

Report

eGovernment Interoperability

(Base on survey of registered users semic.eu and gosbook.ru)

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Introduction

IT technologies is one of the most discussed areas of the administration of government improvement. To identify status and trends of national e-government interoperability frameworks an expert survey was conducted.

The latest draft version of the EIF defines interoperability as “to interact towards mutually beneficial and agreed common goals” and covers the political and legal level additionally to the organizational, semantic, and technical dimension, already defined by the first version of the EIF¹. The five interoperability dimensions and the three defined groups of survey questions are correlated: on a supranational level political and legal issues are most relevant, while interoperability frameworks often cover technical standardisation and semantic assets.

In this article organisational interoperability is used for the interoperability of real word models and sets of problems connected with politics, laws, and IT project management. The content of interoperability frameworks is described by the expert comments as the elements of the interoperability infrastructure. Pan-European services provide the necessary coordination of activities concerning organizational issues and technology.

The survey questions can be divided into three groups: organizational issues, content of national interoperability frameworks, and principles of organization and implementation of a supranational framework. The survey consisted of 15 questions, six concerning the organizational layer, seven describing the content of interoperability frameworks, and two dealing with a supranational framework. The survey was set up with multiple choice questions, giving the opportunity to comment most of the questions.

Organizational issues

The organisational questions cover the main stages in e-government development, participants of translation services to electronic form, the preferred department to lead the process, and the role of the private sector in the electronic services provision.

The first organizational question was about the milestones of e-Government development, asking for the key stages of the development and evolution process². Experts identified as key

¹ EIF v2 draft & EIF

² Q4: What milestones are helpful in the national development of e-Government?

points the creation of a national e-GIF and the establishment of full government support. The standards profile was ranked third, together with the setting up of a federal repository.

A common point of view on the evolution process, provided by the expert comments, is reflected by the following statement: *“too many projects start from a clear surface and try to design a perfect world, but bigger enterprises acknowledge that their field of operation is not homogeneous, and some diversity is necessary. Nationwide, it is even more important to realize that one all-encompassing solution usually hinders more than helps actual interoperability”*.

This is highly correlated with the concept of incremental or evolutionary life cycles, as recommended in ISO 15288, creating the functionality of the system not all-at-once, but step by step. So also the investments in the development will be gradually. Projects that involve significant cash flow, but show results only at the end of the project, are risky business and often end in inappropriate solutions. An applicable way to deal with this problem is to first implement a compact core, and then to develop new modules by requirements and the clear option for integration.

In systems engineering there is a model, the Incremental Commitment Model (ICM)³, which organises design and acquisition processes in ways that better accommodate the different strengths and difficulties of hardware, software, and human factors. The sense of a model is to achieve a better system architecture, which allows for the delay of payments and provides functionality as soon as possible.

The question regarding the department, which shall supervise the e-Government, most experts agree that it should deal with profile ministry of communications and technology, or cabinet. (Q5 Which department should have the lead in e-GIF development?). This correlates with the opinion that the transition process to electronic services need full support of the government.

It should be noted in the United States a significant role in e-government plays the Office Management and Budget (OMB). The OMB mission is “oversees and coordinates the Administration's ... information policies” and “evaluates the effectiveness of agency programs, policies, and procedures”. The OMB with the active participation General Accounting Office was prepared Federal Enterprise Architecture, where the first model is the Performance Reference Model.

³ The ICM is used for Integrated System Acquisition, Systems Engineering, and Software Engineering (Barry Boehm and Jo Ann Lane, University of Southern California, Center for Systems and Software Engineering).

Series of questions about the role of business, science, vendors in the process of e-government (Q7 Who should participate in a standardization committee? Q11 Is it possible to use corporate sector experience for e-Government sector? Q12 Where is it possible to use corporate sector experience for e-Government sector?) expert opinions is that business must play an important role in all activity: standards development, e-Gov projects management and services delivery.

Detailed comments on the question following:

Actually you need political decision makers and all stakeholders in order to adopt AND implement standards. I would recommend two tier structure + thematic working groups. Final decision should be made by a government advisory group consisting of politicians and CIOs from the most important departments (internal affairs, public administration, departments responsible for the citizen, land and company registers) + national CIO if there is one. Operational committee should comprise business practitioners, vendors, scientists and representatives of NGOs. It should prepare final drafts of documents for adoption by the government advisory group. Actual documents should be prepared in thematic working groups under the jurisdiction of the responsible department, and include all stakeholders in an open way in order to make best use of the available knowledge and experience and also service users' business requirements.

The most disputed topic about role of business in e-government is Public-private partnership. Public-private partnership (PPP) describes a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies. A private sector consortium forms a special company called a "special purpose vehicle" (SPV) to develop, build, maintain and operate the asset for the contracted period.

Governmental and nongovernmental agencies promoting PPP in different countries, please visit the UN⁴. Many agencies have been copied model of PPP from agencies UK (Partnerships UK⁵).

Q15 Is your framework / are your regulations mandatory?

⁴ <http://www.unescap.org/ttdw/ppp/PPPUnits.html>

⁵ <http://www.partnershipsuk.org.uk/PUK-Background.aspx>

Content of interoperability frameworks

Most of the answers and comments on the implementation of electronic services is connected with establishing e-government infrastructure.

(Q1: How many of the new e-government projects (i.e. applications) comply with your framework's recommendations? Q2.Does your framework reflect all relevant topics? Q3 What is the most important element of an e-GIF? Q6 Which part should be stressed more in the framework document?)

Infrastructure of e-government can be defined as unified information system for exchange data and technologies and provide services access for citizens and business by universal interface independent on service type: one or multiple agencies.

Topic of infrastructure is one of the most represented in the comments of experts. Some interest coments on infrastructure:

“Action plan on electronic government (2010-2015) push interoperability through 4 layers/principles

- common methodologies (such as: ABC on design, project plans, ITSEC ...),
- common (central) applications (such as: e-Payment, e-GovPortal, e-Directory, ...),
- common set of reusable building blocks (such as: BPEL/ESB Toolbox, Authentication, Authorization, SVN, e-Delivery, e-Safe ...),
- common infrastructure (such as: Common gov. wide network, PKI, Data center Cloud ...).”

“e-Document, eFile, eSignature Policies, data models, etc.

Improvement and extension of existing common infrastructures and services.

universal semantic model, known as the "Open Business Concepts”

“a central service-oriented Interoperability Platform (iAP)

allows information exchange between Public Entities and broadens the communication channels between Public Administration and Citizens.

iAP independent services:

- Integration Platform - provides an easy and integrated delivery of cross-cutting electronic services, becoming a cornerstone in the process of administrative modernization;

- Identity Provider (IDP) - allows authentication using the Citizen Card in portals duly accredited and authorized for that purpose on eID card. Foreign Citizen Identification is accomplishing with Stork Project. Briefly IDP will allow Single Sign-On between Public sites.

- Payments Platform - allows the availability and integrated management of multiple payment methods for different channels;

- SMS Gateway - Enables the sending and receiving SMS via short numbers between citizens and public administration bodies, enlarging the number of available channels of contact for managing the relationship with citizens.

iAP has an Identity Federation mechanism - Interoperability Citizens personal information and a Canonical Data Model for Interoperability systems with different data models.

It also has a web service repository where all Public Entities can chose the services they want to use. iAP will also be the entry point that will allow to fulfil the EU Services Directive. It is already prepared to do so.”

The NIF of Spain involves next aspects of interoperability

the organizational, semantic and technical dimensions

the standards stated for the interoperability

the common infrastructures and services are considered as recognized elements of dynamization, simplification and dissemination of interoperability

the reuse of the applications of Public Administrations, documentation and objects of information

the interoperability of the electronic signature and of the certificates

Information about which API:s/data is available from each agency and who to contact (displayed on a central website).

Reference semantic model (at conceptual level, a way of expressing the core business knowledge)

Support for national taxonomy (vocabulary) including definitions

Spain

- Inventory of administrative and registry offices: Done through the Common Directory – Directorio Común); and associated codings (Something equivalent would be the IMI DB of competent authorities). Interconnection of registry offices: Done through the system called SIR.
- Administrative network for Services delivery
- “Interoperability nodes” - entities that provide IOP services (Org., Sem., tech.) to facilitate the access to BASIC REGISTRIES (e.g. Identity, Residence, Cadastral information, Tax information, Social Security information, Education titles...).
- Semantic assets (equivalent to SEMIC.EU)
- Use of standards; Catalogue of standards
- eIdentification, eAuthentication, eSignature, Electronic Identity Card (DNI-e).
- eDocument and eFile, XML structures for exchange of Documents and Files.

Based on these comments we can draw a new picture on the elements of infrastructure and provide a brief description

Regional or local service provider has following difficulties for IT development:

- the impossibility to get proper funds for the realization of innovative processes,
- the lack of adequate skills to support innovation,
- the lack of a proper technological infrastructure.

For effective service providing government need to create a powerful infrastructure, to shift the development and adaptation activity from the local information systems to infrastructure.

Infrastructure for services providing is analog to outsourcing service delivery, when some steps are performed by external service providers. This allows improving the internal efficiency of government agencies and increasing quality the monitoring and control services. Infrastructure performs in storage, data conversion and processing. Departmental applications within the infrastructure carry out specific functions, using common directories, Web services, digital signatures, e-payment systems, etc. (see Figure 1).

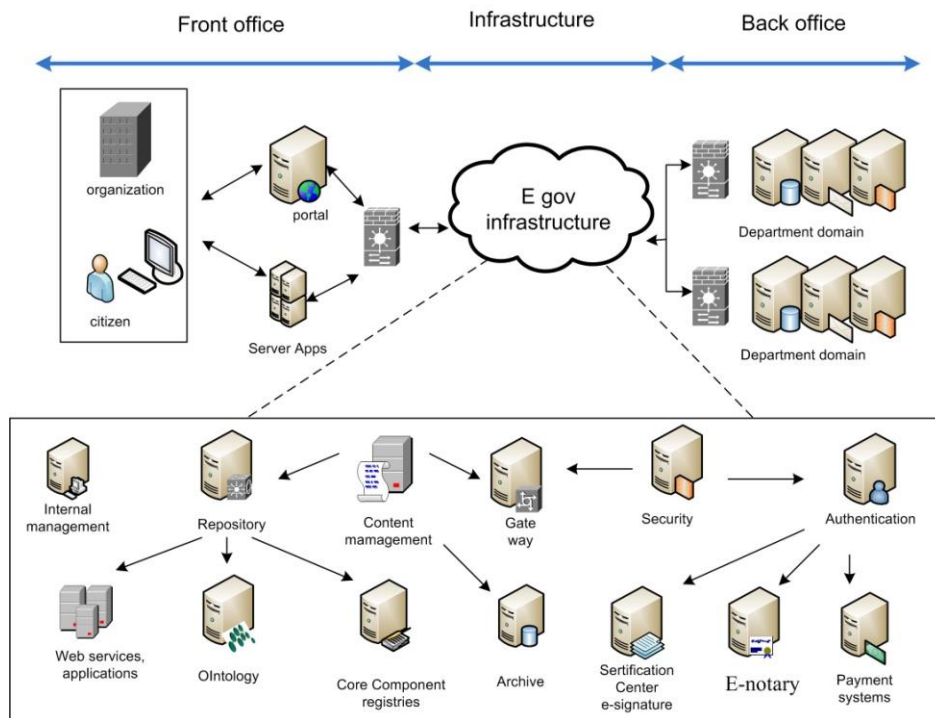


Figure 1: Infrastructure elements for e-gov services

One of the interesting issues of infrastructure services is of public service register. In the comments of the expert from Spain, this question is described as follows “Services provided are identified; also administrative units. Inventory of administrative Procedures and services provided: in the General State Administration done with System of Administrative Information (SIA)”.

