E-GOVERNMENT AND E-BUSINESS MODELS: MYTH AND REALITY

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ABSTRACT

The increasing use of Information and Communication Technologies (ICT) strongly influences the way by which users approach, understand and experience cultural content. More specifically, the advances in internet applications are expected to transform the traditional role of museums and cultural organizations in general which are responsible for the preservation and management of cultural heritage. This paper explores the aforementioned transformation focusing on the cultural tourism and the e-business models adopted by cultural organizations in order to document, present and promote their collections, exhibitions and services. The main objective of this research is the recognition of these emerging business models and its classification. To this purpose, a structured methodology is followed that examines the performance of several cultural organizations. The study proves that the move from the physical space to the virtual place is happening very slowly and that the museums are still anchored to their traditional activities. We identify three e-business models in use: the advertisement, the commercial and the information broker models. These models act as atomic components and are used complementarily by cultural organizations. We conclude presenting a sustainable e-business model for cultural organizations in the pure virtual space. The significance of deploying the proposed business model could prove vital in the case of countries which are highly dependent on the tourists visiting them through their websites.

Keywords: Business Models, E-Government, Cultural Services, Cultural Heritage Management.
INTRODUCTION

The last few years have seen a significant rise in the provision of government services to the European citizens through the internet. The push has taken momentum with the finalization of the Lisbon strategy for eEurope (EU Report 2002) where the European Union (EU) governments agreed to provide concerted actions to boost both demand and supply of electronic services. Among the services provided, one area considered important is the provision of cultural services (ibid). Despite the fact that all European Cultural Ministries and many museums are active in this area (Carugati et al. 2005), it seems that the services provided are few compared to the services provided in other areas (e.g. fiscal and social). The reasons for this gap cannot be found in the technology which is available for the documentation and sharing of cultural content in electronic format (Kiernan 1981, Loebbecke & Thaller 2005). Indeed the advances in internet based applications are already available to transform the traditional role of museums and cultural organizations from being place-based institutions to become active in the virtual space (terminology adopted from Weill & Vitale 2001). If the reasons for the gap are not technical, the other factors that can participate to create this gap could be either organizational or business related (Kraemmergaard & Møller 2004, Linstone 1984). As Carugati et al. (2005) point out the main problem might reside in the fact that museums – as other cultural organizations – are not like conventional government services. In particular, while every citizen is equal in front of the government and therefore also in front of any eGovernment initiative, this does not hold true for cultural initiatives where customer segmentation is normal practice (ibid). Customer segmentation leads to different business practices and as a result to various business models. However, after researching the literature we did not find any study dealing with business models used in eGovernment initiatives.

Given the significance of the cultural tourism in Europe, this paper therefore explores the provision of eGovernment services in the domain of cultural tourism and in particular the business models adopted by cultural organizations in order to document, present and promote their collections, exhibitions and services. The main objective is the identification and classification of the e-business models in use. The methodology focuses on the practices of several European cultural organizations.

The article is composed of five sections. Firstly, we present the basic concepts about cultural tourism and the state of the research on electronic business models. Secondly, we present the method for modelling and identifying e-business models that we will use in the paper. Thirdly, we present the research methodology. Then, we present our survey of electronic initiatives in the domain of cultural heritage. Finally, we analyze these initiatives to identify explicit or tacit e-business models. Based on this analysis and the theory we suggest a business model for museums to operate in the virtual space.

RESEARCH BACKGROUND

Cultural tourism is the form of tourism related to the discovery of monuments and sites. The positive effect on the cultural heritage sites is that it contributes to their maintenance and protection (ICOMOS 1976). At a time of increasing globalisation, the protection, conservation, interpretation and presentation of the heritage and cultural diversity is an important matter for all nations (Ritzer 1999, Urry 2001). A primary objective for managing heritage is to communicate its significance and need for its conservation. Domestic and international tourism contributes significantly to national economies and continues to be among the principal means for cultural exchange, providing a personal experience, not only of what has survived from the past, but of the contemporary life and society of others. It is increasingly appreciated as a positive force for natural and cultural conservation. Tourism can capture the economic characteristics of the heritage and harness these for preservation by generating funding, educating the community and influencing policy. In some cases it is an essential part of the national and regional economy and can be an important factor in the local development (Frew & Shaw 1995, Harrison 1997, Nolan & Nolan 1992).
Cultural tourism has become an increasingly complex phenomenon, with political, economic, social, educational, ecological and aesthetic dimensions. The achievement of a beneficial interaction between the potentially conflicting expectations of visitors and host or local communities, presents many challenges and opportunities. Cultural tourism can also bring benefits to host communities and provide an important means and motivation for them to care for and maintain their heritage. The cooperation of community representatives, tourist operators, property owners, policy makers, those preparing national development plans and site managers is necessary to achieve a sustainable tourism industry and enhance the protection of heritage resources for future generations.

