

# Standard Dehio - On the Way from a Printed Handbook to a Knowledge Infrastructure on Art and Architectural Objects

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## Abstract

In the digital age, the Dehio Handbook of Art Monuments (Handbuch der Kunstdenkmäler) as a reference work is also changing from its traditional book form to a digital and highly networked knowledge infrastructure. In two Marburg institutions of the Leibnitz- Association (Leibnitz Gesellschaft), two projects on the "digital Dehios" are running parallel in cooperation with the Dehio Association (Dehio-Vereinigung): at the Herder Institute for Historical Research on Eastern Central Europe for the series on the East Central European countries, which begun in 1999, and at the German Documentation Centre for Art History Foto Marburg for the series on German federal states. Other partners include the digiCULT-Association (digiCULT-Verbund) for the development of the backend (digiCult.web) – and associated thesauri (xTree), as well as the Berlin company Outermedia, which is responsible for the development of the front end.

The most important elements of the original idea of the Dehio Handbook have been retained: the targeted selection of objects, the communication of well-structured and up-to-date information in order to record the history of origin and alteration in a condensed statement, as well as the most important characteristics of a building and to embed them in the broad art-historical context, plus the publication in a handy form.

The previously structured text, which is based on recording standards, is supplemented by the possibility of a collaborative, continuous work on texts, even if the starting points are different. At Dehio Germany, it is primarily a matter of digitising the existing text corpora using solutions from the Text Encoding Initiative. At the Herder Institute, it is a matter of creating a new context with the projects for individual countries (Baltic countries) or large cultural regions (six volumes for Poland) conducted together with local cooperation partners. The support for the editorial process plays an important role in this.

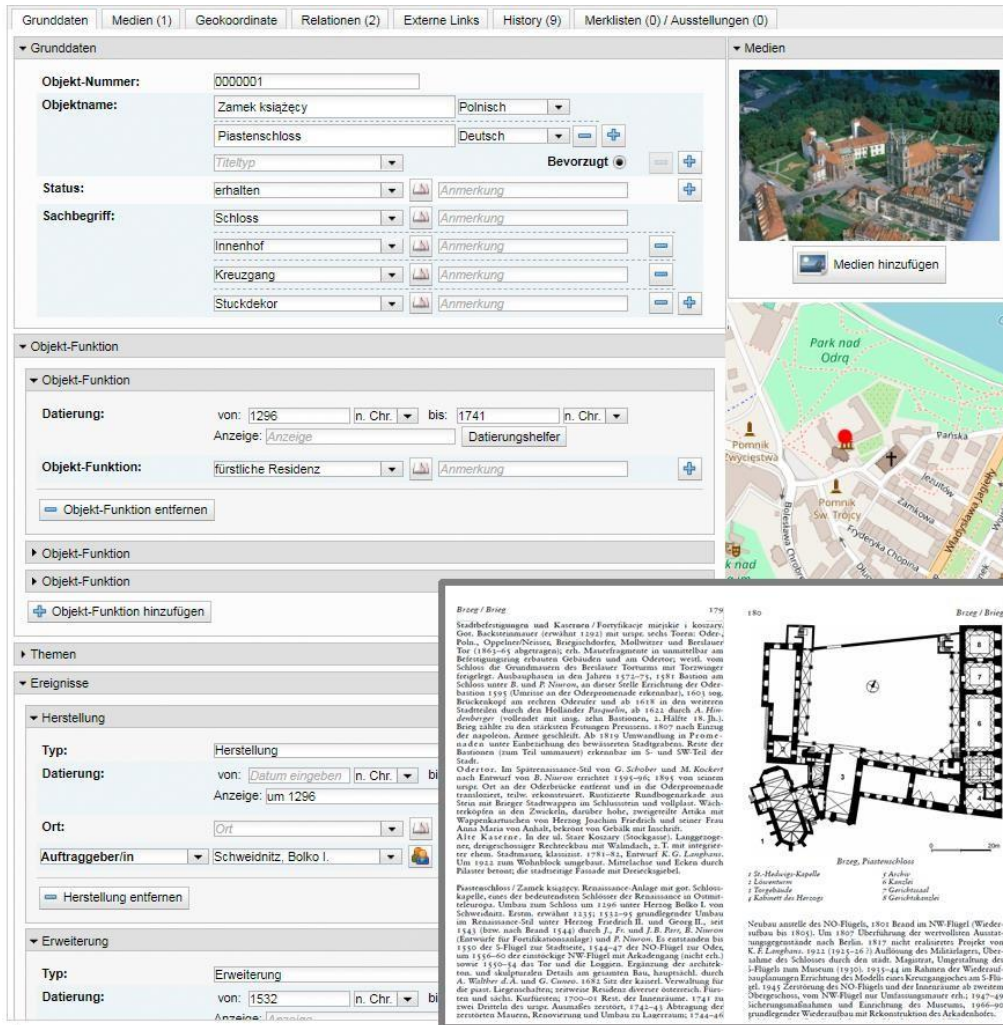


Fig. 1. Analog version of Dehio Text and Backendtemplate in digiCULT.web © Herder-Institut Marburg.