This electronic register is present the set of government and municipal services according to functions of the federal, regional and municipal governments. On the one side this is inventory of functions to eliminate duplication and identified function which apply to agencies, but not executed. On the other side this register can help with continuity of services in case of changing heads of state, region and municipality. It is known that with new president, head of region changes the structure of government, executive authority, redistribution of functions. For federal level it is most typical problem for presidential republics (this happens in the U.S., Russia, France and other countries with similar legislative). Similar problems can be with leadership changes at the regional level, the municipality. Restructuring and reallocation of functions occur by different reasons, mostly political and companionship, and outsiders cannot find a rational basis of this. Register of e-services in this case can be a constructive tool for separate organizational units and services executing and delivery.

Detailed classification of the functions federal government made by UN⁶. The independence of the functions of organizational units as a basis for model Business Reference Model (BRM FEA).

As a result of this model is on the one hand, set of function as "boxes" and departments on the other hand. Classification of functions is a connection the functions and departments.

This approach allows not to lose any functions, eliminates duplication and create portable form of functions to transfer of services provider between departments. PPP model can help to realize this assumption.

Quite interesting and actively commented was a question about problems of interoperability. (Q8 Which dimension causes most interoperability problems?, Q10 Which element can solve some main problems of inter-/national interoperability quickly?).

Most experts as a barrier defined the organizational and semantics problems. Some comments:

- 80% of all problems are purely organizational
- laws are not harmonized
- Data sharing among Public Entities
- Different governmental entities from each country have different goals
- Different legislations
- Lack of semantic
- meta data of the e government entities

A large number of factors determines the outcome of electronic services providing.. Activities in this area are also quite a lot.

The main outcome of electronic services is measured efficiency of supported workflow. How the system of electronic services will remove the restrictions of workflow, and increase the operation efficiency or reduce the current cash flow for operational cost or by increasing the volume of operations, of course by demand from citizens.

The main functional criteria for effectiveness evaluation is increase in the throughput in the declared system activity. We are talking about Goldratt Theory of Constraints (TOC), which says that we can estimate the increase of the throughput by removes the restrictions. Achieving more of its goals by a very small number of constraints
Important issue at this stage - a correct assessment of boarder because throughput increases at

⁶ Classifications of the Functions of Government (COFOG),
<http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=4>

the boundary of the system. Border agencies does not coincide with the boundaries of cross department process, and involved agency can be at different life cycle stage, so it is useful evaluate constraints for full system and full lifecycle stage of e-service, individual participants, including infrastructure.

Q13 Which standards do you trust more?

Supranational infrastructure

One of the main objectives of the study was to summarize experience of the NIF for including to supranational framework. By this theme were two questions

(Q9 Who can lead a supranational framework? Q14 Do you feel (still) committed to implement the following things?)

Experts agree that the coordinating role of this activity should play the European Commission.

Development of pan-European electronic services requires creating a unified environment for data access and of common application technologies. Data models and semantic data exchange formats are a key resource for interoperable exchange. For interoperability of different repositories project Semic.eu prepared document the Asset Description Metadata Schema (ADMS)⁷.

As example of metadata integration may be the result of the project integration Core Person metadata for the open data (see Figure 2).

⁷ <http://www.semic.eu/semic/view/documents/adms-specification-v0.6.html>

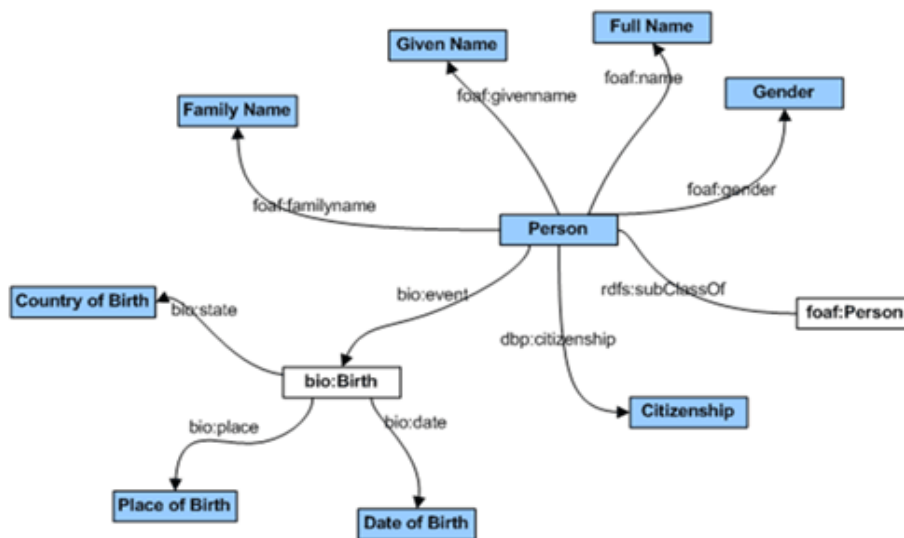


Figure 2: Identification of a person in e-government context⁸ (Peristeras YEAR?)⁹

Coordination of information technology on the one side requires standardization and the other monitoring trends in technological progress and follows this trend, not to be a brake of development. One of the trends is Cloud Computing. The development of a European Cloud Computing Strategy is one of the actions of the Digital Agenda¹⁰. Cloud Computing represents a paradigm shift away from today's decentralised IT systems. European Commission begin consultation with stakeholders and interested parties on the needs, barriers and opportunities of the use and provision of cloud computing¹¹.

Shift from datacenter ideology to cloud computing promoted by federal CIO of USA Vivek Kundra¹² as factor of federal spending on information technology.

Suggestions for Implementation

A supranational pan-European interoperability framework, such as the EIF, is to supplement the national approaches in topics that on the national level cannot be addressed adequately. In order to fill the recommendations and regulations with life a simple maturity model needs to be followed, as shown in Figure 3. The political, legal, and organisational dimensions need to be handled first in order to set up an environment, in which the technical and semantic developments will be applied by new projects. Adoption is one of the most important issues.

⁸ Based on the evaluation of four assets (Person models of Austria, Denmark, France and Germany).

⁹ Peristeras V., SEMIC.EU: Towards Linked Government Metadata, http://www.slideshare.net/init_brussels/peristerasvassiliostowardslinkedgovernmentmetadata

¹⁰ <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/11/50>.

¹¹ <http://ec.europa.eu/yourvoice/ipm/forms/dispatch?form=cloudcomputing>

¹² http://news.cnet.com/8301-13772_3-10353479-52.html

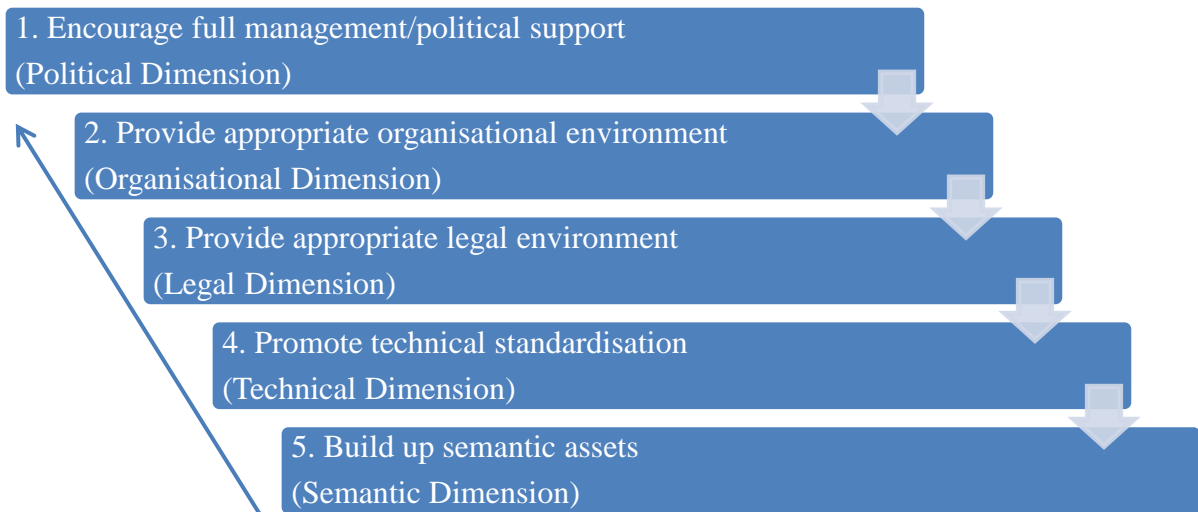


Figure 3: e-GIF maturity model

As described in some of the expert comments, some e-GIFs already needed to be set up new, since the original version turned out to be inapplicable in the real world. Each one of the stages has its own specific questions, which will be explained in the following on the example of a pan-European framework approach.

Regarding the political support the supranational framework needs to be acknowledged and supported by all national approaches. On the national level it is important to understand the supranational approach not as a rival, but as a supplement. All national organisations need to show full commitment to the common goals. Only then they will handle step two and three of the stage model appropriately.

If the political commitment is ensured the organisational environment needs to be set in place. In order to drive the development an enduring organisational structure with roles and responsibilities is necessary, which is independent from individual actors or political changes in the country. Within the survey it turned out that the best performing countries, such as Denmark, had the least changes in the organisational structure over the last 15 years. Clear responsibilities are very important in order to avoid time consuming negotiations or “no-one responsible” situations.

Finally, before dealing with the technical and semantic interoperability issues, the legal environment needs to be adjusted and proper law enforcement regulations need to be set in place. This is necessary to have the tools in hands to force those who are reluctant to apply the regulations.

If all those steps are dealt with it is time to start with technical standardisation and the development of semantic assets. Common standards profiles and common architectural methods will prove appropriate tools to drive interoperability, as long as the political, organisational, and legal dimensions allow their enforcement. To simply trust in the good will of the affected people is a risky business and can lead into a dead end.

Developing solutions for the technical and semantic dimension the experts commented that the development cycles should be short. But agile software development is a general trend, not only in the e-government sphere. The potential users need to be involved early and throughout the whole development cycle. The first projects should start with those solutions that need the least efforts, but offer the most effects, like a standards profile. This will build credibility and will help to ensure commitment.

The organisational, legal, and political dimensions are not set into stone. They need to be monitored from time to time for their effectiveness and efficiency. These three dimensions are the ones, which need the longest time to come into force; another reason to handle them before dealing with technical and semantic issues. In contrary, some technical solutions may be implemented short term.

Further harmonisation

There are a number of topics that are applicable to further standardisation and harmonisation. A European standards body, in which the national e-government bodies work together on common standards, could drive the relevant progress. Since a big bang approach usually ends up in chaos, some smaller iterations of standardisation seem more appropriate.

For instance, the survey revealed that all the study subjects sooner or later stated identical aims and principles. But likely, for each country the stated aims and principles do not have exactly the same meaning. On the European level the meaning of these aims could be harmonised and defined. Since the political context in the EU countries is rather equal such common definition should be feasible. National approaches may refer to the definitions and everyone gets the same idea of what exactly is claimed by, for instance, “back-office integration” and which concrete measures should be performed, enabling the assessment of the target achievement.

In a next step the assessment criteria for the evaluation of standards need to be further harmonised. With the CAMSS projects there is already work on-going that should be valued

and promoted towards a common European approach. Harmonised assessment criteria offer the opportunity to rationalise the assessment of standards among Europe. It should be reminded that standards already went through a public due process where usually representatives of all countries participated. There is no need to assess the standards again, and again. When the assessment criteria is harmonised, the assessment of only one actor would be sufficient. Others can assess the standard based on the assessment report.

The next step will be to harmonise the classifiers. The survey revealed that the approaches are quite similar, however. Therefore, further harmonisation would be feasible easily.

A harmonisation of the general structure of the framework documents, finally, would provide the benefit that required information is be easily identified. This is especially important when dealing with documents which are written in different languages.

