COUNCIL OF EUROPE

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THEMATIC SESSION

Archaeology and digital technologies -

Exchange of best practices, with particular reference to the European Convention on the Protection of the Archaeological Heritage (revised, Valletta, 1992)

- BELGIUM – BRUSSELS -

Archaeology and digital techniques in relation to the Valetta Convention, within the Brussels Capital Region, Belgium

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Urban.brussels is the ministry in charge of urban planning and heritage for the Brussels Capital Region, Belgium. In this capacity it is thus also responsible for the archaeological heritage on its 164km² wide territory. It has developed over the years several digital tools that have become integral part of and are at the source of the actual heritage management.

In order to be able to organize the development-led archaeology and document the archaeological heritage before it disappears during the course of building works and/or restoration works in historical buildings, urban.brussels has developed archaeological layers within the official GIS-website of the Region that brings together all cartographic information concerning its territory. The archaeological layers have been created compelling all sources on known archaeological sites, and actually more than 1100 sites have been inventoried answering in this way the articles 2 and 7 of the Valetta convention describing the need of an inventory of the archaeological heritage.

These data are continually updated with the latest information coming from recent archaeological research and are augmented with several more detailed thematic layers such as the vectorization of ancient maps, eg the primitive cadaster of 1830 or a layer with all medieval cellars. This essential tool is used by the administration for determining the degree of archaeological research to be organized within the framework of the building permit, in function of the proposed building or restoration works and the degree of destruction of the archaeological heritage. Of course, the more detailed these maps are, the easier it is to write the prescription in the building permit and to start the necessary work with the developers once the permit is delivered.

Once on site, digital technologies will help the archaeologists to better organize their intervention which often has to be executed within a very short time-frame, but still needs the precision linked to high profile scientific work. The use of the techniques of 3D-scans and photogrammetry are essential to augment this precision work: while a pencil can draw on a scale 1/20, the digital tool masters a precision of 1 to 1. This also means, for the managers of the archaeological heritage, that machines and software have to be present to help the archaeologists in their work, that the archaeologists must be trained, but also that we have to safeguard and archive these new digital born data, which is actually the most important challenge we are facing, not only in the archaeological world.

Which brings me to article 8 of the Valetta convention regarding national and international exchange of elements of the archaeological heritage. It is indeed necessary, once the excavation is finished to dispose of a report concerning the intervention and to share the results with the wider community. A first step is often the scientific community that needs this information to grow its knowledge on time periods, objects, human behavior, interaction with the environment etc. Within an ever growing internationalization of archaeology, international

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portals like Ariadne or nation- or region-wide websites like our Heritage Collection website, are essential to more global research and our understanding of the past.

But, except for the scientific community, it is also of the utmost importance that the results of archaeological research are shared with the larger public, as stated in article 9 of the Valetta convention. Immersive technologies, such as virtual, augmented or extended reality, are an excellent way to tell the story of the past. Many archaeological sites have indeed disappeared or are only visible in a very incomplete way: you can see fragments of walls, but you don't know how the people lived between these walls. Letting the public dive into this past world by using these immersive technologies, are the new way forward, because it is their heritage; because archaeology helps people connect with the place they are living in, with their past and only in this way can we promote the public awareness on this very fragile heritage.

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