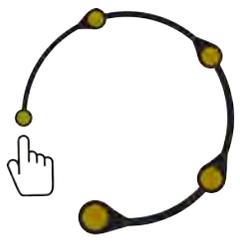


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TimeFrame 1 Ename



Timeframe at Ename archaeological site, Belgium (1997)

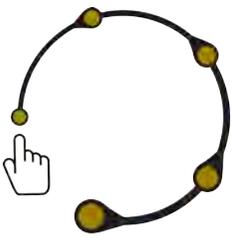


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TimeFrame 1 Ename



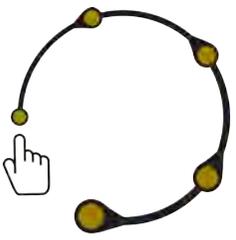
Timeframe at Ename archaeological site, Belgium (2013)



TimeFrame 1 Ename



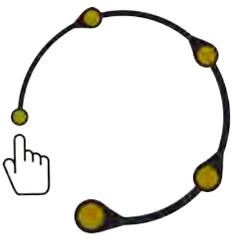
Virtual reconstruction of the Ename abbey (1065) including landscape simulation



TimeFrame 1 Ename



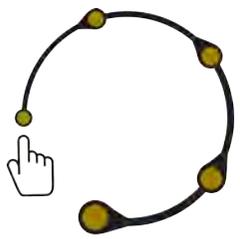
Virtual reconstruction of the Ename abbey (1300) including landscape simulation