How can Russia use the European experiences

Development of information technology in management and administration is traditional in Russia. There were large-scale initiatives in the area of automation of the administration of government in USSR in the last third of the previous century, such as creation of an all-state automated management system (AAMS) and related projects on enterprise-level management (AMS) and technological process management (TP AMS). Experience of the Russian practice shows that consistency and coordination of all projects and initiatives is necessary to implement efficient informational exchange in the administration of government. In this case information technology is the tool which allows creating the growth potential; and the scope of realization of this potential depends on the aggregate of organizational and political factors.

Federal purpose-specific program Digital Russia (2002 - 2010) was the most important initiative for the modern stage of development. Approximately 190 projects in different areas had been implemented in 2004 - 2009 within the frames of the program. The program included 13 projects on architecture and interoperability, 26 projects on unified databases and classifiers, 18 projects on technical infrastructure layer, and 22 projects on the client interface channels. Several projects account for solutions for management and administration automation at the macro level (AIS DROND, etc.), at the regional level, for automation in cultural, educational, and health activities. Most projects, which are about 30, were implemented for IT projects management in the state sector: authority and regional websites monitoring, evaluation of the efficiency of the Federal purpose-specific program Digital

Russia (2002 - 2010) implementation. Materials of the projects were published at the website of the Ministry of Economic Development of the Russian Federation¹³. A consortium for standardization in the area of digital state, Institute of the Digital State Architecture, was founded in 2004¹⁴. At the end of 2008 the Presidential Council on the Informational Society Development in the Russian Federation¹⁵ was created. The Council comprises an expert and consultancy group.

The Strategy for the Informational Society Development in the Russian Federation¹⁶ adopted in 2008 should be mentioned among current documents. Presently active works on implementation of the Interagency E-Circulation of Documents System and Universal Digital Map projects are in progress.

However the attitudes of the experts are quite different, as the survey on the interoperability management conducted on two sites - Russian GosBook¹⁷ [6] (national expert network for the administration of government specialists and experts from different spheres of life) and European site of the pan-European services interoperability project¹⁸ - shows.

The experts had 15 questions to answer from three themes: informational technology processes management, content of the main document on interoperability and third block on the principles of international interaction, which was more for the EU countries. The survey offered two types of answers: selection between offered options and comments. The response in the form of comments was the most valuable, since it showed a significance difference in the opinions. European experts were describing solutions of specific tasks, while Russian experts demonstrated their discontent at the situation with the ICT processes management.

Here are some comments on the content of the document describing the principles of architecture:

"Analytical work in expert groups is necessary. There are no real activities of necessary scope and quality in the country, since the DSA (Digital State Architecture) has not been recognized and organized at the official level. The work on some specific architecture is being conducted in several projects, but these are the object of totally different scale".

¹³ <http://aisup.economy.gov.ru/pubportal/>

¹⁴ <http://www.iaeg.ru/>

¹⁵ Указ Президента РФ от 1 ноября 2008 г. N 1576

¹⁶ Постановление правительства N Пр-212 от 7 февраля 2008 г.

¹⁷ <http://www.gosbook.ru>

¹⁸ <http://www.semic.ru>

"Current works mean there are no current works. Russia does not, and will not, have any such state document as the Digital State Architecture and Digital Government Architecture".

The documents include the System Project for Creation and Use of the Digital Government Infrastructure, which has received mixed opinions from the experts ¹⁹. And the system project was published on the behalf of the Ministry of Communications and Mass Communications of the Russian Federation, while the projects in this area implemented within the scope of the FSP Digital Russia (Digital State Architecture and Software Architecture fir Digital Government) had been conducted under the supervision of the Ministry of Economic Development, though several projects were repeated.

Here is one of the expert's comments on the system project: "Russia has no official document titled Digital State Architecture, there is only crippled System Project of Digital Government - 2010".

Apart from this document the experts state the need to develop methodology for introduction of the architecture principles, evaluation of state and other documents. Here is the comment on the elements necessary to implement the architectural approach. "Merger of the Enterprise Architecture Methodology and approved organizational description (including financing of the architectural process) as a minimum, plus other documents and tools on further stages".

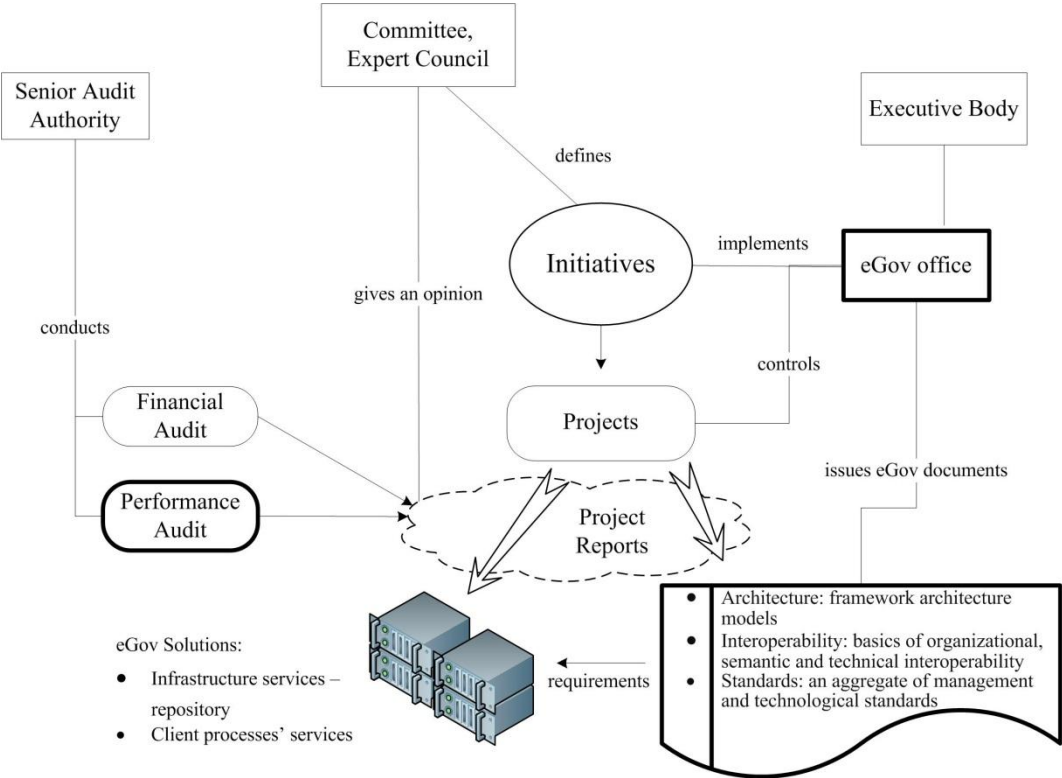
Organizational issues are still the main bottleneck for the IT initiatives. Russian experts mention organizational issues as the major problem hindering interagency interaction development. Some comments on this issue: "There is no mechanism for coordination and regular orientation of the agencies to the joint activities of different divisions and support with exchange of "own" data. The support to other compatibility aspects is needed in order to promote such orientation (new regulations, formation of unified semantic models, etc.)".

The Regulation of the Government of the Russian Federation No. 451 dated 08.06.2011 On Infrastructure Supporting Informational and Technological International of Informational Systems Used for Provision of State and Municipal Services in Digital Form has become one of the steps on the way of the e-state infrastructure generation.

If you look at the ICT management system in the state sector (picture 2), issues of the aggregate of the documents on the IT solutions requirements and an agency, which would be responsible for the ICT policy implementation, are still not solved in Russia. There is a

¹⁹ <http://www.gosbook.ru/node/6697>

comment from one of the participants of the survey: "Russia lacks a personified state agency, not Government, authorized to take decisions on interagency compatibility of information systems which would be mandatory for all ministries and agencies. There is no such notion as a senior federal ICT officer".



Picture 2. Main stakeholders and their functions in the ICT policy

If such a body existed, it would be possible to resolve the problem if the informatization policy continuity after change of teams at the ministries responsible for the informatization area, Ministry of Communications and Mass Communications and Ministry of Economic Development. This problem arises in each of transfer of the coordination functions from one department of the ministry to another one, and also in case of change of the teams after elections. Administration of government automation projects are large-scale and long-term, so any change of priorities and cancellation of specific projects at the stage of completion should be subject to very reasonable reasons.

No the issue of the infrastructure development is within the responsibility of the Ministry of Communications and Mass Communications and Rostelecom as a sole contractor for

maintenance of the eGov infrastructure²⁰. The activities on the infrastructure creation and use should be coordinated with such strategic initiatives as Innovational Russia 2020 Program, which is run by the Ministry of Economic Development.

A repository is an important element of the eState infrastructure, but it is not regulated by any existing documents on the Russian Federation. The repository would allow access to the data on subjects, themes, interagency activities models and administration of government data models. As a rule the repository is supervised by the agency responsible for the ICT initiatives.

Main informational assets of a repository include set of standards, administrative process models, data exchange format documentation, rules of data transformation and subject area components.

Together with the issue of a unified coordination center Russia also faces the problem of external performance audit. Picture 2 shows a senior controlling body as the external auditor. Chamber of Accounts would be such body in Russia. Though the Head of the Chamber of Accounts S. V. Stepashin talks about ideas of the IT projects performance monitoring²¹, it has not yet become a subject to systematic control.

The initiatives (including federal and regional specific-purpose programs) include interrelated, parallel or subsequent projects unified by common goals. It is necessary to coordinate interrelated initiatives in order to reach the strategic goals. The task of obtaining a large-scale effect of the e-Services may be solved by larger amounts of introductions in different areas. This supposes larger scope of coordination of the initiatives and projects.

20 Постановление Правительства РФ от 15 октября 2009 г. N 1475-р

21 <http://www.gosbook.ru/node/5544>

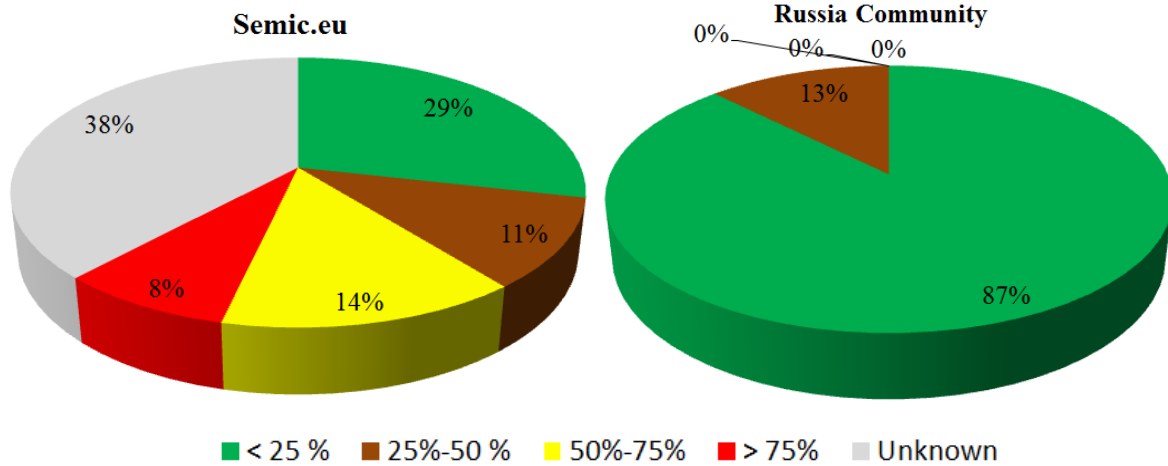
II. Appendix

Q1: How many of the new e-government projects (i.e. applications) comply with your framework's recommendations?