One of the key aspects of the development is visualisation. It helps to complement and strengthen the important core tasks of a Dehio in three ways: beginning with an illustration of the object in question and its spatial context through visual sources, which enables the reader to decode a text intellectually on their own (text comprehension). Furthermore, it promotes the visibility of textual information in a broader context (both of the handbook and of architectural history in general). And finally, it helps to focus attention on a specific content (user guidance).

The digital medium enables the decoding of the information of the semantically densely charged texts for better comprehensibility for humans and even for machine readability at the same time. The supplementary metadata as a schematic representation of an object serve to project complex information references (such as building structure and history). The data model is based on the object-oriented standard ontology of CIDOC CRM, where the class E22\_Human\_made\_object for buildings and furnishing is at the centre of modeling and is mainly related to the places and actors via the events. For this purpose, developments were made in the applied backend-database digiCULT.web for new entity types and corresponding entry masks. Experiences from other projects of the Institute were considered, which deal with the development of the data model for semantic. In addition, another entity type is applied for the description of the well-structured texts of the DehioHandbook (catalogue texts and introductory essays) in order to support the context of the creation

and editorial processes. As the frontend is developed separately by another service provider (Outermedia, Berlin), the data is output from the backend in LIDO format (Lightweight Information Describing Objects) and in the REST API.structured information on architectural and artistic monuments (Semantics 4 Art & Architecture).

Thanks to the standardised recording of entities as well as the application and further development of the thesaurus, the secondary goal of enriching standard data sets (especially GND) will be possible directly from the backend in digiCULT.web, namely via a tool that is being developed within the project GND4C. This is to achieve the expanded visibility of the real material object in the world of Linked Open Data. External normative registers (monument preservation, cadastral offices) are applied as reference sources for places and objects, some of which are accessible as georeferenced metadata (INSPIRE). For broader access to self-generated metadata, a query service is planned for the next project phase.

In the frontend (user interface), visualisation is thus applied to the publication medium (portal) in order to implement the concept of both autonomous and guided use. Thanks to selected image materials on the object, the configuration of the combined search, as well as the mediation of internal and external relations to further resources supported by metadata, the aim is to design a standard of recording that guarantees both easy searchability (retrieval) and connectivity (networking).

The enrichment of the authority files, formulated as a "secondary aim", corresponds to the desire to remedy a desideratum existing above all in the area of East Central Europe, which, despite many initiatives, remains to make the information of the art and building objects of the individual institutions, concerned with the documentation of cultural heritage, accessible. On the other hand, the current geo-referenced information, although often scattered between online services of various authorities, is largely accessible. Consolidating this information and adding a historical perspective, as well as providing standardised data sets on the sites, is becoming an important task, as is the creation of authority files on the artists and other actors mentioned in the texts.

Another secondary goal was the creation and maintenance of a multilingual application thesaurus that not only emerges from both projects at the same time but is also intended to be used from and for other documentation tasks at the Herder Institute and DDK Foto Marburg and fed by in-house databases. In the process, the broadest possible connection to standardised vocabularies in art history, especially to the Art and Architecture Thesaurus (AAT), will be sought (mapping, structural logic, quality assurance). In a parallel project within the framework of participation in NFDI4Culture, the possibility of enriching the standard of AAT Germany and AAT Getty is being explored.

In this way, the developments and experiences in building the knowledge infrastructure "digital Dehio Handbuch" (in HI: Dehio OME. Art Monuments in East-Central Europe) as well as in accompanying project contexts (Semantics4Art&Architecture, NFDI4Culture) are to form a new basis for the digital documentation of architectural and art monuments or material cultural heritage.

## Funding

Die Beauftragten der Bundesregierung für Kultur und Medien (BKM):

<https://www.bundesregierung.de/breg-de/bundesregierung/staatsministerin-fuer-kultur-und-medien>

Gerda Henkel Stiftung: <https://www.gerda-henkel-stiftung.de/>

ZEIT-Stiftung Ebelin und Gerd Bucerius: <https://www.zeit-stiftung.de/>

Böckler-Mare-Balticum-Stiftung: <https://www.boeckler-mare-balticum-stiftung.de/>

## References

About Dehio-Projects: Dehio Ostmitteleuropa OME at <https://www.herder-institut.de/projekte/laufende-projekte/dehiohandbuch-der-kunstdenkmaeler-in-ostmitteleuropa.html> (Accessed: 30 July 2021), Dehio Deutschland at [https://www.uni-marburg.de/de/fotomarburg/forschung/laufende/dehio\\_digital](https://www.uni-marburg.de/de/fotomarburg/forschung/laufende/dehio_digital) (Accessed: 30 July 2021). <style CHNT\_Reference>

About Project Semantics4Art&Architecture: [https://www.ub.uni-heidelberg.de/wir/projekt\\_semantics4art.html](https://www.ub.uni-heidelberg.de/wir/projekt_semantics4art.html) (Accessed: 30 July 2021) and at <https://www.herder-institut.de/projekte/laufende-projekte/semantics4artarchitecture.html> (Accessed: 30 July 2021). <style CHNT\_Reference>

About NFDI4C-Project: at <https://www.herder-institut.de/projekte/laufende-projekte/vernetzung-von-fachvokabularen-mitinternationalen-referenzvokabularen.html> (Accessed: 30 July 2021) and at <https://nfdi4culture.de/what-we-do/taskareas/task-area-2.html/> Development of data formats, data standards and expert vocabularies (Accessed: 30 July 2021). <style CHNT\_Reference>