

## Chapter 2.9

# Development Of E–Government Services For Cultural Heritage: Examining the Key Dimensions

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### ABSTRACT

This article is aimed at defining a framework for the design of e-government services on cultural heritage. Starting from an analysis of three cases on digitization of different types of cultural objects, we highlight the problems existing in the creation of e-services on cultural heritage. These cases show the existence of four key issues in the development of this kind of information systems: digitization, requirement engineering, standardization, and interoperability. The proposed framework addresses these issues, focusing on the user requirements on one side, and the cultural object representation—which is the key to interoperability—on the other. In the cultural domain, the EU Lisbon strategy pushes for the compatibility of shared content across multiple, locally generated contents. Dynamic content exchange requires the use of a prescriptive framework for the develop-

ment of cultural heritage Web sites. This article provides such a framework, using observation from concrete applications, knowledge of information systems development methodologies, and the IDEF0 modelling method.

### INTRODUCTION

The Lisbon strategy for eEurope (EU Report, 2002) and the following eEurope 2002, eEurope 2005, eEurope 2010, drafted as results of the activities of the European Council, are aimed to “make the European Union the most competitive and dynamic knowledge-based economy with improved economy and social cohesion by 2010.” In concrete terms, this means broadband and high-level Internet-based services for the entire population of the European Union. The means envisioned to achieve this goal are largely based

on increasing both demand and offer of e-services respectively, from the public/users and the providers. The problem has been framed as a “chicken and egg” problem and the solution has therefore been to address both ends: increase government-side services and create a friendly legislation for the implementation and sale of broadband connections (EU Report, 2002). This article focuses on the demand side, that is, on the development of the public electronic services.

On the demand side, electronic government initiatives involve providing services in e-government, e-learning, e-health, and e-business (EU Report, 2002). While the efforts of e-government are focusing on providing services to citizens in order to achieve higher efficiencies through automation (tax filing, certification, electronic voting, information provision, and so forth), one other important area of investment regards the facilitation of access to cultural resources. The regional and local cultural heritage (to be defined in a broad sense, from museums to regional gastronomy and folklore) is one of Europe’s greatest economic assets, and ICT and other advanced technologies can dramatically increase the possibility of its exploitation. Until now, the government initiatives for divulging electronic material on the local cultural heritage have been varied in nature and include the creation of portals for information on cultural events, which is the most common model of exploitation today, including the digitization of artwork for archives, the creation of virtual tri-dimensional museum visits with tri-dimensional digitization of art works, and the rendering of archaeological visits in digital formats (Carugati, Hadziliadis, & Demoulin, 2005).

Nevertheless, the potential of using electronic services for cultural heritage applications is far from being fully exploited and many initiatives have remained at the stage of pilot projects. Of these pilot projects, few are completed and most contain only one or very few examples of art digitization. Until now, experiences of use of ICT in cultural heritage sectors too often fail in provid-

ing valuable economic results due to a number of problems, and have generated disappointment among the potential players and beneficiaries. The main problems have been:

- In general, at regional and local level, there is shortage of experience and expertise about the use of ICT in cultural heritage areas. Therefore, local and regional administrators have to rely on ICT vendors and consultants, and these in general, are mainly able to suggest general purpose solutions, non-optimised for the specific sector, since even large IT consulting companies have limited expertise in the cultural heritage area.
- If we consider the “conventional” cultural heritage, such as museums and galleries, this sector lacks expertise and experience in marketing and business promotion on electronic media, which makes it difficult to develop credible business models and plans, and to attract investments.
- There are analogous problems also in the cultural tourism sector. There are hundreds of projects and initiatives related to cultural tourism in Europe, but they often have been designed on “supply oriented” thinking, without systematic investigation into what the customer, the “cultural tourist,” is looking for. The issue of user diversity should be considered in the system development process, as pointed out by Klawe and Schneiderman (2005), since it is a critical success factor to steer user preferences. This is valid not only for business purposes, but also and foremost at the community level (Carroll, 2001). Finally, as e-government services are web-based, they are available to different users. Even though the expectations, in terms of services, might differ, Nielsen (2005) states that usability factors influence, for both professionals and other categories, the success of the service.

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