GRAPHS

Semic.eu: n=84

Russia: n=7

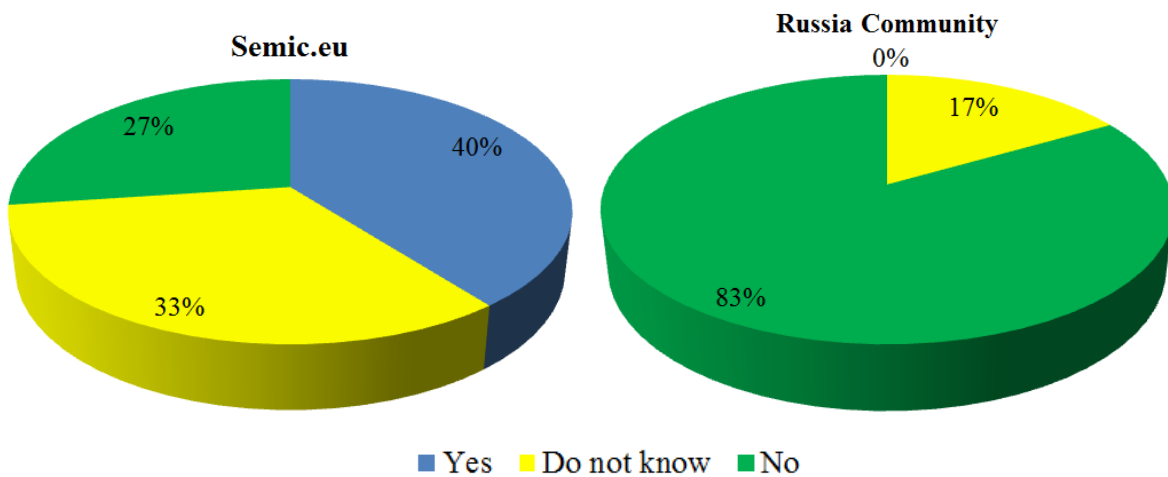


Q2: Does your framework reflect all relevant topics?

GRAPHS

Semic.eu: n=81

Russia: n=7



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Answer	Comment
Yes	A major revision is under way.

Yes	Action plan on electronic government (2010-2015) push interoperability to the new projects through 4 layers/principles: - common methodologies (such as: ABC on design, project plans, ITSEC ...), - common (central) applications (such as: e-Payment, e-GovPortal, e-Directory, ...), - common set of reusable building blocks (such as: BPEL/ESB Toolbox, Authentication, Authorization, SVN, e-Delivery, e-Safe ...), - common infrastructure (such as: Common gov. wide network, PKI, Data center Cloud ...).
No	All aspects of enterprise architecture are under development. Most important aspect is a common information architecture for whole public administration.
No	Attempt to set realistic goals, as the current framework has proved to be nonfunctional. Removing the focus from a common content model in the backend and moving it to the interoperability/service level. Attempting to setup common guidelines for all websites of the public sector.
Yes	Creation of distributed version of standard, creation of more national language versions of standard, creation of security (identity management) extensions of the standard, discussing integration of the standard in Promise initiative
Yes	Data unification and formalization.
Yes	Definition of semantics by which information is categorised and linked.
Yes	Designing a Semantic Portal on the Spanish Civil War and the International Brigades.
No	e-Gov in Colombian public administration.
No	Efforts for bringing semantics into standard data integration models (OGC model, Orchestra, ...)
No	For new Communication scenarios new sub-packages are continuously being developed
/	I am citizen and I have no opportunity to engage in the process of building a framework.
/	I suspect too little attention is being paid to some of the topics raised in answer to questions below.
Yes	I work on a methodology to develop national interoperability framework (NIF) in the new context of EIF 2.0 and digital agenda and the necessary architecture for NIF (my PhD thesis).
/	In our country, there is no approved comprehensive e-Gov Interoperability Framework. In this moment, there are isolated parts completed only and governmental support for this task is lax.
No	interoperability of documents deciding on standards for document formats
Yes	Issues on semantic operability / juridical interoperability and organizational interoperability have the main focus. The more technical issues follow on the outcome of [message stopped here]
Yes	Main work in progress: - Development of a series of technical norms which develop the Royal Decree 4/2010, about e-Document, eFile, eSignature Policies, data models, etc. - Improvement and extension of existing common infrastructures and services. Development of new ones
No	Mandatory by law, under development
Yes	On the methodology side, Praxeme is a comprehensive framework that covers every aspect of the system, from strategy to deployment. On the model side, we are developing a universal semantic model, known as the "Open Business Concepts". These provide accurate representations of core notions that can be shared by administration and other sectors.
No	Semantic
No	since we are a small organization, we extend our framework in an agile processing
/	The Brazilian e-PING initiative has published yearly recommendations to ensure interoperability in the Brazilian e-GOV systems. Each recommendation has been a refinement and an extension of previous versions. These documents stay open for public analysis for a few weeks, so that experts as well as all interested citizens have the opportunity to contribute to the improvement of the e-PING recommendations.

Yes	The development of the Airport Semantic Model framework aligned to the e-GIF for the Airport Ecosystem information exchange. This work is being carried out under the auspices of the ACI-ACRIS Workgroup. I am also applying this framework within the IATA Baggage XML Workgroup. BAA Airports Limited is investing over 50 million pounds in a programme of Baggage transformation using the framework
No	The Establishment of a National Interoperability Framework Covering all relevant aspects but initially focusing on the technical aspects.
/	The framework used in the NJR project is discussed and approved between the different representatives of each government and it's up to each local project to implement its own complaint framework. In Portugal 100% of the framework is implemented. Keep in mind that this framework is not based on the e-GIF initiative.
No	We are currently working on a new interoperability framework. There has not been a formal framework previously.
No	We are undergoing a review of our standards through open consultation.
No	We don't have a task to cover all related topics - instead, we move forward step by step. As new projects are established, framework is elaborated.
Yes	We finished work on all materials related to GIF. The new development cycle has been launched and we are applying for project supervision. Since this is public procurement procedure we still do not have results.
No	We have good coverage of EA and technical standards issues but semantic specifications and workflow analysis is lacking. We are working to define and implement a framework for semantic definitions of workflows and data which will support better integration from process analysis and reengineering all the way "down" to technical specifications such as WSDL and XML Schema.
Yes	We now have a central service-oriented Interoperability Platform (iAP) that provides transversal e-services that are focused on Citizens and Enterprise's needs. This Platform allows information exchange between Public Entities and broadens the communication channels between Public Administration and Citizens. The iAP comprehends the following independent services: - Integration Platform - provides an easy and integrated delivery of cross-cutting electronic services, becoming a cornerstone in the process of administrative modernization; - Identity Provider (IDP) - allows authentication using the Citizen Card in portals duly accredited and authorized for that purpose; - Payments Platform - allows the availability and integrated management of multiple payment methods for different channels; - SMS Gateway - Enables the sending and receiving SMS via short numbers between citizens and public administration bodies, enlarging the number of available channels of contact for managing the relationship with citizens. iAP has an Identity Federation mechanism that allows Interoperability without compromising Citizens personal information and a Canonical Data Model that allows Interoperability between different systems with different data models. It also has a web service repository where all Public Entities can chose the services they want to use. The IDP allows National and foreign Citizen Identification based on eID card. Foreign Citizen Identification is accomplishing with Stork Project. Briefly IDP will allow Single Sign-On between Public sites. iAP will also be the entry point that will allow to fulfil the EU Services Directive. It is already prepared to do so.
No	working on defining the framework itself
No	You can never use the words all relevant topics this openly
/	Our IF does not reflect all the relevant topics, but unfortunately there's no maintenance or update planned at this moment

SUMMARY OF COMMENTS FROM RUSSIAN COMMUNITY

Answer	Comment in Russian	Comment in English
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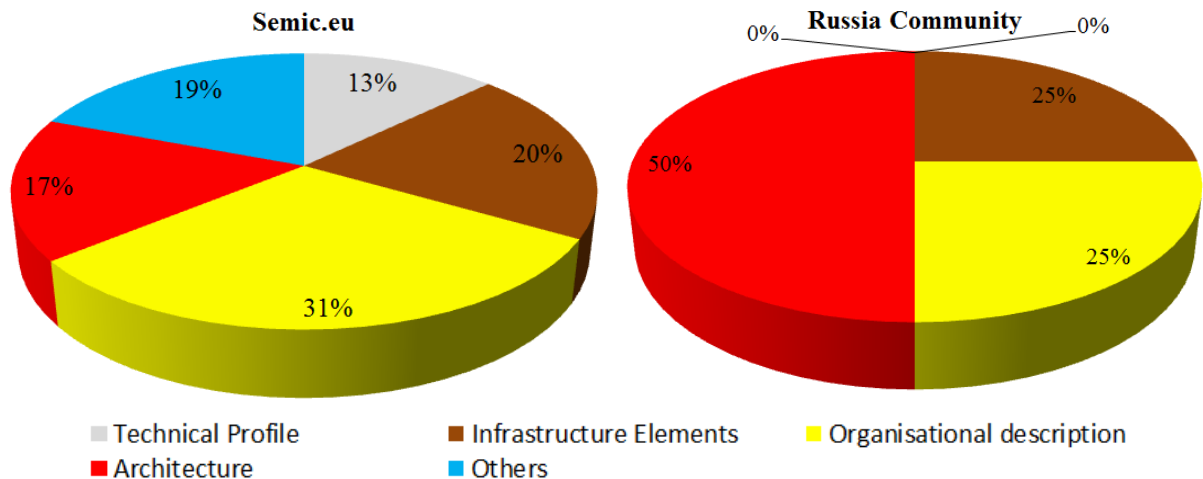
No	Формирование Архитектуры электронного правительства для ряда субъектов РФ Реализация инфраструктурных и прикладных ИТ систем электронного правительства.	Formation of the architecture of e-government for a number of subjects of the Russian Federation. Implementation of both infrastructure and IT applications of e-government.
No	Аналитическая работа в экспертных группах. Реальной работы нужного объема и качества содержания в стране не ведется, так как на официальном уровне АЭГ и ее механизмы не признаны и не организованы. Ведется в отдельных проектах работа над частными архитектурами, но они являются объектами принципиально другого масштаба.	Analytical work in expert groups. The real work of required volume and quality of content in the country is not conducted, because at the official level, e-government architecture and its mechanisms are not recognised and not organised. Work on private architecture is conducted in some projects, but they are subjects of fundamentally different scale.
No	В России нет официального документа "архитектура электронного государства" есть лишь недостаточный документ "Системный проект электронного правительства - 2010".	In Russia there is no official document of the "architecture of e-government" is only an insufficient paper on "System project of e-government – 2010".
No	Текущая работа состоит в отсутствии текущей работы. В России нет и не предвидется такого государственного документа, как архитектура электронного государства, как и архитектура электронного правительства.	Current work is the absence of on-going work. Russia does not have and does not anticipate such a public document as an electronic state architecture or e-government architecture.
/	Некорректный вопрос. Правильного ответа в перечне просто нет, т.к. в России архитектуры ЭП нет. А понятие "электронное государство" вообще представляет собой нонсенс.	Improper question. There is simply no correct answer in the list, because in Russia there is no e-Gov. architecture. And the notion of "electronic state" in general is nonsense.

Q3: What is the most important element of an e-GIF?

GRAPHS

Semic.eu: n=78

Russia: n=4



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Summary of Comments on Semic.eu
All are important - impossible to select
All interop levels are important (legal, org, semantic, technical). Harmonization and transparency of information needs to happen in all of them.

