

# From E-Government to E-Governance

**Nicolae Costake**

*CMC Consultant, Romania*

## INTRODUCTION

The purpose of the present article is twofold: (a) to support the definitions of e-government (eGvt) and e-governance (eG) based on content (and not on technology only); (b) to analyze the relationship between eGvt and eG.

## DEFINITIONS

Every socio-economic system (SES) (e.g., a country) includes a societal governance subsystem. This subsystem refers to the activities of the central, regional, and local state institutions of the Executive, Judicial, and Legislative Authorities. It has an important role in determining the legislative, judicial, fiscal, and other public services environment within which citizens, households, institutions, businesses, and NGOs (elements of the societal operational subsystem) live or function. (The societal governance tasks referring to relationships with other SESs is not discussed here, in order not to complicate the analysis. However, this does not impact the generality).

In the circumstances of building the Information Society, the societal governance uses advanced information and communication technology (ICT). The terms government online, online government, and digital government (DG) are proper to characterize this category of governance, as opposed to the traditional governance based on “paper and pen technology.” (Because of the long tradition, the “bureaucratic culture” is still strong. It explains the presence of still existing “computerized paper and pen technology based” public information systems. They are sometimes called “insular information systems”. However, many times the term “eGvt” is also used in the generic sense of “informatized governance.”

## SHORT HISTORICAL PERSPECTIVE

In the 50s, a rapid expansion of the use of digital computers in practical every field of human activity started. The defense (such as weapon research or U.S.’s Strategic Air Command) was the first field using advanced ICT. Non-military applications of computers started with such applications as the U.S. Census of 1951 and first computer-

ized management information systems designed and implemented by large U.S. companies (General Electric, Du Pont de Nemours, and Honeywell to name a few). Computer process control and electronic data processing (EDP) were recognized as two fields of applications. EDP was organized in “computer centers,” hosting mainframes with very small “fast” memories, small disks and “large” magnetic tape memories and archives. The centers had large GP (girl power) operators for punching cards read by the computers, groups of analysts for understanding user requirements and converting them into specifications and many programmers who converted the specifications into application software. Proprietary operating systems, assemblers and other compilers for widely accepted programming languages (such as FOTRAN and COBOL) were used. New fundamental concepts appeared, such as database—the core of integrated information systems; databank—storing easy retrievable structured information; structured programming. To some mainframes, typewriter or video terminals and/or remote job entry units were connected, using public (possibly hired) or local telecommunications lines. Unitary ranges of computers (such as IBM 360, GE 400, ICT 1900, CDC 6000, to name a few) appeared on the market in the mid 60s. The software industry began to grow rapidly offering utility software, application software and application software systems as “dematerialized” industrial products. The role of the electronic computer for development was officially recognized in the late 60s, when the UN General Assembly adopted a resolution in this sense. (UN, 1968). In some of countries, ICT development programs were adopted. In the UK, ICT (International Computers and Tabulators) and English Electric-computers merged to form ICL. France adopted “Plan Calcul.” Romania adopted also an ICT development program, independent of the “Unitary Series” of the “socialist block” which tried to follow IBM, but with increasing lag). An attempt to build a merged Western European computer industry (“Unidata”) failed.

Computing centers were also established to serve central and local state institutions. The French public administration created many years ago the first version of the SIRENE register of organizations. It was an inter-ministerial project (Ministry of Finance, Ministry of Labor and INSEE—as a neutral data administrator), needed for macroeconomic planning. In the early 90s, Denmark had a remarkable example of eG (even if this term was still not

Table 1. E-government definition in the eEurope program

Service	Level of service
<b>For Citizens</b>	1—Online information about the service
1—Income tax	2—Downloading of forms
2—Job opportunities	3—Interactive submission of forms (including authentication and acknowledgement)
3—Social security payments	4—Full transaction, including full case handling, decision, and payment (if applicable)
4—Personal documents	
5—Automotive vehicle registration	
6—Authorization of construction	
7—Police declarations	
8—Online library (catalogues, search)	
9—Certificates (e.g., birth, marriage)	
10—University student registration	
11—Change of address	
12—Health	
<b>For Organizations</b>	
13—Contributions to social security	
14—Declaration and notification of taxes	
15—VAT declaration, notification	
16—Registration of a new company	
17—Statistical reports	
18—Environmental permit	
19—Custom declarations	
20—Public acquisitions	

in use). The initial government's computing center of the 60s became the state-owned "DataCentralen" company, hosting the population register, the trade business register, the cadastral database, and other databases. Terminals were connected to local area networks of central and local state institutions and these were connected via a wide area network to DataCentralen. Various applications included recording of personal events (such as births), an iterative elaboration of the draft central and local budgets etc. Denmark renounced in the 80s to produce the 10 years national population censuses, processing instead data from the population register and other databases. Danish legislation became supported by a dynamic macroeconomic model (Dam, 1986) and a socio-economic database application (Ekonomiministeriet, 1991) for the simulation of the likely consequences of proposed normative acts. The Danish Data Authority provided the necessary personal data protection. Well defined delegation of Authority between central and local institutions, use of unique identifiers and also the "Kommunedata" local computing centers, were important factors for the success of large integrated information systems. Information integration, information interchange, computerized back-office and front office, central databases, and servicing of citizens and organizations as well as civil servants and other users became specific keywords.

It took nearly a third of a century of accelerated technical and technological progress, to develop: industrial relational databases, PCs, and digital high speed communications. Information technology (IT) and communications technology (CT) merged into ICT. Mobile telephony, high-speed computer networks, and digital content industry flourished. PCs, Internet, and Web ser-

vices brought information and "computer utility" directly to the user. The Information Society concept was introduced in the early 80s. (Masuda, 1980) and gained gradually wide support. In 2003, UN World Summit on Information Society took place. Masuda advocated also the idea to improve relationship between public institutions and the public.

The term "online government" appeared in the mid 90s, as set of e-services, component of a program recommended by the special G7 session for Information Society at the beginning of the present century, EU selected, for benchmarking "e-government," 12 e-services for citizens and eight e-services for businesses (in the framework of the eEurope program). Four service levels were defined. (The low service levels could be created acting at the front-offices only, whereas the levels 3 and 4 implied also the back-offices and their possible integration—see Table 1). This definition by enumeration is precise, but has a limited scope.

The Japanese government underlined the keywords: disclosing government information, making greater use of IT and protecting personal data, with the goals of providing user-oriented services, simplify public administration and increase budget efficiency (Takano, 2004).

However, broader views also developed, for example, the first EU program for Information Society (Bangemann, 1994) included the project for a Trans-European Network, connecting the European administrations. It became the operational IDA (inter-communication between administrations) project to be developed as IDABC (interoperable delivery of European e-government services to public administrations, businesses and citizens—see EC-2, 2005). One of the first classic papers on e-government (Lenk &

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