

eGovernment - One step further

The (new) challenges e-government have to face and an example of organization ready to deal with them

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Once upon a time the e- ... – a déjà-vu

Once upon a time the „e-“, was known as *dot-com*. At these times¹ (as now in e-government) the companies (now the government bodies) asked the investors (now the politicians) for money in exchange of future promises. And the investors pumped money into game. Then you found companies going from \$3 per share in April to around \$34 per share in early May 1998², based only on promises of future gains. A “new business model” was promoted: “Get Big Fast”. Then the reality stroked: there is no gain in this game. So, when the investors got smarter, the *dot-coms* went back to their real value¹. So you found companies going

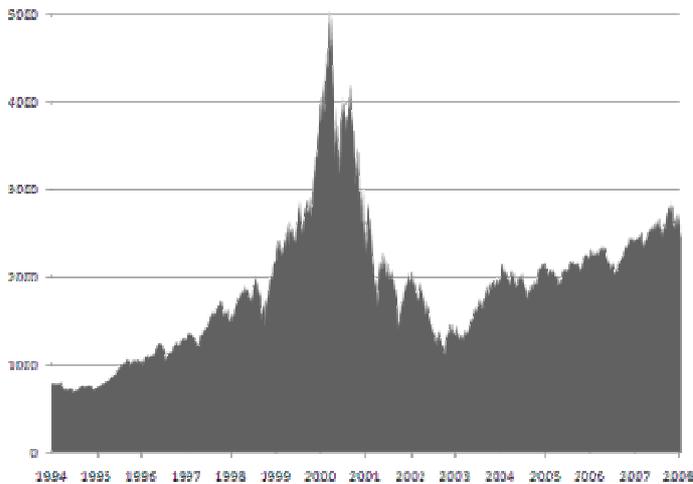


Chart of NASDAQ closing values from 1994

down from \$241 a share in March 2000 to \$1.63 a share in 2002³, or from a value of \$12.5 billion in 2000 to \$95 million in 2004⁴.

The reason for failure may be the engineer’s approach to business. That is happening when a company wrongly defines as good product, the product with the most features technologically possible, ignoring the reality of the market and putting the business into expenses not covered by

sales.

What is happening now into e-government? The government bodies (as companies in the past) are asking the politicians, who have the role of distributing resources (then, the investors), for governmental funding (equities in the *dot-com* era) in exchange of good e-services for citizen

¹ late 90’s early 2000’s

² K-tel International.. See <http://en.wikipedia.org/wiki/K-tel>

³ Inktomi Corporation, See <http://en.wikipedia.org/wiki/Inktomi>

⁴ Lycos, See: <http://en.wikipedia.org/wiki/Lycos>

(future promises). In Europe, the result looks disastrous even in the most appreciated e-government systems.

As an example, in one of the most appreciated e-government systems in Europe, 23 of its 60 services were never used in the last 5 years. In the same country, in one of its richest regions, the number of electronic transactions represents less than 0.1% of total transactions – less than three transactions per week¹.

Questions: How many of e-government services were developed asking the end user in a business-like approach (market study, segmentation, positioning, pricing, up-selling, cross-selling etc)? How many of the services were created in offices by smart engineers, knowing what technology may offer but with no link with the end user, other than common-sense, then promoted for funding to political layer? Isn't it a déjà-vu?

Agency for Information Society Services (AISS) – e-government Asls – a *dot-com* approach

The Agency is operating some critical e-government systems: the Electronic Public Procurement System, the National Electronic System and the Electronic Assignment of International Road Transport Licenses and Persons Transport Licenses System.

The National Electronic System – www.e-guvernare.ro – is, by the law, the portal for service delivery by the central government. It gives, to the big companies, the opportunity to provide all fiscal declarations online. It also centralizes the forms of the central administration so the citizen may download them with paying only a last visit for submitting the filled forms to the public institutions.

In April 2008, The Government of Romania adopted a memorandum stating that the *e-guvernare* system will be developed as electronic Single Point of Contact for implementing the EU Service Directive boosting the position of AISS and its systems among other institutions.

The Electronic Assignment of International Road Transport Licenses and Persons Transport Licenses System is a fully bidirectional system which assigns the licenses to the transporters according with criteria established by Romanian Road Transport Authority and the Ministry of Interior. The transport companies introduces their transport offers (type of cars, number, usage etc) and their path request, the Romanian Road Transport Authority or local

¹ The country name is less important than the phenomenon.. For more details see: From Electronic Government to Information Government, Viktor Mayer-Schönberger, Harvard University

Administration introduces other criteria (transporter experience and vehicle confirmation) and the application, select the winners for each path.