Information technology has become an important tool for promoting cultural tourism national policies, however there is a lack of research on the business modelling side of such activities. This paper investigates the e-business models in the cultural tourism sector, based on a survey concerning existing cultural websites. As a starting point we looked for an agreed reference framework for the definition and classification of business models but both proved to be problematic concepts.

The definition of business models changes in function of the context and it is given plural dimensions (Hawkins 2002, Mahadevan 2000, Timmers 1999). In some cases there is no definition given (Bambury 1998, Chen 2005, Saloner & Spence 2002) but only taxonomies of business models are presented. Alternative terms such as business designs and strategies are used to suggest the same entity (Kalakota & Robinson 2000, Whiteley 2000). The generally acceptable approach of the business model definition converges to the set of methods that organizations adopt to carry out business processes (Afuah & Tucci 2001, Rappa 2004, Turban et al. 2004). Another approach considers business models as architectures (Dubosson-Torbay et al 2002, Timmers 1999), while Krishnamurthy (2003) argues that a business model is the path to the profitability of an organization. Other authors refer to business models as descriptions or specifications of the way in which organizations carry out exchanges (Elliot 2002, Gordijn 2004, Hawkins 2002, Weill & Vitale 2001). Petrovic et al. (2001) describe business models as the logic of a business system for creating value.

As far as the classification of business models is concerned, there is no consensus among the researchers. Timmers (1999) distinguishes between eleven generic e-business models and classifies them according to their degree of innovation and their functional integration. Eisenmann (2002) uses broad categories, whereas Rappa (2004) and Bambury (1998) distinguish businesses according to a unique property resulting in twenty-seven and fourteen different models respectively. Bambury (1998) distinguishes between what he calls transplanted real-world business models and native Internet business models, identifying eight transplanted real-world business models and six native Internet business models. Rappa (2004) proposes eight major categories of business models with no fewer than twenty-seven sub-categories. Afuah and Tucci (2001) list and describe nine business models whilst Lawrence et al. (2003) propose eleven business models. Kalakota and Robinson (2000) do not use the term business model. They list seven e-business designs which are refined adding details that relate to the particular business strategies. Alt and Zimmermann (2001) point out that there are two major categories of business models, one based on the object of the business model and the other based on the purpose of the business model. Tapscott et al. (2000) propose a network- and value-centered taxonomy that distinguishes between five types of value networks, which differ in their degree of economic control and value integration and they are referred to as b-webs (business webs).

Given this pluralism in definitions, in the following section we present the concepts and methods used in this research.

**CONCEPTS AND METHODS FOR E-BUSINESS MODELS**

For the scope of this paper we follow the definition and method for e-business models proposed by Weill and Vitale (2001). They suggest that an e-business initiative is composed by simple concepts that govern the exchanges of any organization (exchanges of money, products, information). They present the idea of “atomic e-business models” as building blocks that can be combined to drive a
more complex e-business initiative (ibid p. 56). The method used by Weill and Vitale to identify the business models is to follow and map the exchanges that an organization carries out. They classify the exchanges as happening in *place* (the real world) or in *space* (the virtual world, the internet).

They provide a schematic for modelling an e-business initiative. The schematic with the complete list of elements is shown in Figure 1 where an example of a Direct-to-Customer relationship is modelled.

![E-Business Model Schematic and example (after Weill and Vitale, 2001)](image)

In our research we use the elements of this schematic but not the eight atomic business models that Weill and Vitale have identified.

