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Reconstructing urban transformations: Digital Humanities for the documentation of large-scale construction sites in historic cities

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The Past

DARIAH Annual Event 2025

Book of Abstracts

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discoverability and findability of resources that are essential to enable sharing and re-use of workflows and methodologies. With a population of ~5000 items, the SSHOMP relies on community curation to ensure the catalogue remains up-to-date and useful for researchers. Curation routines, mixing automatic and manual tasks, are set up to ensure and continuously improve (meta)data quality.

Contextualization and use cases

Contextualization is one of the key pillars of the SSHOMP (Barbot et al. 2024). It is meant to provide a discovery portal for tools and services, while placing these tools and services in context via publications, training materials, datasets, and workflows. As such, these last four categories are indexed in the SSHOMP insofar as they can be placed in relation with tools and services. This is an objective we are pursuing, through the automatic creation of relations and their manual curation, and through encouraging authors to create relations to other items when they create new items. This poster shows how the SSHOMP facilitates diverse methods of studying the past via contextualization of resources, relying on three community use cases:

- The integration of items created within the scope of the ATRIUM project
- The integration of items created within Text+ and DARIAH-DE
- The integration potential of items, including workflows, originating from a DARIAH WG dealing with historical data

ATRIUM Project

The network analysis in our poster shows how the SSHOMP provides insights into the use of tools, methods and standards in the DH research communities, and how it increases serendipity in the discovery of new methods and standards, by interlinking the resources and describing workflows. These relations demonstrate how inter-related this specific catalogue of tools is with the overall catalogue, and the broad impact that initiatives like ATRIUM can have on the community.

Text + and DARIAH-DE

Text+ along with the Society for Humanities and Cultural Research (GKFI), use the SSHOMP as an aggregator and delivery service to present their offerings. Much like ATRIUM, resources are tagged in the Marketplace with minimal metadata and harvested regularly via the API, allowing for the portals of Text+ and GKFI to display over 80 services on institutional websites with minimal effort - needing only to implement harvesting and display: creation and curation of resources are managed solely through the Marketplace, which is a huge benefit for both entities.

DARIAH WGs

Currently, DARIAH has four WG groups focusing on historical data: ARChitectural HEritage Thesaurus through Integrated digital Procedures and Open data (ARCHETIPO), Digital Practices for the Study of Urban Heritage (UDigiSH), Digital Numismatics and Women Writers in History. Through their cross-country and cross-disciplinary character, these WGs create unique resources, tools and knowledge about the past. The SSHOMP is a powerful tool for the dissemination of these resources, and for translating their knowledge and expertise into step-by-step, practical workflows.

Reconstructing urban transformations: Digital Humanities for the documentation of large-scale construction sites in historic cities

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Large-scale architectural construction sites are a relevant part of cities' contemporary developments. They also produce a high amount of diversified data, tools, and information that is complex and challenging to access or communicate. However, especially in the case of historic cities, they embody inventive capabilities, innovation, and processes, representing relevant information for architectural and urban history. By applying Digital Humanities approaches, it is possible to explore new ways of documenting, studying and narrating inherent complexities such as decision-making processes, the interaction of interdisciplinary urban history actors, and the contextualisation of spatial-heritage relationships, while framing these dynamics in the context of the historic city and its past.

This research addresses the challenges of recording and preserving construction site documentation by producing a critically structured digital library of diverse (born-digital, digitised and non-digitised) data, metadata and resources. By intersecting historical and contemporary materials through ICTs, a new interactive multimedia solution can provide a dynamic virtual representation of the urban space and its past. By representing site processes through a spatialised digital reconstruction of phases and interactions, the system can document and interpret the evolution of architectural worksites in historic cities, offering transparency and insight into the spatial-cultural relationships that shaped the present identity of the urban space. Therefore, the research deals with producing a digital prototype to allow cross-referencing the current and past versions of the site-related materials, promoting the accessibility and sustainability of the collected information. This digital interface will make it possible to visually communicate the dynamics of urban development through different historical-critical narratives.

The chosen demonstrator is the Piazza Municipio metro station in Naples, a large-scale infrastructural and architectural worksite in the historic city centre that has taken over twenty years to complete. Designed in 2003 by the Portuguese Pritzker Prize-winning architects Álvaro Siza and Eduardo Souto de Moura, the architectural project dealt with multiple historical heritage segments. During the excavation phases, important archaeological evidence emerged, testifying to the overlapping of multiple historical layers throughout time due to the succession of many different cultures and social changes. These findings added complexity and depth to the worksite process, making it even richer and more multifaceted.

By addressing these dynamics through a Digital Humanities approach, the study contributes to the understanding of large-scale urban transformations and their relationship to urban history, providing new digital means to document and narrate the city and its past. In this context, this contribution focuses on the challenges of building a digital tool to reconstruct, make visible, map and narrate complex processes of a large-scale contemporary construction site as a spatial and conceptual node of the historic city at the crossroads of its past, thus leading to a more comprehensive understanding of its connection to urban history.