TimeFrame 1 Ename

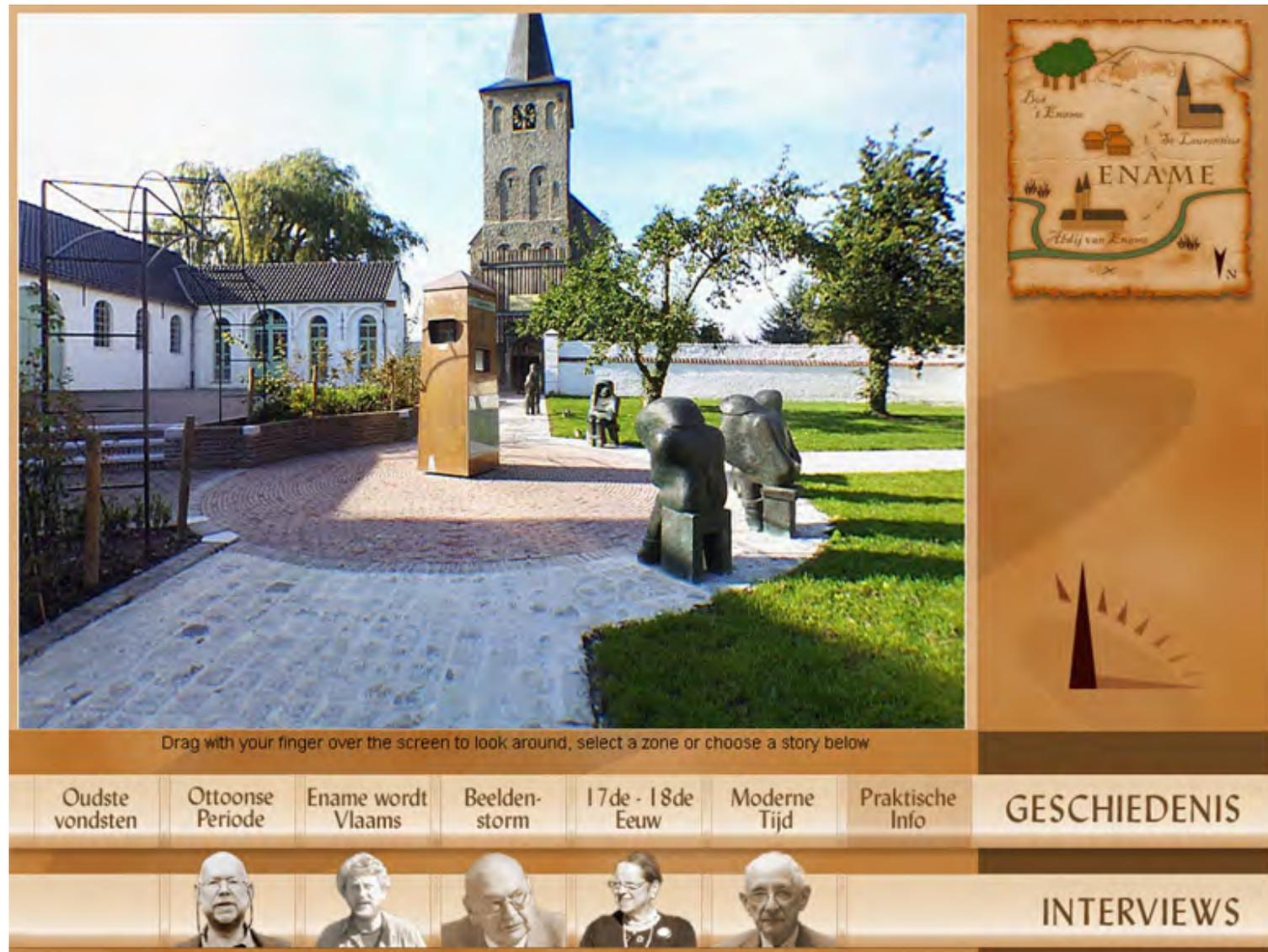


Virtual reconstruction of the Ename abbey (1665) including landscape simulation

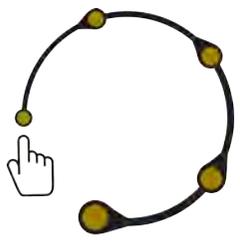


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TimeFrame 2 Ename



Timeframe user interface at Ename museum, Belgium

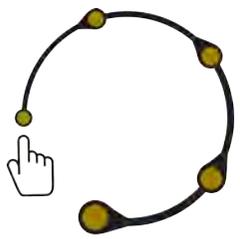


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TimeFrame 3 Ename

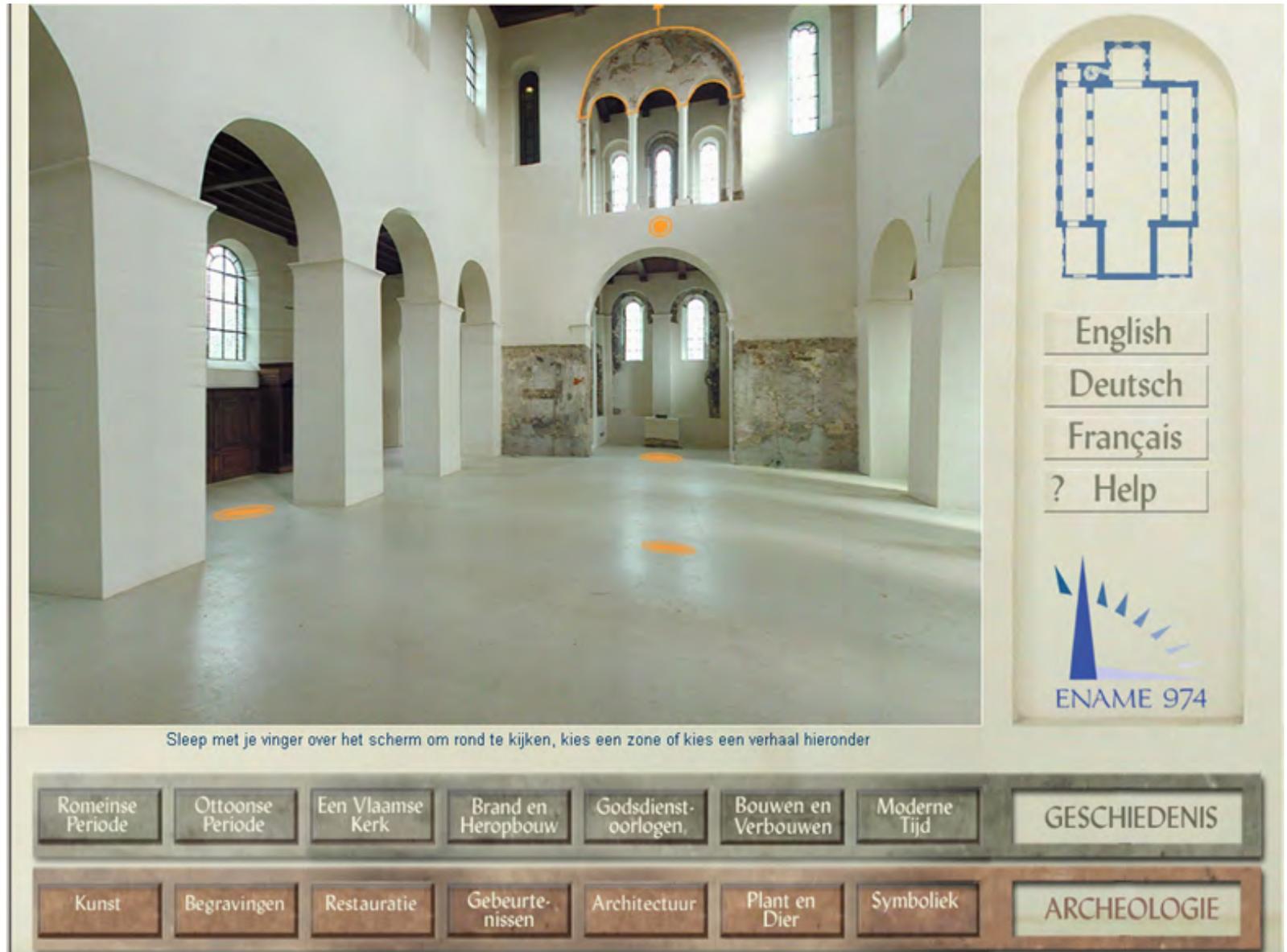


Timeframe at Saint Laurentius church, Ename, Belgium

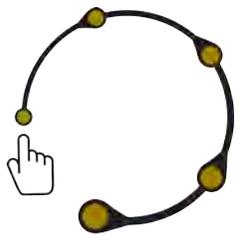


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TimeFrame 3 Ename



Timeframe user interface at Saint Laurentius church, Ename, Belgium

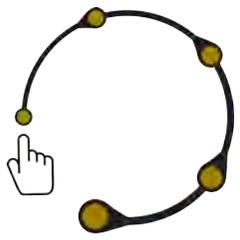


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TimeFrame Born



Timeframe at Born castle ruin, Netherlands

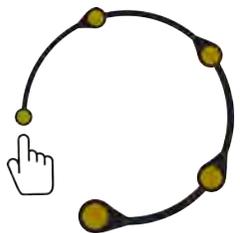