Common information architecture including semantic interoperability specifications
Description of organisational goals, scope of interoperability (predefined cooperation partners or wider interoperability), functions to be supported, classes of resources to be shared and/or exchanged, properties of resources, value spaces; issues of security, persistence, maintenance and change management.
Homogenizing the "how" is a prerequisite. Then, we need to share common semantics.
I think you cannot choose the most important the one is quite meaningless without the others. If I have to choose then it is 3 or C or option "Organisational description"
In our opinion, there are three layers of e-GIF with almost equal significance: 1. Architecture (abstract description of objects, interactions and restrictions) 2. Specification (detailed description of how technical standards fit the architecture) 3. Implementation (concrete infrastructure object, i.e. applications, built in conformity with specification) Because of it, we cannot prefer only one of choices mentioned above.
It is a combination of open standards, architecture and organizational guidelines
It is difficult to answer this question. The correct governance and the organizational interoperability are very important
Legal interoperability and incentives to co-operate between organizations are key. When the intentions are clear and agreed upon, architectural and technical interoperability issues are easy to solve.
Political support. Without that the rest is just IT.
Provisions for semantic and organisational interoperability.
Question should not be single answer
Semantics!
technical, organisational, legal and semantic interoperability
The most important factor, without doubt, is understanding and commitment from the potential user community. The technical parts - e.g. as listed above - are valueless without commitment.
The National Interoperability Framework of Spain involves all the aspects shaping globally the interoperability. Firstly, the organizational, semantic and technical dimensions referred in article 41 of Law 11/2007, of June 22, are considered; secondly, it deals the standards stated for the interoperability in Law 11/2007, of June 22, as well as the independence of the choice of technological alternatives and the citizens' right to choose the applications or systems to communicate with Public Administrations; thirdly, the common infrastructures and services are considered as recognized elements of dynamization, simplification and dissemination of interoperability also as facilitators of the multilateral relation; fourthly, the reuse of the applications of Public Administrations, of the related documentation and of other objects of information, since the command «share» appears in the interoperability definition stated in Law 11/2007, of June 22, and together with «reuse», both are relevant for the interoperability and are related to the policies of the European Union in connection with the idea of sharing, reusing and collaborating; fifthly, the interoperability of the electronic signature and of the certificates are considered; finally, it deals the preservation, as established in Law 11/2007, of June 22, as declaration of the interoperability through time and that affects the electronic record in a singular way. In this regulation the interoperability is referred as an integral process, where occasional actions or immediately relevant treatments do not fit, due to the fact that the weakness of a system is determined by its most fragile point and often this point is the coordination among individually suitable measures but inadequately assembled.
The right balance of all the above however focusing where there could be immediate results
Interoperability policies and principles, and an outline on the governance of interoperability

SUMMARY OF COMMENTS FROM RUSSIAN COMMUNITY

Comment in Russian	Comment in English
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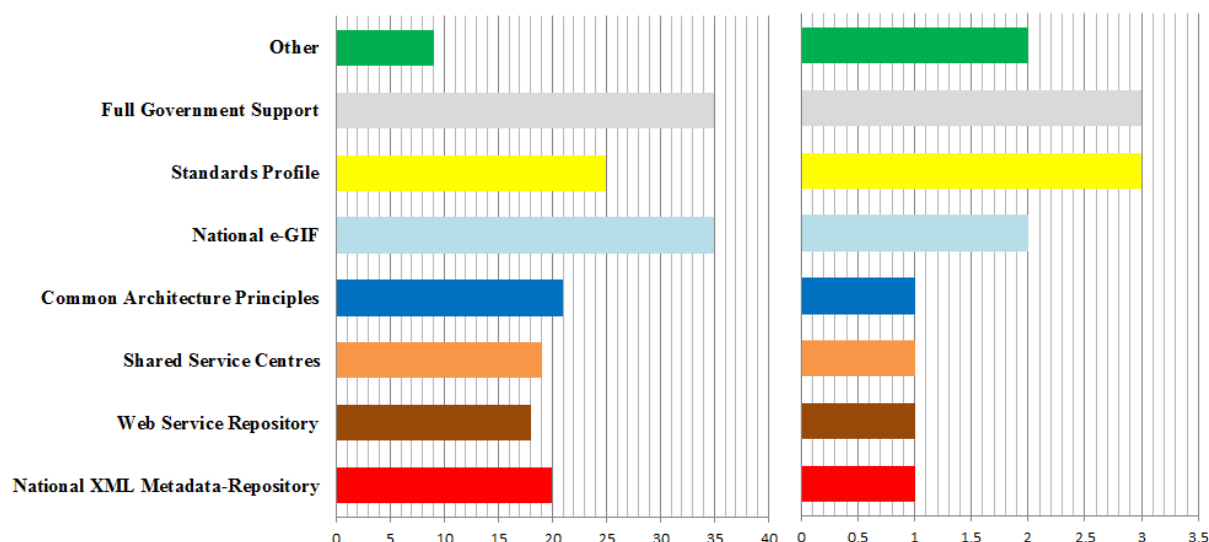
Как минимум объединение Методологии архитектуры предприятия и утвержденного организационного описания (включающего финансирование архитектурного процесса), к которым на следующих этапах добавляются остальные документы и инструментальные компоненты.	As minimum, the union of both enterprise architecture methodology and approved institutional description (including the financing of the architectural process), to which the remaining documents and instrumental parts are added on the next steps.
Все перечисленное равнозначно важно.	All of the above is important.
Неграмотный вопрос. В соответствии с архитектурным подходом важны все уровни: архитектура деятельности, системная архитектура и технологическая архитектура.	Illiterate question. In accordance with the architectural approach all levels are important: activity architecture, system architecture and technology architecture.

Q4: *What milestones are helpful in the national development of e-Government?*
[Multiple choice]

GRAPHS

Semic.eu: n=78

Russia: n=6



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Comment
<i>[Edit: First Group]</i> (Impossible to answer more than one of the above even though the question implies multiple answers). We believe that the following is important: 1. Creation of a national interoperability framework 2. Information about which API:s/data is available from each agency and who to contact (displayed on a central website). This facilitates reuse. 3. Harmonization on basic technical interop requirements (but not too strict to allow for new technology) 4. Examples on how to implement recommendations in a NIF.
<i>[Edit: First Group]</i> 1. Marketing and Sales of the e-government 2. The metric foundations of e-Government (costs, prices, ROI, users (usage), impact)
<i>[Edit: First Group]</i> All of the list's milestones are helpful. Most important (any project should start with it) is Full Gov. support. The first and the second milestones as, in my opinion, "a must" in any e-Gov dev. plan.
<i>[Edit: First Group]</i> All of them. I do not understand why the question is formulated plural, while only one single answer is possible.

<i>[Edit: First Group]</i> The first milestone should be getting a clear view on what already exists. The second milestone should be identifying what can be built on top of existing best practices. The third milestone could be to find out, what is currently missing, and filling in the blanks. The missing pieces will vary between countries. Too many projects start from a clear surface and try to design a perfect world with single standards enforced to all parties. This is a good approach in a company scale, but bigger enterprises tend to give everyone some slack: they acknowledge that their field of operation is not homogeneous, and some diversity is necessary. Nationwide, it is even more important to realize that one all-encompassing solution usually hinders more than helps actual interoperability.
<i>[Edit: First Group]</i> Many of the above are not either/or options. All of these will be helpful.
any connection to other framework authorities is very helpful. Exchanging news and staff is also very important. I can only choose a framework if I know how others decided and what are their experiences
Legal framework (primary and secondary legislation, agreement templates, SLAs) - necessary for cross-departmental services - need to cover shared responsibility for service quality, financial aspects - online payment etc.
Reference semantic model (at conceptual level, a way of expressing the core business knowledge)
Support for the creation of a national taxonomy (vocabulary) including definitions. There are some word lists (no definitions) but there seems to be little encouragement to use them.
Support Open Standard and OSS
The main milestone for the development of eGovernment in Spain has been the LAW 11/2007, of 22 June, on electronic access to Public Services for members of the public together with its related action plan.
<i>[Edit: First Group]</i> This should be possible to make multiple choice since you say milestones the answer is all of the above <i>[Edit: For the first group a technical issue did not let them perform multiple choices]</i>

SUMMARY OF COMMENTS FROM RUSSIAN COMMUNITY

Comment in Russian	Comment in English
Все перечисленное и еще многое (например, обучение специалистов, оценка зрелости реализуемых архитектур, и др.), но реализуемое в порядке, определяемом на базе Методологии и Организационного положения.	All of the above and much more (e.g., training, evaluation of maturity of implemented architectures, etc.), but implemented in order based on the methodology and Institutional arrangements.
Опять плохо поставленный вопрос и неудачный инструментарий опросника: полезными являются несколько этапов, а отметить сразу несколько невозможно.	Again, bad question, and bad questionnaire tool: useful are several stages, and it was impossible to mark several ones.

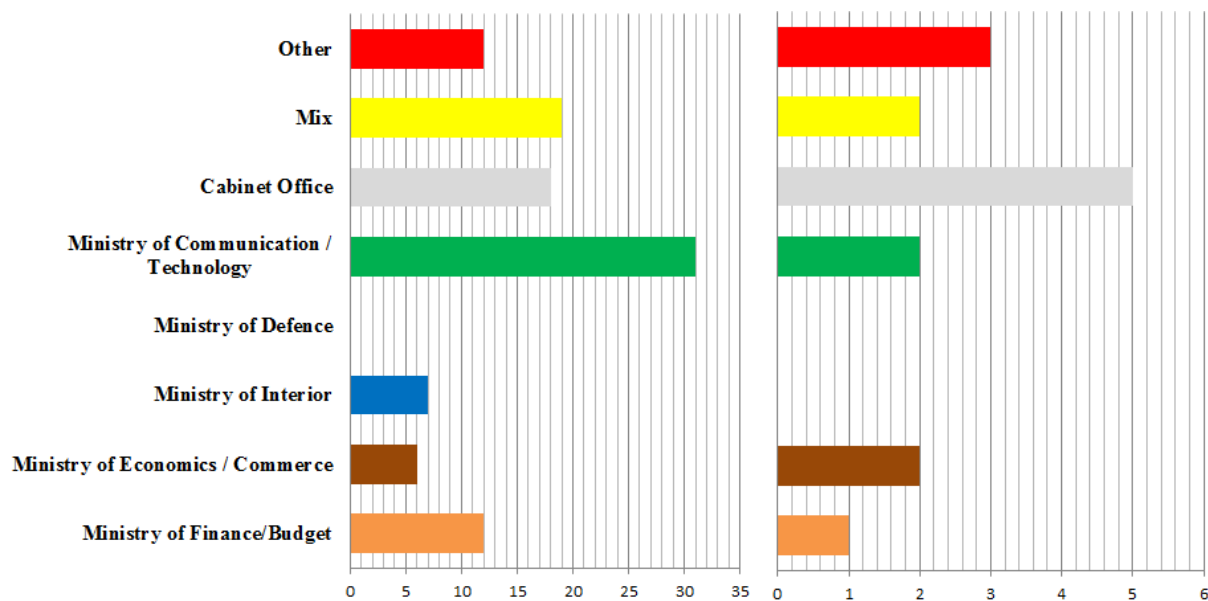
Q5: *Which department should have the lead in e-GIF development?*

[Multiple choice]

GRAPHS

Semic.eu: n=77

Russia: n=7



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Comment
An independent institution with Interoperability competences directly dependent of the Cabinet Office
Any that has jurisdiction on Government wide information standards
Central Government Office for eCroatia
In our case the Ministry of Territorial Policy and Public Administration, with support of the Ministry of Industry because of its competencies in relation to the development of information society in Spain.
In Portugal there is a specialized agency responsible for the national and international interoperability. It's called AMA "Agência para a Modernização Administrativa" (http://www.ama.pt). It depends from the Ministry of the State Presidency gaining transversal autonomy.
It will depend on the national legislation and existing infrastructure. Critical success factor: CIO must have direct report line to the prime minister or the president of the country.
Ministry of Innovation, Science and Culture
Ministry of Public Administration
Prime minister, otherwise how could we arbitrate and enforce the directions?
Private sector representation is also important. Both citizens and companies should be able to express their wishes, needs and requirements for the interoperability framework.
Since usually departments have their own authority over development of such frameworks they will need to cooperate.
The pressure needs to come through departmental CIOs to ensure buy-in.
The question is ill-founded. There is no reason to suspect that the question can be answered meaningfully in the general case, or at least not with the answers presented here. The best answer is probably something like "the department which has the most appropriate and available skills needed" - but that department will vary from country to country.
This depends on local circumstances and culture. In any case, a central agency to promote and maintain the use of common standards, vocabularies, and tools is necessary.