In order to research business models it is necessary to define their architecture, that is, the elements that compose business models. Mahadevan (2000) indicates that a business model consists of a configuration of three exchanges. Firstly, the value stream, which identifies the value proposition for the business partners and the buyers (the flow of information “i”). Secondly, the revenue stream (the flow of money “$”) to assure revenue to the organization. Thirdly, the logistical stream (the flow of products “0”), which addresses the supply chain issues of the organization. We will therefore follow these three flows in our research for e-business models in use.

Having a modelling schematic and the architecture defined, we possess the reference framework to carry out this research.

**METHODOLOGY**

The research conducted in order to evidence the e-business models used in cultural heritage electronic services followed a structured approach comprised of five steps. First, we catalogued the EU countries by the level of internet access in percentage of households per country. To achieve this, we surveyed the relevant statistics for the EU provided by Eurostat (Eurostat Report 2005). As there is not an a-priori connection between widespread usage and advanced or elaborated e-business models we preferred to survey both the services offered in high placed countries and in low placed ones. As an investigation of eGovernment services requires a good knowledge of the local language we were limited in our choice by the languages we speak. We then used the Eurostat statistic to identify the three top and the three last countries classified according to internet usage that matched our language capabilities. These countries were Greece, Portugal, and Spain for low usage and Sweden, Denmark, and United Kingdom for high usage. For these countries we surveyed the most important museums according to the number of visitors per year.

Then, we analyzed the cases through the reference framework presented in section 3 to identify the e-business models used and we applied the modelling schematic to represent them. Following Weill and Vitale (2001), we looked for the atomic e-business models to identify the building blocks for more complex e-business initiatives.
CASE ANALYSIS

In this section we present the selected cultural organizations from the six countries and we identify the flows of information, products, and money that characterize them. We conclude proposing a sustainable pure e-business model compatible with the initiatives that we have seen in use.

1.1 Selection of Cultural Organizations

The starting point of the survey was the Eurostat statistics table to identify the countries under consideration and the next step was the selection of the following websites:

- Greece (GR) – Ministry of Culture. In Greece there are no stand-alone web services that host the museums’ collections and artifacts. The Ministry of Culture acts as an Information Broker which has under its auspices all the public cultural organizations and provides information about their collections, sample objects and contact details. The website is responsible for advertising the museums, providing one-way information flow to the users.

- Portugal (PT) – Instituto Português de Museus - Museu Nacional de Arqueologia. This site provides the same Information Brokerage service as the Greek Ministry of Culture, but it also offers direct access to the cultural organizations’ own sites. This is the missing link from the previous case and shows an evolution from the Information Broker service to bi-directional information flow and commercial services directly provided by the stand-alone website of the museums. The museum website supports the sale of the museum shop products to the website user and it supports the existence of a virtual community called “Friends of the Museum”.

- Spain (ES) – Ministerio de Cultura – Museo Nacional del Prado. In comparison to the two previous cases, there are no web-based commercial services provided to the users of the website, however there is a service that provides a selection of artworks with a detailed description accompanied by their digital image. The users are given information on how to contact the museum shop in case they are interested in buying certain objects and the “Friends of the Museum” initiative exists as well.

- United Kingdom (UK) – Department for Culture, Media and Sport – The British Museum. This cultural organization offers extensive commercial services: there is an integrated approach concerning not only the online sale of exhibition tickets, but also the special events, the Pre-book Highlights Tour and the museum shop. Furthermore, there are online games for children. It is essential to point out that entrance to the permanent collections of the museum is free while the commercial services apply to temporary events.

- Denmark (DK) – Statens Museum for Kunst. This website is offering information on the museum collections and there are no commercial services regarding booking tickets in advance or buying items from the shop, but the “Friends of the Museum” initiative exists.

- Sweden (SE) – National Museum. In contrast to the previous cases, this website features a database called “Webart” that provides pictures and descriptions of the museum collections. The quantity of material hosted in “Webart” is growing indicating increased activity (from 60000 collection items in 2004 they reached 92000 collection items in 2005). All items are catalogued with their metadata and most of them are accompanied with their images. The resolution of the images starts from 100x140 pixels for thumbnails and reaches 500x600 pixels. These services are provided free of charge.

