

# Mapping Our Heritage: Towards a Sustainable Future for Digital Spatial Information and Technologies in European Archaeological Heritage Management

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(Interview conducted by Volker Hochschild & Christian Sommer)

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Archaeological record systems routinely record the position of sites and find spots from information reported from fieldwork or research. A simple point distribution map, with hyperlinks to related data, is sufficient for many web browsers (where the accuracy of location may be generalized to protect the precise archaeological location) and general distribution maps. However, spatial data also describes the extents and relationships between sites, features and objects in a geographic context. This is data derived from fieldwork and research. Modern surveying technologies enable archaeologists to produce highly accurate records of their fieldwork but the potential reuse of that data is often not realized beyond the immediate research objectives. Even where the project archive is accessible, most researchers will typically access this data as raster images within printed reports or pdfs rather than reuse the vector data. Reuse of data is therefore highly inefficient.

Development of a thematic [Spatial Data Infrastructure](#) (SDI) for archaeological data, modelled on established international and national SDIs, would realize the potential of spatial data fossilized in project reports and buried in archives (McKeague et al. 2017, 2019). By developing consistent mapping conventions archaeologists can present a coherent view of the archaeological landscape that can be easily understood by a range of users from researcher to the general public.

The [Infrastructure for Spatial Information in Europe Directive](#) (INSPIRE) Directive (European Parliament 2007) serves as a model. Developed as a response to transnational challenges, including pollution and flooding, INSPIRE has broken down national, regional and institutional barriers to sharing a range of spatial datasets across public agencies to support environmental policies and activities that may have an impact on the environment.

The INSPIRE SDI established the framework and rules for efficient data management and promotes data sharing as View and Download services via the INSPIRE Geoportal and national portals.

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INSPIRE requires public bodies responsible for the legal designation of archaeological sites to publish key data under the Protected Sites theme. However, there is no equivalent framework addressing the wealth of primary data from archaeological fieldwork.

Consequently, data is fragmented across organizations, stored in inappropriate formats, obstructing easy reuse and aggregation. In calling for a thematic SDI for primary data

- Archaeologists will create an environment in which spatial data from archaeological research is shared openly, maximizing its contribution to the study and stewardship of the past, and engages positively with the broader geospatial environment.
- To develop a sustainable approach to collecting and sharing spatial data from archaeological research that increases efficiency within our discipline, and releases the full potential of that data to the broader geospatial environment.

Data should be collected once and maintained at a level where this can be done most effectively (Infrastructure) in accordance with the FAIR Data principles coupled with capacity building within the profession (McKeague et al. 2020).

Without legislation, funding and hosts, realizing the potential of spatial data remains challenging, but it is being addressed through research initiatives. The SEADDA Cost Action recognizes the fragility of the wider digital resource whilst the ARIADNEplus Digital Infrastructure enables access to a range of data from multiple partners in Europe and beyond. It should be possible to develop the spatial element of that infrastructure to realize the potential of the spatial data we create.

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