SUMMARY OF COMMENTS FROM RUSSIAN COMMUNITY

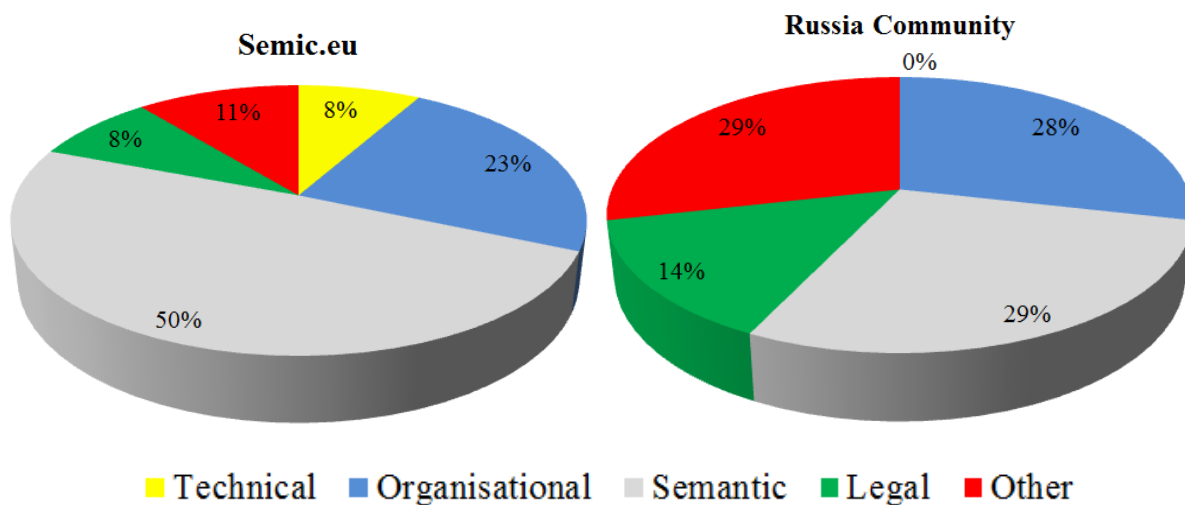
Comment in Russian	Comment in English
Аппарат Правительства РФ	Russian Federation Government
<p>Целесообразно определить Специальное Архитектурное бюро в составе Аппарата Президента, которое объединит механизмы, свойственные указанным выше ведомствам, а также представителей гражданского общества для того, чтобы соединять политические и стратегические цели, технические инновации и требования стандартизации, аспекты экономической целесообразности и профессиональный комплексный архитектурный процесс.</p>	<p>It is advisable to determine the special architectural office in the Office of the President, which will unite the mechanisms inherent to the above mentioned departments, as well as representatives of civil society in order to connect the political and strategic objectives, technical innovation and standardisation requirements, aspects of economic appropriateness and a professional comprehensive architectural process.</p>

Q6: Which part should be stressed more in the framework document?

GRAPHS

Semic.eu: n=73

Russia: n=7



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Comment
<p>All of them are important:</p> <p>#1 Services provided are identified; also administrative units. Inventory of administrative Procedures and services provided: in the General State Administration done with System of Administrative Information (SIA). Inventory of administrative and registry offices: Done through the Common Directory – Directorio Común); and associated codings (Something equivalent would be the IMI DB of competent authorities). Interconnection of registry offices: Done through the system called SIR.</p> <p>#2 Services are available through the administrative network; conditions of use are known (published). Development of supporting instruments: Role of Intermediation services (SVD).</p> <p>#3 The role of “interoperability nodes” is recognized. Entities that provide IOP services (Org., Sem., tech.) on behalf of others. IOP nodes notably simplify organizational interoperability. Intermediation services: facilitate the access to BASIC REGISTRIES (e.g. Identity, Residence, Cadastral information, Tax information Social Security information, Education titles...). Some kinds of nodes are usually needed: STESTA LDCPs, STORK PEPs...</p> <p>#4 Semantic assets are published and used. Share, reuse and collaborate around a collaborative instrument equivalent to SEMIC.EU (currently under development).</p> <p>#5 Use of standards. Legal basis: (EU) D.98/34/C, national (Law 11/2007)... + Additional criteria (inspired in CAMSS). Catalogue of standards for IOP and rules of maintenance under development.</p> <p>#6 Common infrastructures and services are available, used and linked with equivalent ones → Local-& Regional-& National-& EU.</p> <p>#7 In particular, all P.A.s are connected through adm. Network and equivalent networks → Local-& Regional-& National-& EU Administrative Network (Red SARA) connected to sTESTA.</p> <p>#8 eIdentification, eAuthentication and eSignature are interoperable in an scenario of diversity (CSPs, certificates, ...) Electronic Identity Card (DNI-e). Platform of validation services @Firma: & 100 types of certificates of & 15 providers (national and int.) used by & 500 entities of Public Administrations. STORK for cross border interoperability.</p> <p>#9 Conditions for interoperability of eDocuments are defined. There is a common understanding about eDocument and eFile. There are agreed XML structures for exchange of Documents and Files.</p> <p>#10 Share, reuse and collaborate → Local-& Regional-& National-& EU: There are collaborative instruments linked with equivalent ones.</p>
all of them equally

All of them. Each of the parts has to be stressed over the others depending on the moment of eGIF development.
All of those.
Both legal and organizational aspects are the critical ones. Semantic and technical can be dealt with through cooperation with providers (internal and external). The political aspect need not be stressed in the document, but has to be resolved.
Methodology
Policy without direction/strategy the others fall
Question is not single answer
Real solutions to overcome the barriers. There has already been a lot said about the principles, but clearly the barriers continue to prevent significant progress being made.
That depends on the context. In Sweden we need to stress legal interoperability transparency as we have a lot of regulation concerning intra-agency information exchange. To minimize erroneous use of information the semantic interoperability level is important.
The framework document must be well-balanced mix of all aspects mentioned above ...
We use framework to mean a strategic grouping of standards. The logical grouping needs to be stressed the most.

SUMMARY OF COMMENTS FROM RUSSIAN COMMUNITY

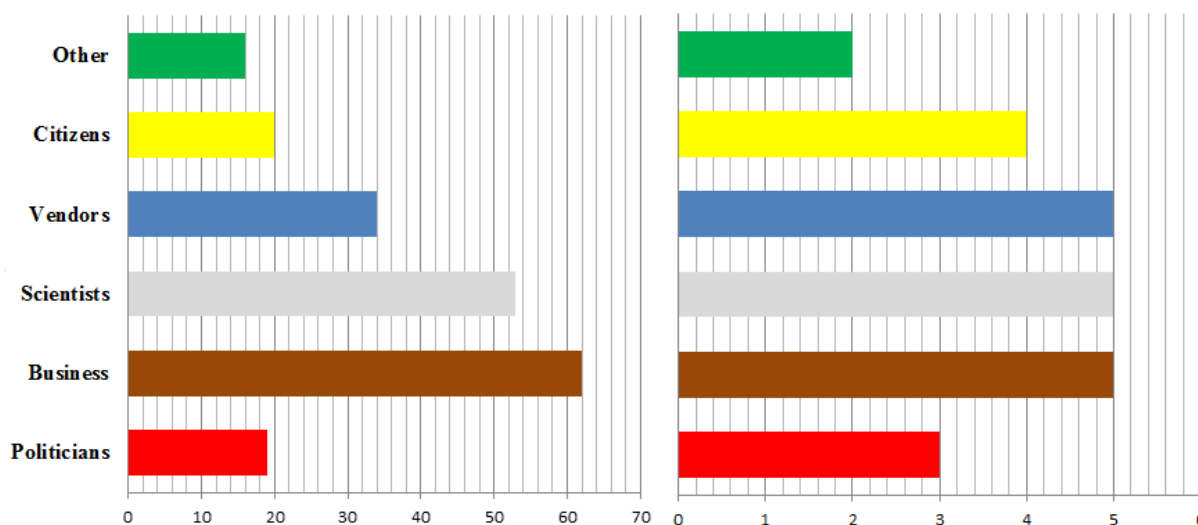
Comment in Russian	Comment in English
В соответствии с фундаментальными и стандартизованными определениями, а также передовой практикой в документе архитектуры АЭГ должно быть уделено внимание в первую очередь комплексному подходу, состоящему в сочетании и целостном описании всех указанных выше и некоторых добавочных аспектов.	According to basic and standardised definitions and best practices in the e-government architecture document attention should be given in the first place to an integrated approach, consisting of both combination and consistent description of all the above and some additional aspects.
Опять должен посетовать на некорректную формулировку вопроса. Если речь идет об архитектуре ЭП, то нужно работать и уделять внимание всем архитектурным уровням (см. ответ к вопросу 5). Кстати. термин аспекты здесь некорректен, не говоря уже про т.н. АЭГ. К тому же, в вопросе речь, видимо, должна идти об интероперабельности, а не об архитектуре ЭП. Именно для интероперабельности и нужно вести речь об обеспечении на нормативно правовом, семантическом, организационном и техническом уровнях. Все это - не более чем архитектурный аспект взаимодействия и интеграции.	Again should complain to the incorrect formulation of the question. If we are talking about the architecture of e-Gov., then you need to work and pay attention to all the architectural level (see answer to question 5). By the way, the term aspects is flawed, not to mention the so-called e-state architecture. Besides, the question probably should be about interoperability and not about the architecture of e-government. That is for interoperability there is need to talk about provision on the regulatory framework, semantic, organizational and technical levels. All of this - no more than an architectural aspect of the interaction and integration.

Q7: Who should participate in a standards body? [Multiple choice]

GRAPHS

Semic.eu: n=76

Russia: n=7



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Comment
A group of IT-competent people who understand the needs of public services and can argue for what is best for public services as opposed to commercial interests. This group should be in the majority. The issue of standardisation has been over-emphasised. What is required is a moderately long list of open standards that truly enable interoperability. Vendors of proprietary software/hardware will quickly make modifications as needed in order to comply with open standards.
Actually you need political decision makers and all stakeholders in order to adopt AND implement standards. I would recommend two tier structure + thematic working groups. Final decision should be made by a government advisory group consisting of politicians and CIOs from the most important departments (internal affairs, public administration, departments responsible for the citizen, land and company registers) + national CIO if there is one. Operational committee should comprise business practitioners, vendors, scientists and representatives of NGOs. It should prepare final drafts of documents for adoption by the government advisory group. Actual documents should be prepared in thematic working groups under the jurisdiction of the responsible department, and include all stakeholders in an open way (like any standardization technical committee) in order to make best use of the available knowledge and experience and also service users' business requirements.
Administration personnel
Archivists, Information Scientists, Librarians and Technologists
Civil servants
Depends on the scope of the committee. IT standards for the public sector? In that case civil servants, business practitioners and vendors may be suitable.
Civil servants
Experts
In France, the Commission Nationale Informatique et Liberté (CNIL) should be involved. CNIL is an independent authority whose mission is to protect the individual privacy and the liberty within the digital world.
It depends on what a "standardization committee" is supposed to do. It can work on various levels, e.g. coordination of standardization of policies, harmonization of organizational procedures, choice of semantic and syntactic standards. In the area of technical standards, please don't develop new standards; use existing open standards as much as possible.