1.2 Identified Business Models

The analysis of the services provided to the public through the cultural organization websites show some important similarities and many differences. The first observation is that most of the museums visited, used the websites as an “advertisement” for the museum: only a very limited view of the
collection is available for browsing and the image quality is not very high. The websites are used mainly to attract visitors (with a time lag $\Delta T$). We call this e-business model the “advertisement” model and it is shown in Figure 2 (refer to section 3 for the modelling schematic). Only two websites offered the opportunity for the users to download an electronic version of the artworks (SE, ES), but visitors cannot download or buy high-quality images from any of the websites. This could turn into a business model but it was not exploited at this time. The business services offered, covered sales of objects from the museums shop (PT, UK) and advance ticket sales (UK). We call this e-business model the “commercial” model which is an extension of the “advertisement” model and it is shown in Figure 3.

![Figure 2: The Advertisement Model](image)

![Figure 3: The Commercial Model](image)

Several museums (PT, ES, DK) offer the possibility to become part of the museum club indicating therefore the interest in creating a community of aficionados, but these communities are leveraged centrally by the museums and do not offer discussion forums open to the members, therefore in the cases above, the “virtual community” model that could exist is not exploited either.

A third e-business model identified is the “Information Broker” which is usually implemented by the national Ministries of Culture. Greece is the only country in which the Information Broker model is not accompanied by additional e-business models, whereas in other countries it represents one of the possible ways to promote and access the museums’ websites. Figure 4 shows the Information Broker e-business model identified in all the six cases, where the thick black line represents the direct commercial relationship between the visitor and the museum. The cultural organization website represents the Information Broker.

![Figure 4: The Information Broker Model](image)

The investigation shows that museums are still firmly implanted in the place realm and that the move to the virtual space is happening only gradually and in a very traditional way (museum shop online). We did not observe business models that could be defined as innovative. Rather, the museums adopt a combination of the three atomic models identified above.

1.3 Proposed Business Model for Cultural Organizations

At the conclusion of this research it was observed that there is hardly any flow of money in exchange for high quality digital material (images and metadata). This exchange could serve the needs of all those visitors that for a variety of reasons cannot physically reach the cultural organization (e.g. people
with disabilities and remotely located users) or that are interested in particular details of the artworks (e.g. academics and researchers). Such a service would therefore not represent a threat to the core activity, but a complementary service with a high social impact.

While the business models identified in the six cases can only survive with the organization’s presence in both place and space, we propose a sustainable one that is independent from the existence of the museum in the real-world. In order to do this, it is necessary to introduce a new entity which we call the Digitization Broker that supplies digital services to the cultural organizations (e.g. digitization of artworks). This model, which we call “Digital Commercial” Model, can include other museums with which digital content can be exchanged in the context of loan agreements for collections and artworks. The model with the flows of information and money is depicted in Figure 5.

![Figure 5: Digital Commercial Model](image)

The proposed model justifies the creation of high quality and therefore costly digital material, since there is a flow of money from the visitor to the cultural organization. This flow can contribute to the maintenance, protection and preservation of the unique and fragile artworks.

**CONCLUSIONS**

In this paper we studied the existing e-business models in the cultural tourism domain. We identified three e-business models currently in use by cultural organizations: the “Advertisement” model, the “Commercial” model and the “Information Broker” model. The cultural organizations are moving conservatively from place to space and are still more anchored in the first rather in the latter. Therefore, a sustainable e-business model is proposed, that is compatible with the other e-business models adopted and with the core activities of the cultural organizations (the “Digital Commercial” model).

The objective of the proposed “Digital Commercial” model is not to offer a panacea that will move all cultural organizations’ activities to the internet, rather to complement the existing services with new value-adding ones. The cultural organizations should find their balance in positioning themselves between place and space and continue to use the “Advertisement” model in order to attract people to the place to support all the other activities that are initiated from local community, tourist operators, property owners, policy makers, officials preparing national development plans and site managers.

An additional finding of this research refers to the fact that the most advanced business models are not adopted by the cultural organizations active in the countries with the highest internet penetration percentages. The reasons for this phenomenon are complex in nature with cultural, political and socio-economic roots and should be the topic of future research.

**References**


