

General Requirements for Digital Government



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INTRODUCTION

“Digital government” (DG), “online government,” “e-government (eGvt),” and “e-governance (eG)” are widely used terms. They suggest the use of modern information and communications technology (ICT) in the governance of socio-economic systems (SES). It is widely accepted that the goal consists in increasing the performance of the governance. This can be considered in the sense of improving the services provided to citizens and organizations and also of improving the socio-economic development. There are still various points of view concerning the scope and strategy. The purpose of the present article, based on existing results and trends, is to propose a set of general requirements for the informatized governance of socio-economic systems.

SHORT HISTORICAL PERSPECTIVE

The use of digital computers to support the public administration by creating informatized registers, databases and integrated information systems, started in the 60s. They generated a number of advanced national, sectoral, and territorial information systems. The known example of Denmark’s integrated state information systems, created by public institutions with the support of DataCentralen and Kommunedata in the late 80s and early 90s is remarkable (e.g., DataCentralen, 1990, Ekonomiministeriet, 1991, Ministry of Finance, 1992). In these years, the orientation was to support the core activities of the public administration, also easing the communication between citizens and organizations and the public administration.

The further development of ICT, starting with the two “explosions” in the 80s (PC and internet) made possible to formulate the need for “communications highways” and “government, which works better and costs less” (Gore, 1993). It was followed by the adoption of the Information Society as a strategy for development by the European Union (UE). The “Bangemann Report” (Bangemann, 1994) proposed “electronic tendering” and “trans-European administration network” as two of the ten priorities. The 1995 session of the G7 countries, launched a program which included also an “online government” project. DG was recognized as a key factor for achieving international competitiveness (e.g., Leitner,

2003) OECD and the World Bank initiated DG projects (e.g., Khalil, Lanvin, & Chaudhry, 2002; OECD, 2003). United Nation’s World Summit on Information Society in 2003 paid a major attention to DG. EU allocated important R&D and structural funds for developing the Information Society, including also DG projects. Major IT companies showed their interest for the growing market of DG. (e.g., the IBM E-Government Centre in Berlin and the Oracle-HP E-Governance Excellence Centre in New Delhi).

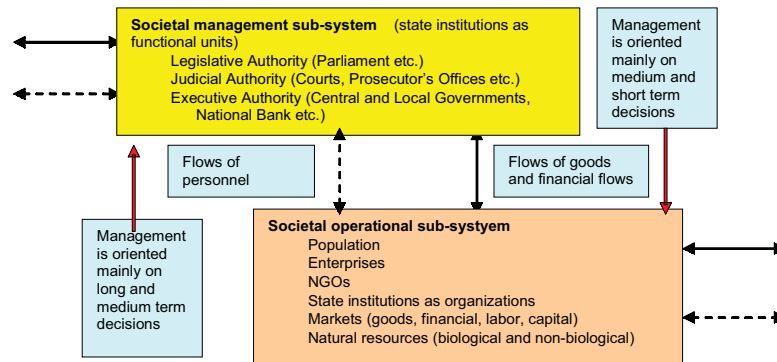
The main orientation for DG starting in the 90s, was on online services provided by the Public Administration to citizens and organizations, considered as customers. However, the scope of DG was gradually extended from the public administration, (executive authority) towards the set of three authorities (the executive, judicial, and legislative ones (e.g., Lenk, 2003; Lenk & Traunmueller, 2000; Reinermann & von Lucke, 2001) from national to international level. (e.g., EU’s eEurope program was focused on national development aspects of the Information Society, whereas the following ones: eEurope 2005 and the Draft i 2010 (EC-1 and EC-2, 2005) have an accent on achieving the European informational interoperability.

The rising general interest for DG is also illustrated by the yearly International DG Conferences (such as EGOV in Europe and ICEG in Asia). UN produced an “e-Gvt Readiness Report” (UN, 2004). The EC established the “eGvt Observatory” as a contribution to the European Information Society. It complements the “European Information Technology Observatory (EITO).”

ISSUES IN DG: GOVERNANCE

Issues can generate requirements. Issues in DG were proposed by a number of authors (e.g., Traunmueller & Wimmer, 2004). The authors enumerate a number of “challenges”: portals for service provisions, usability, and empowerment, improving processes and back office integration, interoperability and standards, identity management and security, collaboration via multimedia, knowledge enhancement, and change management. The EU’s e-Government Observatory retained following categories of issues: actors, e-services (for citizens, for businesses), history, legal framework, national infrastructure, strategy. E-services for citizens and for businesses are defined as components of a benchmark. The other issues contain

Figure 1. Model of the Socio-economic system (SES)



a wide range of visions, situations, and approaches. This suggests the need to consider basic problems such as governance. Just a few topics of governance are discussed here: (a) basic models; (b) sources of benefits and losses; (c) performance.

Basic Models

A simple high-level model of a SES (see Figure 1) is proposed. Summarized, a SES has two subsystems: a societal management subsystem and a societal operational subsystem. The concept of SES can be defined at global, international, national, regional, or local level. In the followings, the national level is implicitly assumed, but this does not represent a limitation. As the information communication, processing, and storing are obviously vital for the societal management subsystem, DG is, in principle, the solution for increasing its performance. On the other hand, the performance of the enterprise depends on the performance of its own management and also of its socio-economic environment. SES's governance determines in a large measure, this environment. The governance generates e.g. regulations, information, public acquisitions, social services, collects taxes and information etc. It results that DG is of interest not only at macroeconomic level, but and also at microeconomic level.

A simple model of governance is proposed in Figure 2. This model suggests first basic requirements for Governance:

- Separation of powers (precise delegation of decisions) between the three authorities: (1) generation of law to ensure the normal functioning and the development of the SES; (2) application of the law in the societal management and other general interest activities; in assuring the socio-economic development; (3) assurance of the respect of the law (homeostasis)

- Assurance of the necessary coherent socio-economic information and of the feedback circuits necessary for the permanent improvement of governance, including via fair elections

This model permits to define:

- EGvt, as the informatized governance focused on the provision by the executive authority of e-services for the citizens and organizations within the SES
- eG, as the informatized governance covering the domain on all the three authorities (executive, judicial and legislative)

These two definitions are content-based. It follows that DG and online government are generic terms defining the technology used in the societal governance.

The models in Figure 1 and Figure 2 suggest also the large number of actors involved in Governance. They are highly simplified models. The role of the executive authority to collect and distribute financial means is not apparent. Nor is its role to collect and validate data and information and to supply coherent results (which cannot be obtained at microeconomic level) to citizens, organizations and other SESs. Quasi-automatic closed loops, generating the natural trends of the evolution of the operational societal sub-system, are not represented, nor their possible switch from vicious to virtuous loops which, can be influenced by governance (e.g., Costake, Dragomirescu, & Zahan, 2001; Lockenchoff, 2001; Millard, 1995). This suggests another requirement for governance: to create or enforce virtuous loops and minimize vicious loops within the SES by adjustment and tuning actions and/or generation of new informational feedback circuits, instead of generating commands (emergency circumstances apart).

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