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TimeFrame Born



Timeframe at Born castle ruin, Netherlands

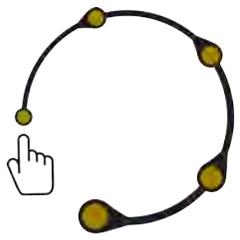


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TimeFrame Born



Virtual reconstruction at Timeframe at Born castle ruin, Netherlands

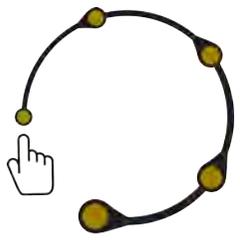


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Virtex interactive replica



Ivory object (real: left, 3D:right) from Ename museum, Belgium

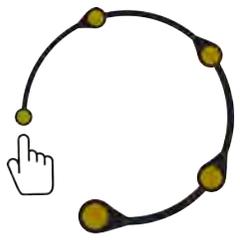


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Virtex interactive replica

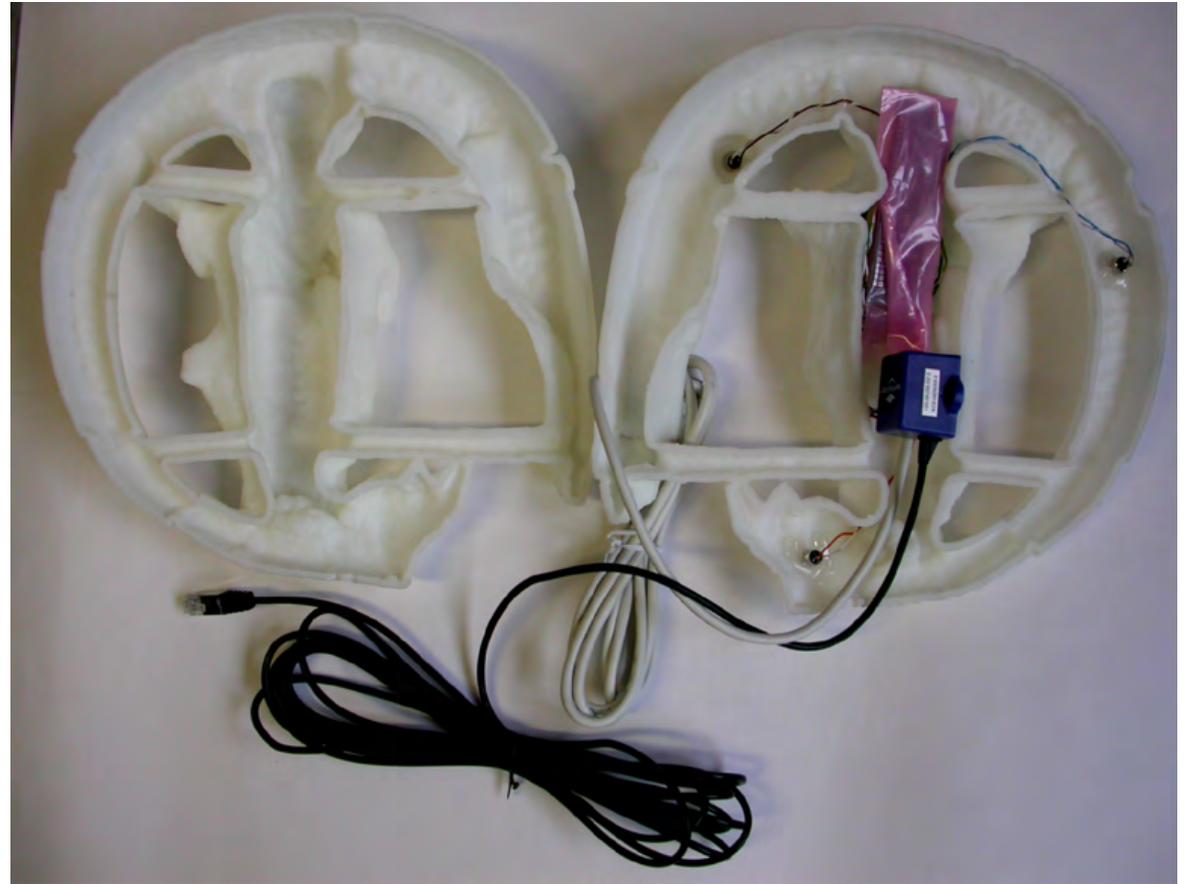


Interactive replica of museum object

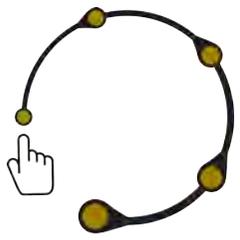


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Virtex interactive replica



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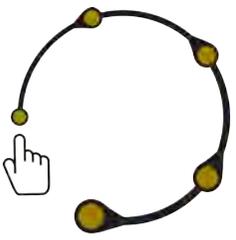


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Virtex interactive replica



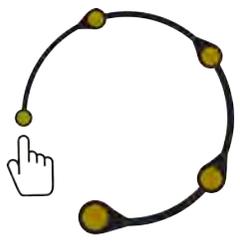
Virtex on autostereoscopic screen



Virtex interactive replica



Virtex story: VR visualisation of the origin of the object (Ename abbey in 1065)

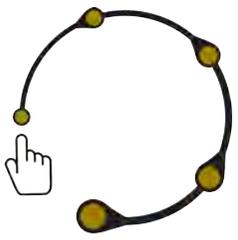


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Virtex interactive replica



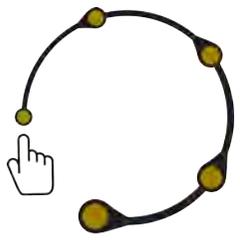
Virtex story: virtual reconstruction of the use of the object



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Exploration of virtual spaces

- Virtual space concept
 - Experience the atmosphere of a space/site/landscape
 - Understand the significance/use of a space/site through exploration
- Museum example: Etruscanning
 - Natural interaction interface
 - Recontextualisation
 - Digital restoration
 - Interactive storytelling
- On site example: Santimaniña
 - Virtual visit with a real guide
 - Better protection of the site - safer visit

