

# Towards Pro-innovative Models for Efficient Use and Continuing Development of the Digital Culture Ecosystem

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**Resume:** Digital cultural ecosystems appears to respond to the growing willingness to share the wealth of cultural resources and continuous research and study of cultural treasures. These systems virtually assemble various digital collections, archives, virtual museums, digital libraries, and cultural heritage sites to facilitate the access to their resources, bringing cultural content to new audiences in novel ways. The paper presents the activities for development of models for effective use, continuing improvement, research and delivery of digital cultural resources in digital cultural ecosystems following the grand vision, good practices and achievements of the Digital Research Infrastructure for the Arts and Humanities (DARIAH).

Major digital sources related to European history and culture are fragmented in various repositories, libraries, and collections. This raises the question of how users can access heterogeneous sources. The problem of how to utilize all available knowledge that is distributed over multiple locations and stored on a myriad of digital storage is challenging. The number of cultural artifacts is increasing rapidly and there is also a growing demand for simple access and better usability and personalization.

An innovative model for the creation of new scientific knowledge will address the problems of *gathering, processing, analyzing, and visualizing massive amount of data*. It will include methods of analysis, understanding, interpretation, context-dependent use and sharing of content in ecosystems for digital culture in new ways and through means for fuller delivery of knowledge to digital collections and archives of cultural artifacts.

The paradigm of ecosystems for digital cultural assets (also called digital cultural ecosystems, DCEs) appears to respond to the growing willingness to share the wealth of cultural resources and continuous research and study of cultural treasures. These systems virtually assemble various digital collections, archives, virtual museums, digital libraries, and cultural heritage sites to facilitate the access to their resources, bringing cultural content to new audiences in novel ways. Digital cultural ecosystems demonstrate wide range of applicable services and tools for re-using and repurposing digital assets (or objects), paving the way for wider exploration of cultural resources and boosting innovation.

The users' manipulations with DCEs content are related to: access and exploration, curating, semantic extraction, use/re-use and remix, analysis, study, etc. The main content units and the activities for their manipulation can be extended according to the concrete DCE' aims, marketing and advertising strategies, target groups, and so on. In this study, we concentrate on models and visions for effective use, continuing development, research and delivery of digital cultural resources in DCE following the grand vision, good practices and achievements of the Digital Research Infrastructure for the Arts and Humanities (DARIAH).

The grand vision of DARIAH (<https://www.dariah.eu/>) is to facilitate long-term access to, and use of, all European Arts and Humanities digital research data. The DARIAH is a connected network of people, information, tools, and methodologies for investigating, exploring, and supporting work across the broad spectrum of the digital humanities. Researchers use DARIAH to:

find and use a wide range of research data from across Europe;

exchange knowledge, expertise, methodologies, and practices across domains and disciplines;

ensure that they follow standards and best practice;

experiment and innovate in collaboration with other scholars.

The core strategy of DARIAH is to bring together national, regional, and local endeavors to form a cooperative infrastructure, where complementarities and new challenges are clearly identified and acted upon.

Our innovative model for efficient use and continuing development of the digital culture ecosystem includes the following strategic goals:

- analyze research and development of the ICT sector and the needs of the cultural heritage sector to outline the directions for further development and improvement in the search for innovation;

- work to improve coherence between cultural institutions, public administrations, research institutions, and local business representatives involved in the ecosystem to develop specific policies to support the wider use of ICT in the cultural sector inheritance;
- promote transnational and cross-border cooperation between cultural institutions with similar goals and interests in the context of digital preservation, presentation, and open access;
- transfer knowledge and good practices among ecosystem users (in this way, users stimulate innovation and strengthen their capacity for future collaborative work);
- develop a joint action plan between ecosystem users to stimulate innovation and technological development in the cultural heritage sector to promote new niches for cultural tourism, technologically supported training and research.

To achieve our strategic goals, it is necessary to:

- develop a common research and development strategy for the new "digital culture";
- make a SWOT analysis of technical development, innovation capacity and economic prospects for digitization and ICT in support of the cultural heritage sector;
- create online tools for the mapping of ICT activities, research and development in the cultural heritage sector;
- develop a joint action plan and business plan to promote the use of ICT and digital innovation in the cultural industry;
- create a support strategy and mentoring activities to support targeted users;
- promote the ecosystem at national and international level;
- open and expand the existing technologies and platforms for digital access to cultural resources (e.g. semantic web, open data, and metadata);
- use of standard formats to enable interoperability for digital content sustainability and integrated dissemination to the public (including the educational community, curators, librarians, and ordinary visitors). Existing initiatives and good practices that can be reused will be analyzed;
- penetrate everyday life through current and future technologies such as serious games, mobile applications, digital TV, 3D, video walls, etc.;
- include social media technologies such as blogs, wikis, social networks, and more. Virtual and physical environments are specifically designed to stimulate creativity, knowledge sharing between sectors, and attracting talent;
- consume new creative and cultural content, transform it, and provide the opportunity to build new revenue and business models in the sector in order to change the practices of the whole cultural chain in line with today's technological upturn.

The digital arena offers artists and cultural organizations the opportunity to broaden, diversify, and deepen their relationship with new and existing audiences and to increase their engagement with the digital cultural heritage.

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#### Session Details:

**Title:** Repositories: Are we serving our scientists? Cross-learnings from multiple disciplines (/IDW2018/sessions/208/)

**Room:** Tsodilo B1

**Date:** Nov. 7, 2018

**Time:** 09:30 - 11:00

**Room:** Tsodilo B1

**Date:** Nov. 7, 2018

**Time:** 11:30 - 13:00

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[Back to Programme \(/IDW2018/programme/\)](/IDW2018/programme/)



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