Executive Summary
D2.5 – Upper-level cultural heritage ontology

This deliverable presents a collaborative effort from the project partners, which took place in months M2-M25 of the project and focused on the delivery of an Upper-level conceptual structure that captures common concepts and relationships across the four project pilots. The deliverable is focused on i) reviewing the data modelling requirements of the four pilots; ii) investigating ontology and vocabulary standards relevant to the project; and iii) defining appropriate ontologies and vocabularies to model the semantics of the "world" of CrossCult.

The ontologies and vocabularies developed during the project form the conceptual backbone of the CrossCult Knowledge Base. The *Upper-level Ontology* aims to capture the cultural heritage, and history reflection and reinterpretation semantics of the project. It is designed in a way that enables augmentation, linking, semantic-based reasoning and retrieval across diverse cultural heritage resources. It consists of a carefully selected subset of CIDOC-CRM, some project-specific elements and some elements from SKOS and Dublin Core. Its main innovative feature is the ontological definition of the semantics of *Reflective Topic*, a concept that encompasses all those connections that can be made to create a network of points of view with the aim to aid the reflection over a certain topic by enabling interconnections between physical things, such as artifacts from the venues' collections and conceptual things, such as stories about the artefacts, reflective narratives, etc. The *Venue Ontology* acommodates the spatial semantics of the pilots' venues. It accommodates different types of venues , from small closed places like the museum in Tripolis to whole cities like Luxembourg and Valetta. For the Venue Ontology, we relied solely on elements from CIDOC-CRM, as these were sufficient to capture different kinds of spatial relationships (*falls within*, *borders with*, etc.), dimensions, coordinates, place appellations, the status of a room, but also spatial events such as the move of an object from one room to another. The *User Ontology* is also compliant with CIDOC-CRM in the sense that its main elements are mapped to classes and properties of CIDOC-CRM, and also uses some of the elements of FOAF. It was extended with some further project-specific entities to capture demographic characteristics of the users of the pilot apps, but also their interests and knowledge, any comments that they make through the pilot apps, and personality traits and their visiting style. The need for an additional level of vocabulary-based semantics, which is not covered by the above ontologies, was addressed with the development of the CrossCult Classification Scheme (CCCS). This is a faceted vocabulary structure, which aggregates terminology from standard thesauri resources, such as the Arts and Architecture Thesaurus of Getty, the EUROVOC, the UNESCO Thesaurus and the Library of Congress Subject Authorities vocabulary. The CCCS also incorporates a limited number of CrossCult specific terminology entries, designed to accommodate particular needs of the project, such as types of multimedia elements, types of dimension and other.

The CrossCult ontologies and vocabularies enable a homogeneous and semantically rich representation of the data of the project pilots, whilst supporting the reflection and reinterpretation needs of the project and the development of semantics-based services for association discovery, personalisation and recommendation. They are publically available on http://www.crosscult.eu/en/resources/datasets/.

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