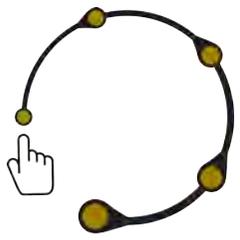


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Etruscanning

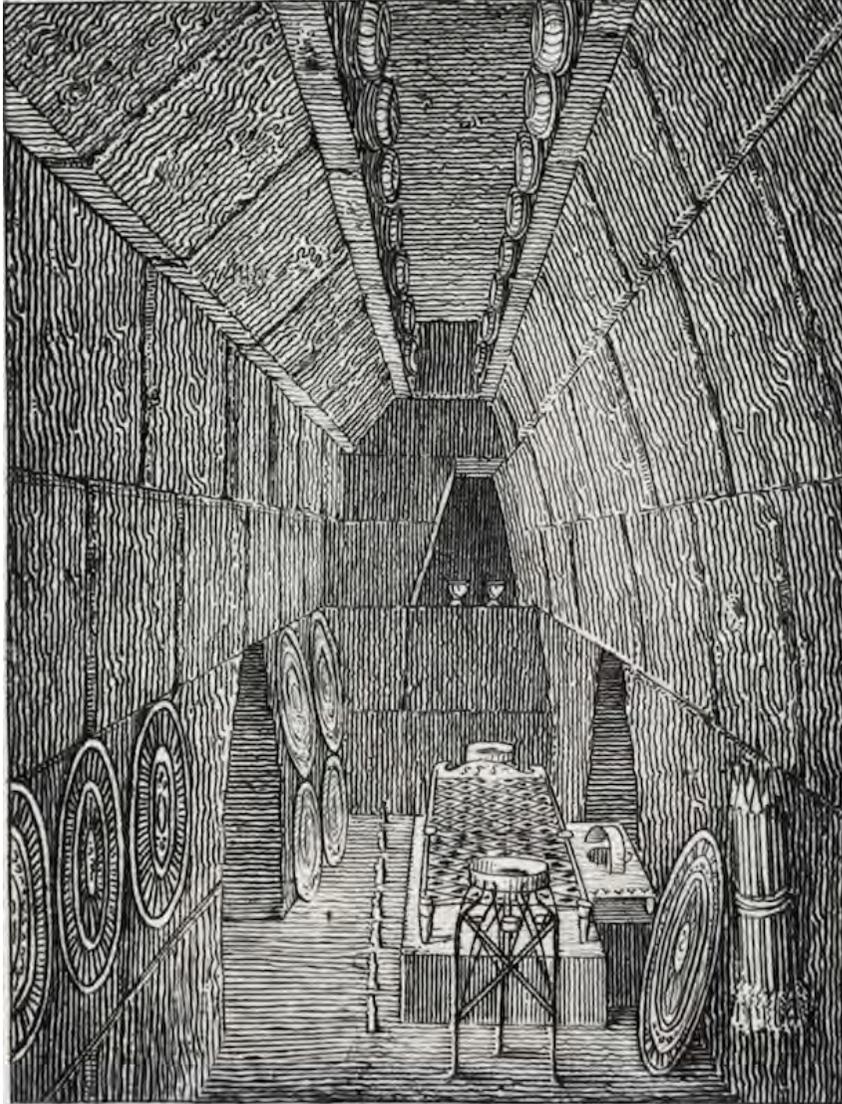


Museo Gregoriano Etrusco, Vatican Museums

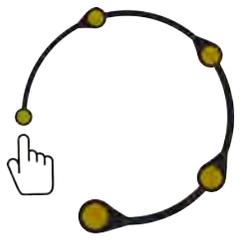


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Etruscanning



Regolini-Galassi tomb, excavated in 1836, objects in Vatican Museums

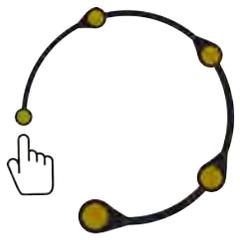


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Etruscanning



Interactive virtual Regolini-Galassi tomb (CNR-ITABC & Visual Dimension)

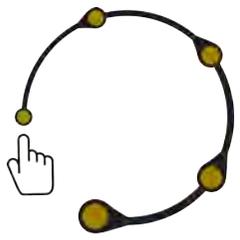


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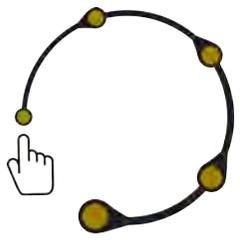


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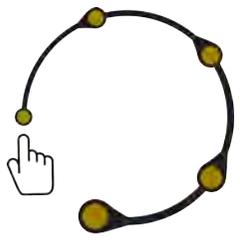


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Etruscanning



National Museum of Antiquities, Leiden, Netherlands

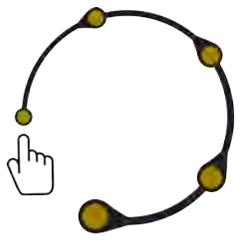


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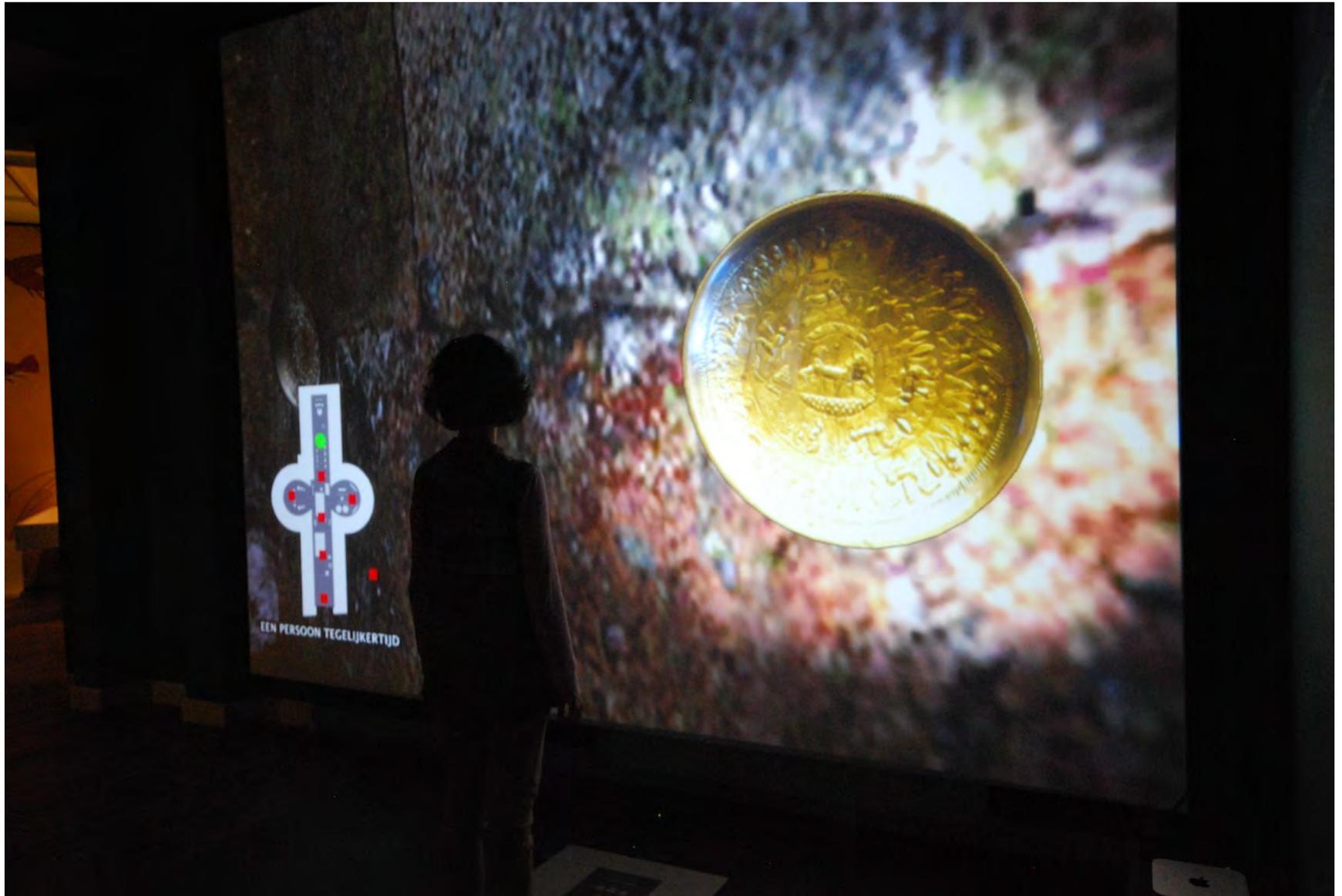


