

COUNCIL OF EUROPE



CONSEIL DE L'EUROPE

**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)**

***- European Association of Archaeologists –  
Nathan Schlanger -***

**"The Valletta convention and digital technologies. Challenges and opportunities 30 years on (some perspectives from the European Association of Archaeology (EAA))."**

Contribution to the thematic session of the CDCPP meeting, 8 December 2021,  
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(EAA).

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I – The European Association of Archaeology and the Council of Europe.

The EAA has longstanding affinities with the Council of Europe and its European-wide objectives.

The creation of the EAA in 1994 was to a large extent motivated by the redrawing of the European political and cultural map after the fall of the Berlin Wall, and the need to bring together the professional practitioners of archaeology across Europe. The archaeological past as we know does not follow the geopolitical and cultural boundaries of today (the Palaeolithic, the Roman Empire) and likewise archaeological questions and methodologies go far beyond individual nation-states or research traditions.

At a more formal level, the EAA has long held consultative (1999) and participatory status (2003) with the Council of Europe, and has made available the expertise of its presidents, executive boards, members and stakeholders communities. In parallel, the legal instruments of the Council of Europe have proved instrumental to the development of European archaeology – most notably the Valletta Convention (see <https://www.coe.int/en/web/culture-and-heritage/valletta-convention>), which has since become the backbone of archaeological practice in Europe, be it developer-funded (or preventive archaeology) or research-driven.

As an association linking up the professional archaeologists of Europe (some 15,000 members out of a total of probably 35,000 individuals across Europe), the EAA ([www.e-a-a.org](http://www.e-a-a.org)) promotes the development of archaeological research and the exchange of archaeological information. Among its main aims are: strengthening the management *and* interpretation of the European archaeological heritage; doing so following proper ethical *and* scientific standards for archaeological work; and promoting interest in archaeological

remains as evidence of the human past and human culture, while discouraging an undue emphasis on commercialisation.

Importantly, the EAA includes and represents individual archaeologists – and not state organisation or managers, like the *Europae Archaeologiae Consilium* – who work in both the academic and research sectors and in the preventive archaeology and heritage sector. For the most part, they will be the archaeologists who implement, on the ground, in the lab, in the library, in the lecture hall, in the museum, the tenets of the Valletta convention.

## II. – A digital technology "booster" for the Valletta Convention

When the Valletta Convention was signed, in 1992, digital technologies were still very much in their infancy. It is in fact only by the mid-2000, or even 2010, that digital technologies for the retrieval, enhancement and storage of archaeological data were developed to become broadly available in terms of hardware, software, ease of use and costs.

Several articles of the 1992 Valletta Convention include comments or paragraphs on which a digital technology "booster" will be appropriate and welcome.

In the following quotes from the Valletta Convention, the relevant passages are underlined <https://www.coe.int/en/web/culture-and-heritage/valletta-convention>

### **Definition of the archaeological heritage (Article 1)**

1 The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.

### **Identification of the heritage and measures for protection (Article 2, 3, 4)**

- the maintenance of an inventory of its archaeological heritage and the designation of protected monuments and areas;
- the mandatory reporting to the competent authorities by a finder of the chance discovery of elements of the archaeological heritage and making them available for examination
- to apply procedures for the authorisation and supervision of excavation and other archaeological activities
- to ensure that archaeological excavations and prospecting are undertaken in a scientific manner

### **Integrated conservation of the archaeological heritage (Article 5)**

- to ensure that archaeologists, town and regional planners systematically consult one another
- to ensure that environmental impact assessments and the resulting decisions involve full consideration of archaeological sites and their settings

### **Collection and dissemination of scientific information (Article 7, 8)**

- i. to make or bring up to date surveys, inventories and maps of archaeological sites in the areas within its jurisdiction;

- ii. to take all practical measures to ensure the drafting, following archaeological operations, of a publishable scientific summary record before the necessary comprehensive publication of specialised studies.

- i. to facilitate the national and international exchange of elements of the archaeological heritage for professional scientific purposes while taking appropriate steps to ensure that such circulation in no way prejudices the cultural and scientific value of those elements;

- ii. to promote the pooling of information on archaeological research and excavations in progress and to contribute to the organisation of international research programmes.

**Mutual technical and scientific assistance** (Article 12)

The Parties undertake:

- i. to afford mutual technical and scientific assistance through the pooling of experience and exchanges of experts in matters concerning the archaeological heritage;

- ii. to encourage, under the relevant national legislation or international agreements binding them, exchanges of specialists in the preservation of the archaeological heritage, including those responsible for further training.

### III – Principles into practice – some opportunities and challenges ahead

There is undoubtedly much scope for the enhancement of the Valletta Convention and the facilitation of its various objectives through currently available digital technologies. Of course, this opportunity has been already well perceived by quite a few member-states of the Council of Europe (..).