IT's
Open participation to all voluntary parties.
Or selected lobbies of the mentioned participants. The selection of participants or lobbies depends on the scope of standardization.
Politicians have to play a role of sponsorship. Definitely avoid the involvement of vendors in this committee. That would be a fault, with respect to ethics and efficiency. Vendors certainly must be involved but in a proper way.
Public Administration experts
Technicians: Programmers/Architects/Semantic experts etc. Maybe that's meant by "scientists"
The good answer in the end is: all. But, in order of priority: 1. business practitioners 2. Citizens 3. Vendors 4. Scientists 5. politicians
There are multiple levels here

SUMMARY OF COMMENTS FROM RUSSIAN COMMUNITY

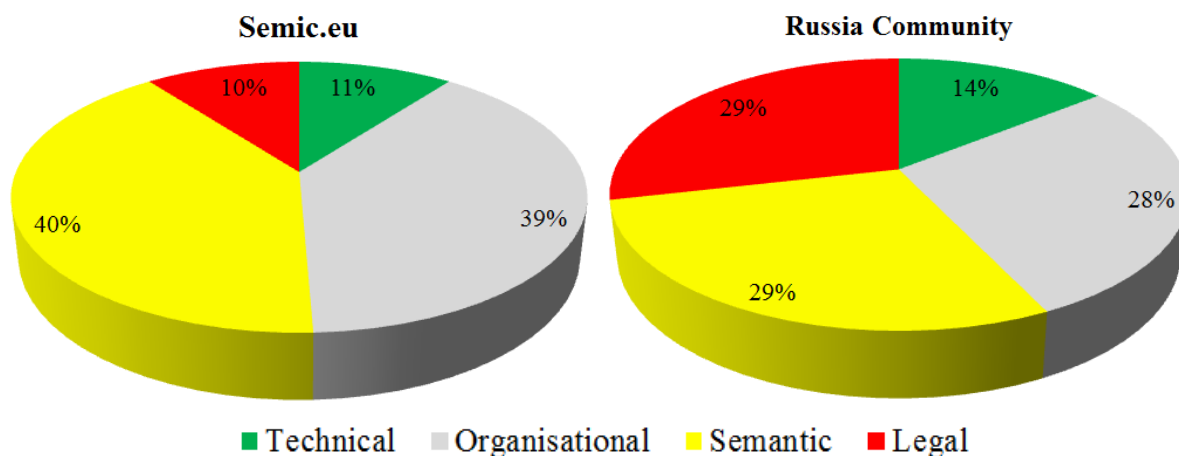
Comment in Russian	Comment in English
госслужащие	civil servants
В АЭГ стандартизируются разные аспекты ЭГ и его систем (например, требования к потребительским качествам процесса оказания электронных услуг, требования к эргономике интерфейсов конечного пользователя, требования к техническим интерфейсам и процедурам совместимости систем ЭГ, и др.), поэтому комитет (или иная орг. структура) по стандартизации должен иметь в своем составе представителей всех указанных выше групп, а также инженеров в области ИТ, юристов, инженерных психологов и специалистов по стандартизации (список не исчерпывающий).	In e-government architecture various aspects of e-Gov. and its systems are getting standardised (e.g. requirements for consumer qualities of e-services, ergonomics requirements for end-user interface, requirements for the technical interfaces and procedures, interoperability of e-government, etc.), so the committee (or other org. structure) for standardization must be composed of representatives of all the above groups, as well as engineers in the field of IT, jurists, engineering psychologists and experts on standardization (the list is not exhaustive).

Q8: Which dimension causes most interoperability problems?

GRAPHS

Semic.eu: n=77

Russia: n=7



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Answer	Comment
Org	80% of all problems we faced in our e-Gov project are purely organizational. Sometimes it is almost impossible to set different system holders around the same table. Also it is necessary to "buy-in" technical staff and vendors, which supplies IT/support IT in many orgs.
Org	All dimensions have problems. But they are different
Org	Almost every organisation thinks it should be ruling the framework process. But in fact that results in a bad practice. It would be much better if only one organisation is in charge. And then again you need to have more exchange between framework-in-progress-initiatives and the ones that have already made one.
Org	Assigning responsibilities and accountability for adopting standards in all applications within each agency of the public administration.
Leg	Because laws are not harmonized, so the semantics is not harmonized. As a consequence the systems and the organizations remain unable to work towards each other and interoperability of all other kind remains at least problematic.
Tec	choosing interface in non-adequate
Org	Commonly there are no exact borderlines between responsibilities and competencies of particular actors in e-Gov. processes. The result is huge amount of minute problems (of course, legal aspect plays the role, too)
Org	Data sharing among Public Entities evolves major organizational changes in the way Portuguese Public Services operate. So in my opinion this dimension causes most problems and these problems must be overcome with a strong political leadership
Sem	definition are different depending on the different domains
Sem	Definitional problems are hard to resolve ex post; if not impossible.
Leg	Depending on the regulation it may be impossible to re-use information from one agency in another agency in a service oriented way.
Org	Different cultures of different actors

Org	Different governmental entities from each country have different goals and different understanding of concepts, mostly for historic reasons. There is also the empowerment of each country and its ability to push changes to the less empowered representatives.
Leg	Different legislations among the interoperating parties make agreements impossible.
Sem	Different meanings of things (mostly because of communication/translation issues).
Sem	Difficult to classify
Sem	Flaws in all dimensions may hinder interoperability, but the first one in the sequence is the lack of a common understanding.
Sem	Heterogeneity of information, merging information systems, mapping knowledge organization systems.
Sem	I do not think they cause the most problems but I do think it the base for all the others.
Sem	If two persons want to communicate the first question is : what are we speaking of? Even legal problems can be studied only once this point has been fixed.
Org	In the recent past various approaches for the technical and the semantic dimension has been developed. Today's challenge is to realize these approaches. In this context especially the organizational and also the legal dimension are the problem.
Tec	Interop problems are mostly caused by the sheer number of interconnects. There are plenty of examples of technical, organisational and semantic problems but it's the volume of each that overwhelms.
Org	Interoperability requires cooperation between the stakeholders, and organization problems appear to be the major hurdle to cooperation between public authorities (at any level, not just the technical)
Org	It is necessary to create a context for multilateral interaction in order to avoid the proliferation of bilateral scenarios and solving the same problems n times. This requires legal basis and agreements.
Org	lack of proper guidelines, templates, etc. for creating interoperable solutions; maybe the added value of providing interoperable services and interfaces is not adequately articulated
Sem	Lack of semantic definitions of both services, workflows and data hinder interoperability and creation of shared services.
Sem	lack of semantic interoperability: between different domains, between different states, lack of semantics which can be referenced for certain tasks lack of simple referencing system (like linked data note: referencing system needs to be standardized to be useful. reference sources can be diverse but must be distinct)
Org	Many organisations do not have the requisite technical, legal and organisational/managerial skills to drive interoperability forward. A strong political will is essential - as is the recognition that this is an organisational problem, not an IT problem.
Sem	meta data of the e government entities
Sem	multi script, multi-language
Leg	Mutual assistance regulation could block a direct interoperability in the law enforcement sector; intelligence provision is ok but evidence of crime hand-over in preparation for a court-case still has to go through mutual assistance to be accepted in the respective jurisdiction.
Org	No clear responsibility of Business domains. Overlap of business domains
Tec	Not all the solution use open standards (which is the key factor in interoperability), so this solution remain closed to the other and also the data, knowledge remain closed.
Sem	Organisational and procedural inconsistency, lack of common understanding among depts. and sectors, 'bush' evolution of localized standards or quasi standards.
Org	Organisational barriers, lack of cross-organisational understanding, organisational self-interests

Sem	Organisations tend to invent their own vocabularies rather than sharing. Hence linking between them is limited.
Sem	Organizational (trust, competition, ..) and semantic (context-dependence of all the meaning of all data).
Org	Organizations tend to optimize processes from their own perspective - and ignore the common good. Organizations should be given incentives to co-operate. Sometimes a legal process is necessary, but usually other methods should be exhausted first.
Org	Organizations will be better able to better communications. Communication should be established.
Org	Organizations' interests and goals alignment are complex. Organizational change management is key.
Sem	Question is not single answer
Sem	same description - different meaning
Sem	Semantic problems cause the most problems because they are invisible.
Sem	Technical problems is just a matter of budget Organizational and legal dimension cannot successfully be attacked until semantic standards are set, accepted and being implemented
Tec	Technique is the foundation of interoperability. E-government solutions must be based on open standards to allow greater control. However, the framework should be scalable in order to open up innovation. These require a relationship between the IT companies and administration. Other dimensions of interoperability are difficult to treat, I think particularly to the organizational, interoperability needs changes in practice.
Org	The missing culture of service provision (Strategy, Development, Transition, Operation and Contiguous Improvement)
/	The number of interoperability problems is not that significant. Imho it is more important to note that legal, organizational, and semantic problems are usually harder to resolve than technical problems, where many useful standards exist.
Leg	There is a need for cross departmental services that pose problems of jurisdiction, sharing of risks, responsibilities and funding. There is also a political dimension. Different departments may have different priorities and vision for sequencing of development. There is a need to establish cross-departmental priorities and resolve a problem of funding and coordination of development for services that cross department boundaries. Political, legal and organizational dimensions are the more difficult ones. Technical and semantic problems are often only used as an excuse when political and organizational issues are not resolved.
Sem	There is often ambiguity in definitions between government departments, local government and agencies. This leads to many problems in interoperability and prevents appropriate sharing of data
Sem	Unclear direction of whole government development. You need clear and common security policy, XML formats for most common cases. You also need one communication point (more organization part). Where you send information only once. For example you change your permanent address and all necessary parts are informed, like police to give you need ID card, new health insurance card,
Org	Unless absolutely required by business needs, solutions almost always do not take account of the potential for interoperability, using whatever provides the required capability at lowest cost. This is very common even within individual government departments. I believe one key reason for this is that there is no clear way of quantifying the future benefits of interoperability. Therefore, even if there has been some initial encouragement towards interoperability, ultimately the commercial decision will justify ignoring this aspect.
Leg	Who is allowed to do what when is most problematic. Including data protection issues
Org	People than do not collaborate with other institutions or departments, because they think that their "business" is so much different or with only a few common points.
Sem	Technical interoperability is never finished, but we know how to handle issues. Semantic interoperability is the next step and a huge challenge. It is a premise for organizational i.o.
Tec	You cannot communicate if you do not know technically secure it, even if you speak the same language.

Org	Degradation of local social and political environment (Hungary)
Org	Technical and semantic interoperability might be reached but what they need to run are always work processes to organize the work of human beings. Therefore, I see the crucial part in the organization. If the organization runs well then all other problems can be solved, it is the basis for any other activities. It might have less influence on the legal framework which is probably the most difficult to manage. But in my opinion the problems arise from the organization.