Etruscanning setup at the Allard Pierson Museum, Amsterdam

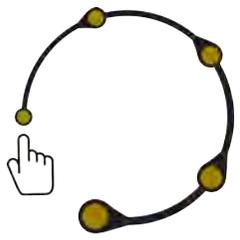


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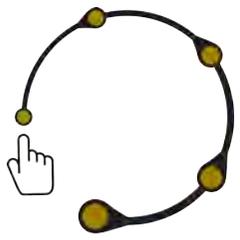


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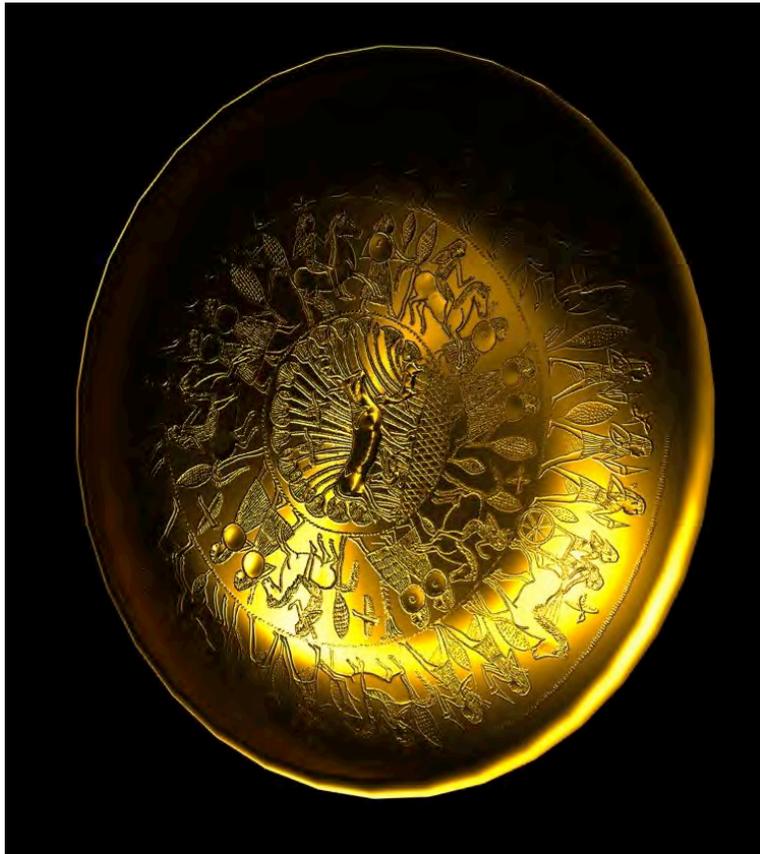


Patera from Regolini-Galassi tomb, Museo Gregoriano Etrusco, Vatican

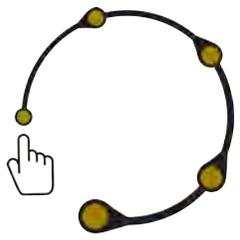


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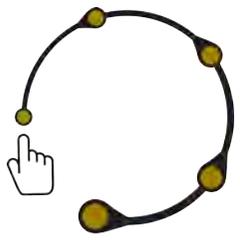
Patera from Regolini-Galassi tomb, digital restoration, render test with normal maps, 2011