It will be quite useful however to provide some impressions and points for thought, based on the experience of the EAA. As indicated, European archaeology has grown considerably in the past decades, largely thanks to the Valletta Convention and its core requirement to take account of archaeological remains in the planning and development process. This has led to an important growth of "developer-led" or "preventive" archaeology across the continent, undertaken ahead of the potential destruction of archaeological remains by infrastructure and building works. Alongside an increase in public outreach and an ambivalent for-profit commercial sector, the EAA strives to hold together the "research driven" and the "developer-funded" dimensions of archaeology.

In addition to so-called "pure" or "blue sky" research, the use of digital technologies is likely to have impacts in two major areas: 1) archaeological mapping and 2) access to data.

1) **Archaeological mapping** include here cartography, GIS, grid coordinate location of sites, referencing by period and nature of sites, delimitation of (rural or urban) zones of archaeological sensibility, and so forth. The data for such digital-aided mapping originates from excavations, evaluations and site sampling, on-site prospections and mechanical surveys, as well as aerial photography or Lidar reconnaissance.

Archaeological mapping serves two major functions (Articles 2, 3, 7): as heritage management tools, for inventorying, reporting, and supervising heritage assets, and also as scientific research tools, for studying sites in their landscapes and addressing human-environment interactions at different scales, as well as phenomena of mobility and migrations.

Building on their experience, professional archaeologists at the EAA are likely to wonder if these two mapping aims (heritage, research) are always convergent? What sort of normalisation and shared standards are required in either case? As well, can these maps be made to provide relevant indications (without excessive information or noise) for urban and rural planners, for local authorities and for builders? At the same time, how can the information in these maps be protected from increasingly sophisticated looters and metal detectorists?

2) **Access to archaeological data.** For both scientific, procedural and ethical reasons, professional archaeologists produce a wealth of data and documentation. Archaeology – or at least this important part involving the evaluation and the excavation of archaeological sites – is a non-repeatable experiment (unlike, for example, the multiple re-reading of a manuscript), which involves the de-structuring of the sedimentary matrix and the physical and analytical separation of its contents (artefacts, ecofacts, samples). This explains the necessity to document on site the process of excavations in as much relevant detail as possible. This wealth of archaeological documentation (plans, sections, distribution maps, stratigraphic units, notes, sketches, photographs, ledgers, inventories, etc.) has long been drafted and assembled using traditional inscription technologies (pen and paper, forms, photographic prints): increasingly, there is a move towards "native" digital recording, where all data are produced and processed in digital format.

From the point of view of professional archaeology, several challenges surround the production, access to and use of archaeological data, in the wake of the Valletta Convention.

(a) One problem is that of the so-called "grey literature", that is the reports that are an administrative requirement following all preventive archaeology or developer-funded operations, but which very often do not get to be known and disseminated in the archaeological community. When results of an archaeological operations are inaccessible, this is as if there has been no archaeological research at all. It is true that much more grey literature and data generated by "contract archaeology" can be made accessible by digital means, for example by including these reports in a searchable database. Has this problem been fully resolved, or brought under control?

(b) A related issue concerns normalized formats of data entry, sharing and re-use. These uniform formats are of interest for centralised heritage administration, if only because they promise to be 'cost effective'. Such normalization may however be poorly fitting for research objectives, for using new descriptive criteria, identifying unexpected patterns and generating new knowledge.

(c) Use of the FAIR/O principles, developed since 2016, is becoming widespread. These principles underline the Findability, Accessibility, Interoperability, and Reuse of digital data, as well as their Open Access (<https://www.go-fair.org/fair-principles/>). The availability of data according to the FAIR/O principles can facilitate, but not initiate, scientific research.

Among the issues that could be raised by EAA professional archaeologists are the following. Firstly, it is clear that data without analysis and interpretation is of little use. How then to ensure that the vast amounts of "contract archaeology" grey literature data produced over the last 30 years are well used – not simply to authorise the planning process (and indeed clear the grounds from archaeological remains), but also for scientific understanding and social benefits? As well, alongside the benefits of the FAIR principles, the questions of individual copyright and authorship on scientific publications remains to be addressed. Likewise the opportunities provided by 'Open access' need to be stimulated, but also controlled: how to encourage public outreach and participation, while maintaining scientific authority and credibility.

The Council of Europe's Valletta Convention has proved to have immense impact on European archaeology over the past 30 years. As it sets now to receive a digital technology 'booster', the European Association of Archaeology stands ready to provide its experience and its expertise in order to assist the CDCPP and the Council of Europe to further attain the conventions' wider objectives and benefits at a European level.

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