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Telecommunications Policy

URL: www.elsevierbusinessandmanagement.com/locate/telpol

ICT standardisation and public procurement in the United States and in the European Union: Influence on egovernment deployment

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ARTICLE INFO

Keywords:

Standardisation
Public procurement
Egovernment
Interoperability
European Union
United States

ABSTRACT

Most governments have regarded interoperability as one of the key enablers of egovernment. If interoperability was achieved, the vision of an integrated provision of public services to both citizens and businesses by means of the information and communications technologies (ICT) regardless of the number and type of departments involved in the provision could be realized. This paper analyses two factors that may influence government interoperability: standardisation and public procurement. The paper analyses the policy and legal framework setup by these factors and checks whether egovernment deployment have been influenced by them or not. The analysis is focused on the cases of the United States federal government and of the European Union institutions and Member States administrations.

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1. Introduction

During late 1990s, most governments in OECD countries released their egovernment strategies. In the strategies, a common vision was presented where an integrated provision of public services to both citizens and businesses by means of the information and communications technologies (ICT) may be realized, regardless of the number and type of departments involved in the provision. In order to fulfil this vision, egovernment strategies have been supported by several policies, namely security, confidentiality, delivery channels, etc. One of such policies is the interoperability policy (CEC, 2002; OECD, 2003). Interoperability can be defined as “the ability to exchange information and mutually to use the information which has been exchanged”, according to the European Commission (CEC, 1991). But more technical definitions are found in the literature, such as the following one: “Interoperability is the ability to exchange functionality and interpretable data between two software entities. It can be defined in terms of four enabling requirements: communications, request generation, data format and semantics” (Mowbray & Zahavi, 1995), where the definition goes into detail enumerating the sort of requirements that interoperability must tackle.

Many interoperability policies have been implemented by means of interoperability frameworks.

An interoperability framework is a tool designed for facilitating interoperability. The recipients of the interoperability frameworks are those agencies that are engaged in government initiatives. And the final aim of an interoperability framework is to make easy the integrated provision of services to both citizens and businesses by means of egovernment. Interoperability frameworks have been produced by a large amount of egovernment agencies around the world. At least, an interoperability framework contains a technical standard catalogue. A technical standard catalogue lists those standards that are recommended for the deployment of government systems within the public administration. The standards that

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can be incorporated in some catalogues are required to be developed by standardisation bodies, but other catalogues do include any standard which has wide market acceptance. Guijarro (2005) discusses thoroughly this issue. In addition to the technical standard catalogue, some interoperability frameworks also state policies, guidelines and best practices.

This paper investigates how government interoperability policy implementation relates to the context of broader government policies. The paper focuses on two policies: standardisation policy and public procurement policy. The rationale of the analysis undertaken through the paper is the following. Firstly, interoperability frameworks are used to select those standards that are to enable interoperability between government systems belonging to different departments in one or more public administrations. Each country defines the requirements on the standards through their standardisation policy. Therefore, the standardisation policy is expected to influence which standards select and are recommended in an interoperability framework. And secondly, interoperability frameworks usually guide public procurement in the area of government systems and service deployment. Specifically, the standards that are recommended or mandated by an interoperability framework are usually referred to in contract documents when governments procure themselves with ICT systems. Since public procurement regulations regulate how technical specifications are set out in contract documentation, it is expected that the support of interoperability frameworks to the procurement procedures would be aligned to the regulations.

Based on the above rationale, the paper analyses the cases of three public administrations that have been very active in government deployment. The three cases are the federal government of the United States (US), the European Union (EU) institutions and the UK government. For each case, both the standardisation policy and system, and the public procurement policy and practice are described. From this description, some factors that may influence the interoperability frameworks are identified. Finally, the identified factors are compared against the current practices in the use of the interoperability frameworks.

The paper is structured as follows. In Section 2, the research methodology is described. In Section 3, the standardisation and public procurement policies that both the US and the EU have developed are described and compared¹ and the influence that these policies may have on government deployment is explained. In Section 4, the use of interoperability frameworks by the US federal government, the EU institutions and the UK government is described. In Section 5, the expected influence of the standardisation and public procurement policies is checked against the actual practices in government deployment in both scenarios, the US and the EU. Finally, conclusions are drawn.

The paper is focused on the influence on government deployment. Nevertheless, the conclusions can be applied to the specific context of telecommunications systems and services deployment. This statement is based on two reasons. Firstly, interoperability frameworks encompass issues, among others, at the network and interconnection level, where telecommunications lie. And secondly, public administration telecommunications are currently managed by many governments as an asset within the government strategy.

2. Methodology

The research that has been conducted is quality-oriented. The process of the research has progressed in the interpretation of the reality by means of an iterative collection and analysis of data and of building of the research hypothesis (Hernandez-Sampieri, Fernandez-Collado, & Baptista-Lucio, 2006).

The data collection method used in the research is of the non-standardised type, and it basically consists of analysis of contents of written documents. The documents are mainly the official documents that each organisation under analysis has published through their official web sites. This fact could pose problems for the research validity, because of the biased source of data. However, the author would argue that, although relying on a unique channel of information dissemination is not the best scenario, the documents are produced by the different actors involved in the area under research. Indeed, documents on government that are relevant for our research have been produced by the following three different actors:

- Legislative bodies, e.g. the House of Representatives in the US and the European Parliament in the EU.
- Executive bodies, e.g. the Office of Management and Budget in the US and the European Commission in the EU.
- Technical departments, e.g. the Federal Enterprise Architecture (FEA) Project Management Office in the US and the IDABC² Unit in the EU.

The above actors reflect different perspectives over the problem under study, which is government interoperability, and their documents reflect the consensus among the different stakeholders that share the respective perspective; for instance, IT industry interests are taken into account by the documents elaborated by the technical departments, which usually conduct public consultations on the issue.

¹ As far as the standardisation and the public procurement are concerned, the UK is constrained by the EU legal framework.

² IDABC stands for Interoperable Delivery of European eGovernment Services to public Administrations, Businesses and Citizens.

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