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Santimamine cave



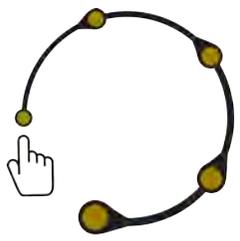


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Santimamine cave



Santimamiñe visitor centre - Basque country - Spain



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Santimamine cave



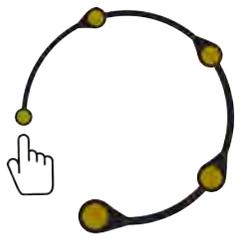
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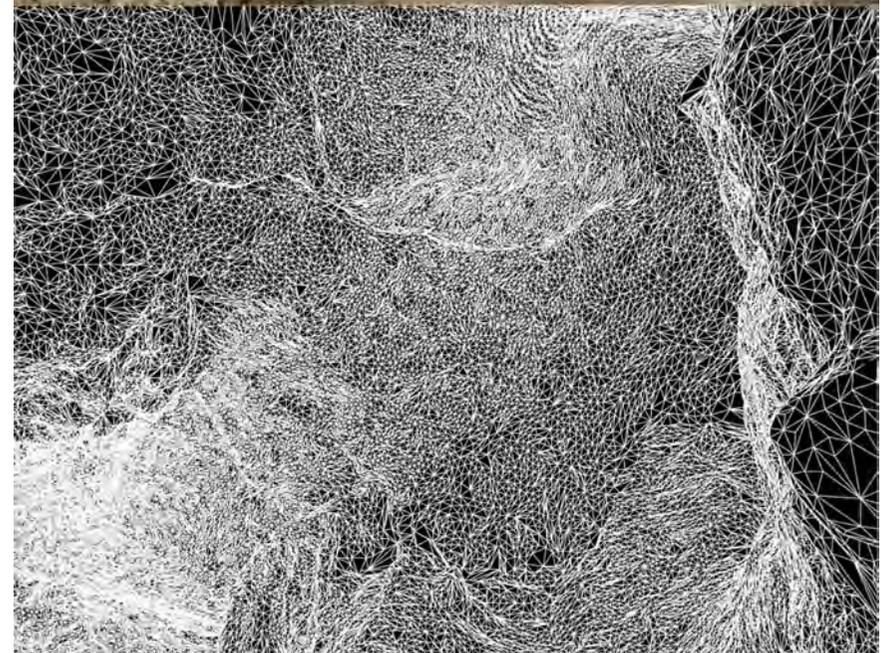
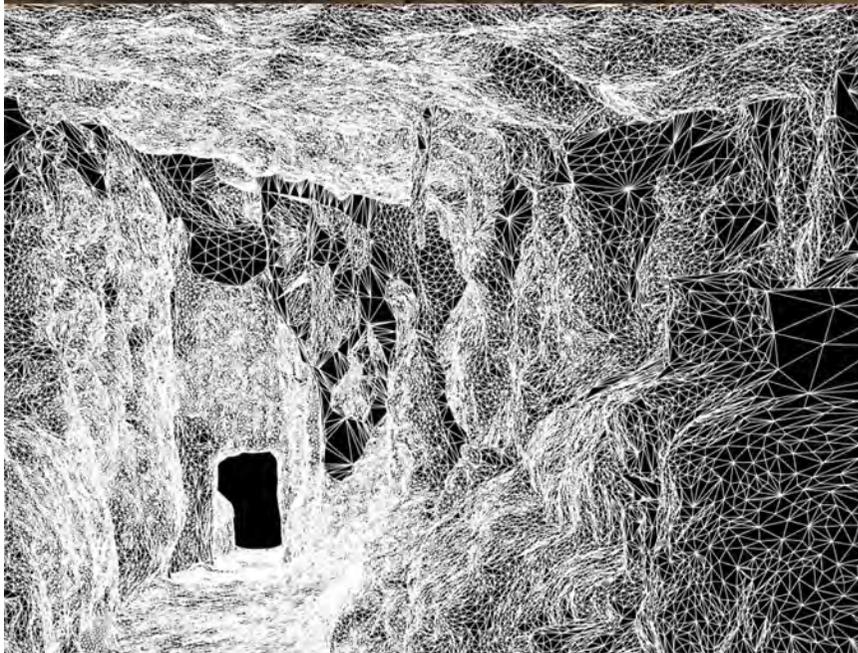
Santimamine cave

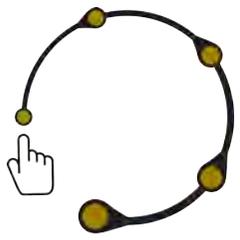




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Santimamine cave



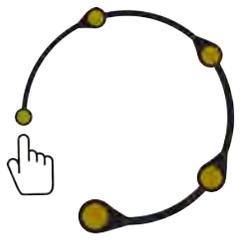


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Santimamine cave



Santimamiñe virtual cave with wall paintings from 1928 by VirtualWare

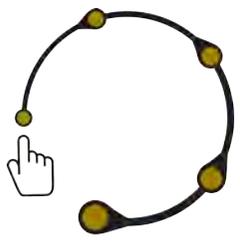


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Games

- Challenge based
 - Quest
 - Task/goal based
 - Competition based
- Example: Assassin's Creed