The Electronic Public Procurement System is the star of the Agency. One of the top three e-procurement systems in Europeⁱⁱ was developed starting with 2002 and in 2008 will be fully compliant with EU directives and Manchester declaration – 2005.

The system is fully bidirectional, with the possibility of rolling the public procurement, in different types of procurement, entirely by electronic means. Even if the system is not used for procurement, all public institutions are obliged by the law to publish through it the public procurement announcements and assignments.

The number of users (companies as bidders and public institutions as buyers) registered in the system is more than 20 000.

Starting with 2008, the Government of Romania published the decision that contracting authorities are compelled to use electronic means for at least 20% of public procurement. This will create an electronic procurement market of more than 3.5 billion EUR.

All of the systems, as well as part of its personnel, were previously part of another governmental body, having as main duty the supervision and management of the frequencies spectrum. Their main challenge was to provide reliable services and still remained as such when the IT systems and people were moved apart and created AISS. The agency is still an organization more “service oriented” than “customer oriented” and, under the (still) general accepted e-government principles, could stay as such indefinitely, with only minor changes to accommodate new services when needed.

This may be the end of a successful presentation of an e-government institution.

But...

We already know it – Some classic e-government challenges

Lack of data reusability

Since most of the data rest in governmental “silos” (see “Low maturity” below) a strong sense of ownership is developed. Mixing the understanding of the power of information ownership with the drastic penalties (image is power) in case of sensitive data disclosure and with (sometimes) an inherited culture of secrecy and you will find an almost impossible-to-break

wall against data exchange. Therefore citizens are asked to bring the same data again and again, to same or different organizations or even parts of the same organization¹.

Lack of human resources

Since sometimes the governmental institutions are used to act like monopolies, most of the time they do not understand that labor market means free competition for people's will to work. Having strong restrictions in wages of the public personnel, a wage of 3000-5000 EUR per month for an IT expert is out of the question, being seen more like an exotic issue than like a fight for human resources.

Unforeseen consequences – Some post-classic e-government challenges

Data tsunami

“Number of transistors on a chip doubles every two years”. This assumption known as Moore's law, still valid since 1986, is used mostly on describing how fast the technology advances. However one of its unforeseen consequences is that this processing power will pump more data in IT systems. Therefore “Data” itself become one of the main issues. Business continuity and data reliability are concepts that should be added to classic data security (confidentiality, integrity, availability). In the same time a new question is raised: How much information can you extract from your data? The existence of analytical systems and the difference between them and operational systems are still a white spot on the knowledge map of government IT employees.

Citizen education

Citizen expectancies rise as their digital education increases. This happen as more devices and commercial services are available and used.

Although digital gap in education was seen as between people with access versus people with limited access, a new digital gap is rising: between average people and their governments. The spread of mobile phones and other digital devices (mp3 players, GPS systems or just digital cameras) has as unforeseen consequence the rise in digital education of citizens. “If I can receive weather info from any corner of the world or I can make banking transactions using my digital device, why can't I see online at least the tax amount I have to pay? Why they ask again and

¹ Bulgaria made an impressive step forward forcing the institutions to ask for data not from citizen but from the issuer of the data.

again for the same document issued by “them” and provided already to “them” in another public institution?”

The governments have to face the pressure of their citizens who, being more “digital” educated, increase their expectancies and ask for more: better services, more transparency, cost cuts.

Ivory tower approach

As described above (see “Once upon a time the e- ... – a déjà-vu”) most of the e-government services are developed using engineer’s approach: “its technical possible then we should deliver it”. Questions:

■ **How often does e-government providers:**

- Analyze the customer needs and satisfaction?
- Analyze the customer behavior?
- Prioritize the investments according with the above?
- Give up the projects without usage?

■ **What is the percentage of e-government sales, promotion and advertising in each project?**

As unforeseen consequence we have a loose couple with the end user and a total link with political layer as investor, which brings a set of technically brilliant but useless systems for the end user.

