**TRAIL 4.3:**

# Development of a comprehensive online geodata service for sites and monument data

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**Summary**

In order to make the enormous stock of heterogeneous monument-related data, which is often held in country- or institution-specific systems, more accessible and searchable in the future, an INSPIRE-compliant geodata service will be developed in which daily

updated spatial data from various providers will be bundled into a common service on sites and monuments.

Based on the practical experience of the participants in the TRAIL, we will produce white and blue papers with the specification of the online geodata service for addressing and describing monuments and sites and update it with the project's expert community within the work of the consortium. Thus, this TRAIL addresses the areas of documentation, collecting, analysing, protecting, storing and sharing in the research data lifecycle.

## Description

The online geodata service described here makes basic information about monuments (e.g. address, dating, georeference, description) available online and updates this daily using the interface described in TRAIL 4.1. This makes it easy to integrate this data into other systems.

In contrast to the interface described in TRAIL 4.1, which can be used for bilateral data exchange (e.g. between a heritage office and a university) this service is intended to bring together the heritage-related databases of several data providers. The web service (e.g. as an OGC web feature service) offers the data user a permanent, always up-to-date view of these datasets in a standardised format that can be easily processed in common geodata systems. Once the service has been set up and the access rights (see T4.1.2) clarified, this minimises the effort for data providers and data recipients

The service will be able to transport geodata (e.g. location and extent) on sites and monuments, enabling the data user to make spatial queries (e.g. which coins come from the core area of the castle, which from outside). This will be compatible with the INSPIRE standard, which is mandatory for all public institutions (e.g. all heritage authorities) in the EU.

## Relevance

The standard/interface for addressing and describing monuments and sites addresses all aspects of the research data lifecycle (documentation, collecting, analysing, protecting, storing and sharing) and is highly relevant to data providers and data users, as it can offer a permanent, always up-to-date and quality-assured view of the monument-related databases of different data providers.

Within TRAIL 4.3, participants' data services on Salian castles bundled into a central service and made available to the other partners. This makes it possible to compare the regional datasets and make the most up-to-date data automatically available to researchers.

This service constitutes a central building block within N4O, as it can be combined with the data of all other TAs. This is useful: for example, features or excavation data (TA1), finds or collection objects (TA2) or analysis data (TA3) can be combined with basic attributes of the site or monument (e.g. location, dating, address, description), to enable

a query on mapping coin finds dating from a specific period within or around Salian castles.

The service is relevant for the entire consortium and beyond, in particular for scientists, data curators, infrastructure providers, system integrators, university teachers, authorities and decision-makers. It will be created right at the beginning of the funding period within the framework of this TRAIL.

All elements of FAIR are fully addressed [F4:RDA-F4-01M, A1.1:RDA-A1.1-01M, I1:RDA-I1-01M, R1.3:RDA-R1.3-02M]. The community standard to be developed here is findable, accessible, interoperable and reusable.

**Deliverables**

Within the TRAIL, the online geodata service will be defined, modelled and tested in participants' own systems. This will lay the foundation for the feasibility study envisaged in M4.3. The results are to be published as a white paper (best practice paper) and blue paper, then updated by the expert community.

**Work plan**

- Year 1, Month 1–6: Coordination with data-holding (e.g. heritage offices) and data-processing (e.g. universities and research institutes) institutions

- Year 1, Month 5–7: OGC compliant WFS service implemented

- Year 1, Month 8–9: Service implemented in the systems of participant institutions

- Year 1, Month 9–11: Test phase

- Year 1, Month 11: Evaluation

- Year 1, Month 12: White and blue papers published

*FAIR*[1]     *F4:RDA-F4-01M; A1.1:RDA-A1.1-01D; I1:RDA-I1-01D; R1.3:RDA-R1.3-02D*

*TRAILS*     related with TRAIL 4.1

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[1] Nach Tabelle 1 von Bahim, C., Casorrán-Amilburu, C., Dekkers, M., Herczog, E., Loozen, N., Repanas, K., … Stall, S. (2020). The FAIR Data Maturity Model: An Approach to Harmonise FAIR Assessments. Data Science Journal, 19(1), 41. DOI: http://doi.org/10.5334/dsj-2020-041 cc by 4.0