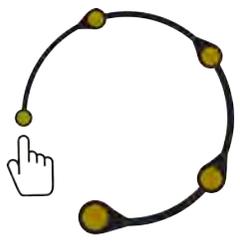


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Serious Games in museums



Villa di Livia at “Future of the Past”, 2009, Allard Pierson Museum, Amsterdam

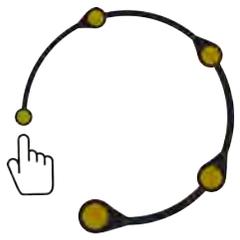


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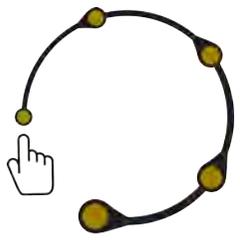


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Example: Villa di Livia



Virtual reconstruction of landscape around Villa di Livia (CNR-ITABC)

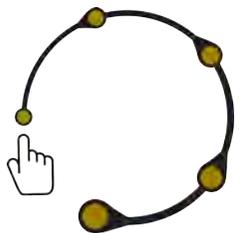


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Example: Villa di Livia



Digital model of archaeological site of Villa di Livia (CNR-ITABC)

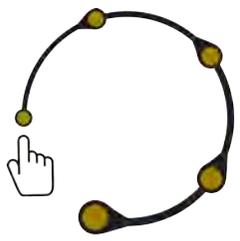


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Example: Villa di Livia



Explorable content at archaeological site (CNR-ITABC)

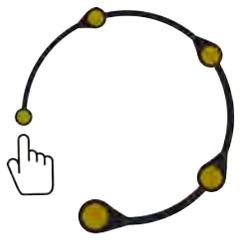


v-must

Example: Villa di Livia



Explorable content at archaeological site (CNR-ITABC)

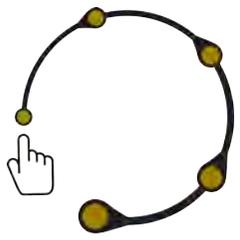


v-must

Example: Villa di Livia



Virtual reconstruction of the villa interior (CNR-ITABC)

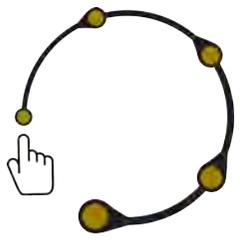


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Issues for curators

- More storytelling?
 - Current curator goal: creation of knowledge on a specific domain
 - V-MusT goal: integration of 3D virtual museums in museums

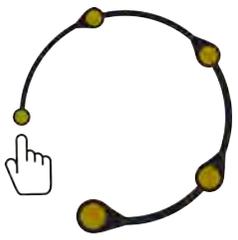
=> conflict
- Curatorial information is not story based
 - Typical story information is missing or not researched
 - Can emotions/tension/humour be combined with scientific accuracy?
 - How do you curate/document stories?
 - Can fiction be combined with scientific results?
 - Most curators miss storytelling skills
 - Should storytelling be outsourced?
- How can we address the younger generation?



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V-MusT Competence Centre

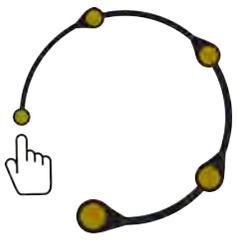
- **Issues**
 - Be self-sustaining => projects
 - Transition from *technology push* to *technology pull* => integration
 - Need for quality, quality, quality => guidelines, methodology
 - Create transfer between research & industry => existing software
- **Goal = Create CH Industry**
 - Combine creative industry with CH and technology
 - Raise the quality: appealing, robust, long-term asset
 - Integrate in the CH sector



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V-MusT Competence Centre

- Project based approach
 - Service broker
 - Excellent project management
 - Common methodology
 - Use best partners for the job on European scale
 - One stop shop approach
 - From conception to maintenance and updating
 - Cascade approach:
 - Implementation by companies
 - Applied research by research centres
 - Fundamental research by universities

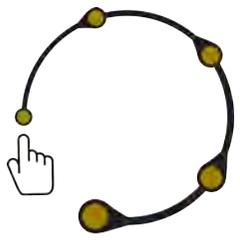


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Conclusions

- **Creative Industries**
 - Need to make cultural heritage a profitable business => CC
 - Need to master a large number of technologies => specialisation
 - Need to focus on quality => methodology, guidelines
 - Need to focus on long term usability and sustainability
 - Need to invest on integration with CH
- **Cultural Heritage Institutes**
 - Need to see costs as investments
 - Need to invest in understanding digital technologies
 - Need to adopt creative industry solutions

multimedia => creative CH solutions



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Thank you!

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