Low business approach

Beside the creation of services accordingly with the customer’s needs, a lot of tools are used in different stages of electronic service delivery:

- how user finds the provider: search engine, on-line catalog
- tools for selecting the goods: recommender agent, configurator,
- negotiations: aggregators
- sales: transaction processor, data interchange
- payment: cryptography, e-payment systems
- delivery: tracking agent

- post-sales: on-line help, call-center

Too often the service provision is under evaluated and a lot of useful business information is lost. As unforeseen consequence, knowledge of customer relation management is not developed and business opportunities like cross-selling or up-selling are missed.

Low outcome orientation

If for front office services the customer is easier to be identified, for back-office services the customer is more diluted and harder to point. As a consequence, the accent of investment is put on computerization, without links to what should be the outcome of computerization: business process improvement. As consequence, money is wasted in useless systems and services.

A useful IT investment is the one that is explicitly linked with business process improvement. Therefore a Governmental Architecture Framework is needed as a methodology for creating this link. Also, if business processes should be described, then a methodology for this action should be chosen. And here comes a more subtle decision: should it be an added value oriented (like DMM-DFD-WFA, used in oriental countries¹) or a cost oriented methodology (like BPMN²).

Low maturity

A CMMI³ may be used to assess and predict behaviors in organizations and, maybe more important, to the entire government.

Understanding the level of maturity and applying it at the governmental level, with ministries as departments, can explain why public institutions are reluctant of sharing data (i.e. a level 2 maturity – “Our group vs. the rest of the organization”) and the cultural change needed to change the situation (grow the maturity towards level 3 for inter-institutional data exchange and further to level 4 for sharing data with business and citizen). Such an understanding gives the real image of the size of the hurdles that have to be overcome in implementing useful e-government.

¹ South Korea, Japan, usually countries under USA influence.

² The Business Process Modeling Notation (BPMN) is a standardized graphical notation for drawing business processes in a workflow. BPMN was developed by Business Process Management Initiative (BPMI), and is now being maintained by the Object Management Group since the two organizations merged in 2005.

³ Capability Maturity Model[®] Integration (CMMI) is a process improvement approach that provides organizations with the essential elements of effective processes. It can be used to guide process improvement across a project, a division, or an entire organization. It is developed by Software Engineering Institute, Carnegie Mellon University. See <http://www.sei.cmu.edu/cmmi/> for more information.

Level	Human Capital	Knowledge Processes	Culture	Infrastructure
OPERATE	Individual	Personal	Me	Manual systems of non-networked PCs
CONSOLIDATE	Functional group	Department	Our group vs. the rest of the organization	Functional systems
INTEGRATE	Enterprise group	Enterprise	All of us	Enterprise Systems
OPTIMIZE	Enterprise group	Extended enterprise	Our partners and us	Extended enterprise systems
INNOVATE	Dynamic network	Situations matrix	Adaptive groupings	Adaptive systems

Five levels of maturity as described in *The Business Intelligence Competency Center: A SAS® Approach*

Agency for Information Society Services (AISS) – e-government ToBe – a new approach

Going out of silos

The creation of the Agency and the position it was given related with other public institution will definitely not solve all the problems e-government has in Romania but gives a strong pretext for starting the long and painful trip to success.

The road from government AsIs, with loose couple between institutions, lack of alignment and common understanding, towards ToBe, with integrated institutions and real common actions is to be sustained on four pillars:

- Central provisioning
- Administration data exchange
- Unified methodologies

- Standardization

Central Provisioning

AISS is also designed to provide central back-office systems for central government. Several outcomes are targeted: common knowledge pool, costs cuts, simultaneous improvement, cross-domain analysis, improved security.

Administration data exchange

By using its position created by the operation of the only portal for provisioning of e-government services by the central government institutions and by the memorandum for implementing the portal as electronic point of single contact, AISS may become the data broker for public institutions. However, enforcing the law may be proved as insufficient and more actions to be done. The main challenge of AISS is to become the most trustee partner for the other institutions. The cultural wall can be overcome mainly by cultural means and trust is one the most important mean.

Unified methodologies

In order to obtain a synergy effect among the public institutions in regarding the improved outcome of IT&C a common methodology should be used. Here the AISS have, by the law, the authority to regulate the e-government domain.

Some of the main targets are: developing a Government Architecture Framework and a Business Process Methodology.

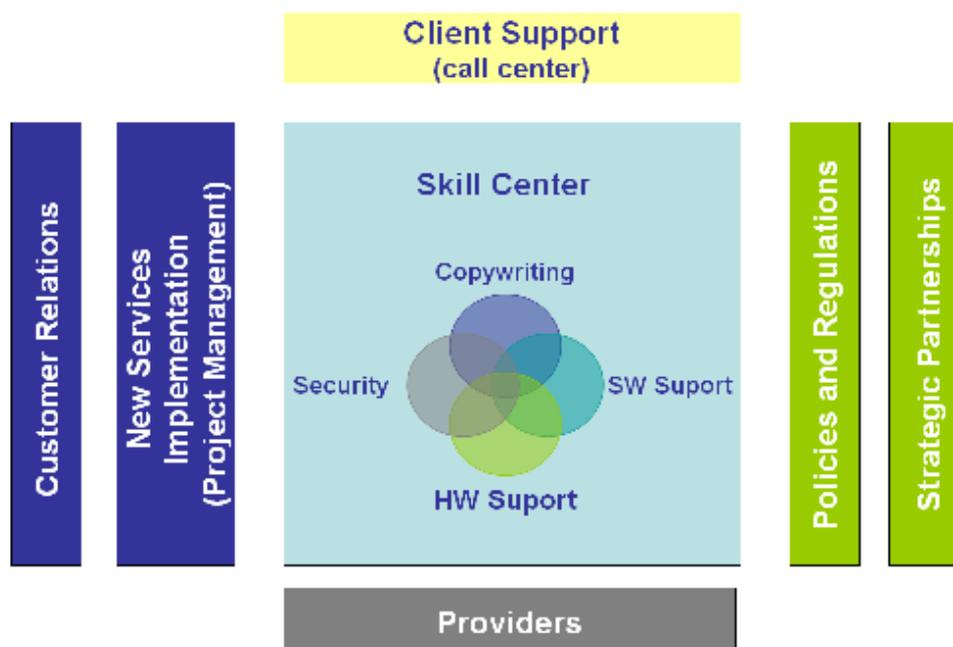
New version of IT public servant

The lack of human resources and the past experience of failed projects in public administration increased the understanding of advantages brought by outsourcing. However, there is a pool of business and IT knowledge that should be preserved and used in new services development. Therefore, a new position of IT public servant should be considered, going from programmer towards a more value-added position: business process analyst. Indeed, the former IT public servant is the depositary of business process knowledge in his/her organization and is a key person for developing the appropriate back office services for the institution. Again, for a common understanding among the institutions, a common methodology framework is needed.

Agency Core Business

Having as premises the experience gathered both in public administration and in business, the training provided by third parties and the information coming from other e-government environments, the AISS management designed the organization from scratch delivering a fully business approach inside a public institution.

Starting from cultural changes (implementing concepts like “client”, “marketing”, “sales”, “business process analysis”) to structural changes (the business was split into a promotional and an operational branches) the organizational design was oriented to face the challenges into developing useful, outcome oriented e-government services.



4 Conclusions

1. “The internet was invented in the 1950’s; it didn’t become popular until the 1990’s. When a company or many companies¹ are promising life-altering changes in how we live our lives, be very skeptical. Even if these ideas for change are realistic, they don’t happen overnight, in most cases they don’t happen for decades!”²

¹ Read „e-government providers” instead “companies”

² <http://www.theinvestorsjournal.com/lessons-from-the-dot-com-bubble/>

2. Because of a strong link with its finance providers and a weak link with its end users, e-government may invest in useless projects (as “dot-com” companies in the 90’s)
3. An output or outcome-oriented metric (i.e. cost per user or cost per burden saved) may affect the political trust, support and financing therefore a fall of e-government as we know it.
4. When a service is delivered to a customer a sale should be made (Know Your Customers!)

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ⁱ The "dot-com bubble" was a speculative bubble covering roughly 1995–2001 during which stock markets in Western nations saw their value increase rapidly from growth in the new Internet sector and related fields. The period was marked by the founding (and, in many cases, spectacular failure) of a group of new Internet-based companies commonly referred to as dot-coms.

ⁱⁱ Good practice title at the European level (European Conference for e-Government, Como, 2003) and international level (International Conference for eGP, World Bank, Manila, 2004); The International Golden Link 2005 prize of the Association for the Communications and Electronics of the Military Forces, USA for “The most innovative solution”, at the International Defense or Civil Government section; Finalist at eEurope Awards 2005, Manchester, UK; 1st European Country in terms of electronic announcements delivered to JOUE (more than 99% of announcements)