SUMMARY OF COMMENTS FROM RUSSIAN COMMUNITY

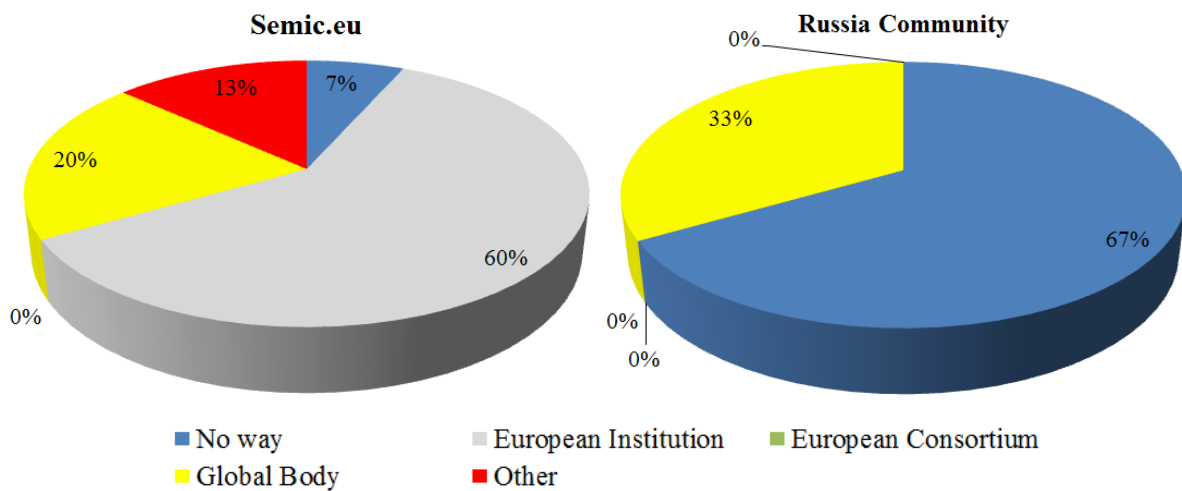
Comment in Russian	Comment in English
Отсутствие механизмов координации формирования электронного правительства.	Lack of coordination mechanisms for building e-government.
Организационный аспект, состоящий в отсутствии плановой ориентации организаций (подкрепленной контролируруемыми показателями результативности и производительности такой деятельности) на совместную деятельность разных ведомств и ее обеспечение обменом "своими" данными. А уже для обеспечения такой ориентации может и должна быть осуществлена поддержка и других аспектов совместимости (новые регламентные документы, формирование общих семантических моделей, и т.п.).	Organizational aspects held in the absence of a planned orientation of organizations (backed by controlled performance indicators and performance of such activities) on the joint activities of different agencies and ensure the exchange of "their" data. And already for provision of such guidance the support of other aspects of compatibility can and should be implemented (new routine documents, the formation of common semantic models, etc.).
Интеграция информационных систем и ресурсов — это в первую очередь интеграция смыслов.	The integration of information systems and resources - it is primarily the integration of meanings.
В России отсутствует персонафицированный государственный орган, отличный от Правительства, но, возможно, входящий в Правительство и наделенный полномочиями по принятию решений по межведомственной совместимости информационных систем, обязательных для всех министерств и ведомств. Нет такого понятия как высшее федеральное должностное лицо по ИКТ (э-правительству, э-государству -- как угодно). Только что (Февраль 2011 г.) появился документ по Требованиям к системе межведомственного электронного взаимодействия (СМЭВ) и по внедрению для внутренних нужд министерств и ведомств электронного документооборота, а такая система как межведомственный электронный документооборот, так и не запущена.	In Russia there is no personified public agency other than the Government, but probably included in the government and empowered to make decisions for interagency interoperability information systems mandatory for all ministries and departments. There is no such thing as a higher federal officer on ICT (e-government, e-State - as you like). Just (February 2011) appeared on-demand to the system of inter-electron interaction (SMEV) and the introduction to the internal needs of ministries and departments of electronic documents, and such a system as an inter-agency electronic document is not running.

Q9: Who can lead a supranational framework?

GRAPHS

Semic.eu: n=15

Russia: n=3



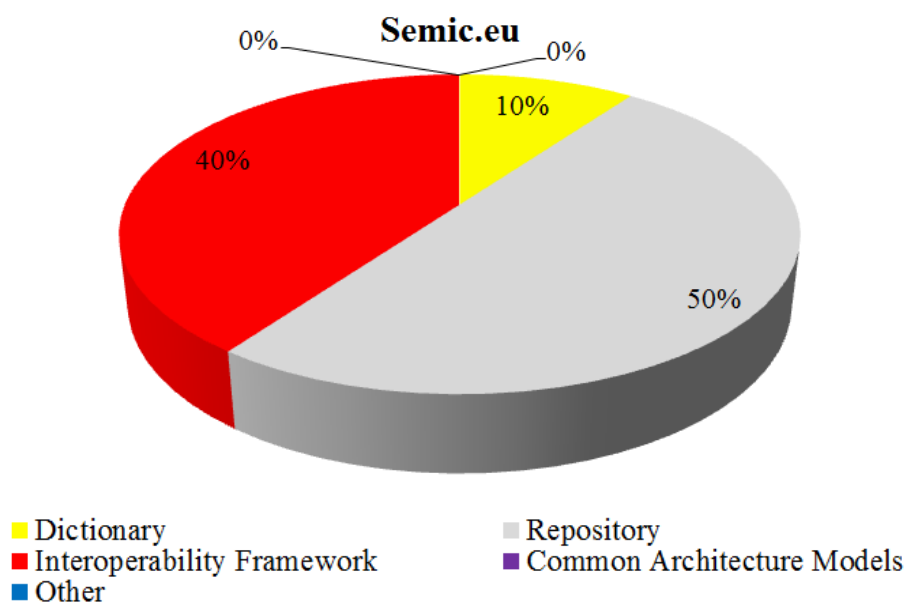
SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Comment
I am not definite on this point. A lead by an European institution would be a (easy?) first step, but is it enough? What kind of global institution could lead an efficient global cooperation? United Nations Organization (UNO)?
We have many open standards. Anyway till we will have different countries with different rules we will need different formats. General technical approach based on open standard is feasible. In areas like encryption, document format (XML), ...

Q10: Which element can solve some main problems of inter-/national interoperability quickly?

GRAPH

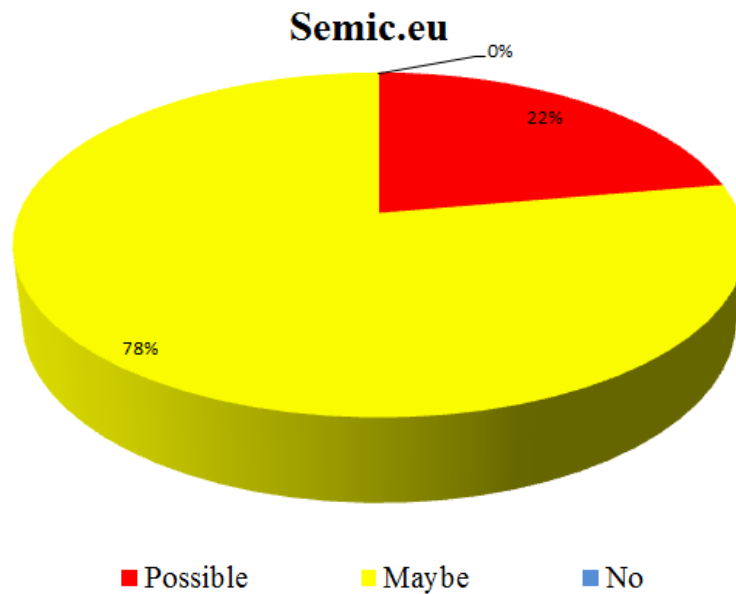
Semic.eu: n=10



Q11: *Is it possible to use corporate sector experience for e-Government sector?*

GRAPH

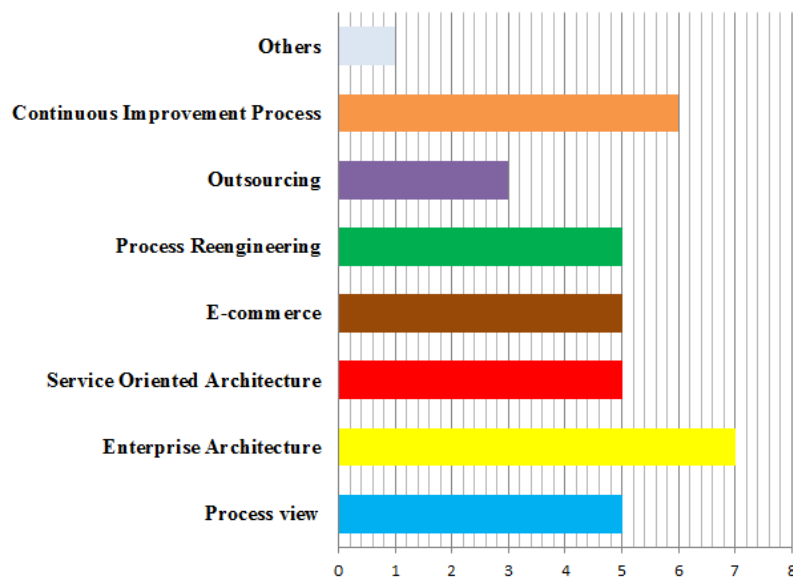
Semic.eu: n=9



Q12: *Where is it possible to use corporate sector experience for e-Government sector? [Multiple choice]*

GRAPH

Semic.eu: n=9



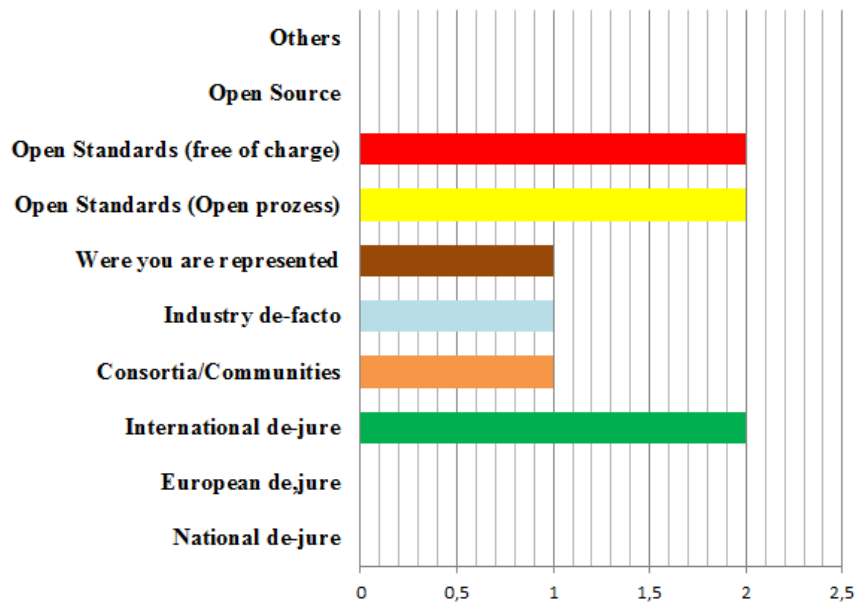
SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

Comment
Motivational models, creation of benefits for the "customer" (the citizen).

Q13: Which standards do you trust more?

GRAPH

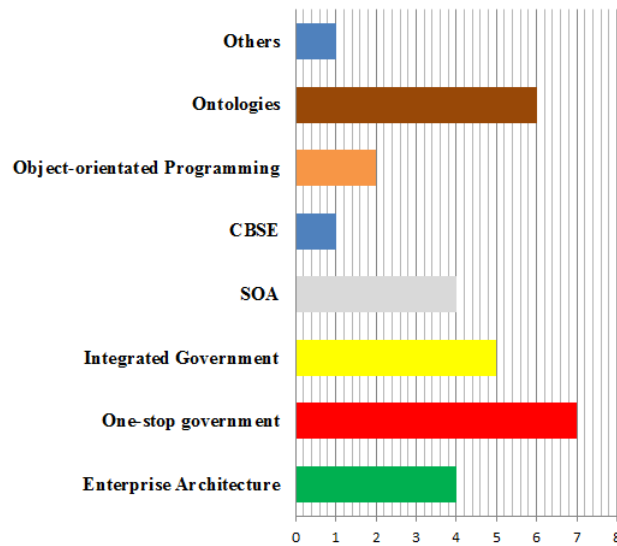
Semic.eu: n=9



Q14: Are you still committed to the following things? [Multiple choice]

GRAPH

Semic.eu: n=9



SUMMARY OF COMMENTS FROM SEMIC.EU COMMUNITY

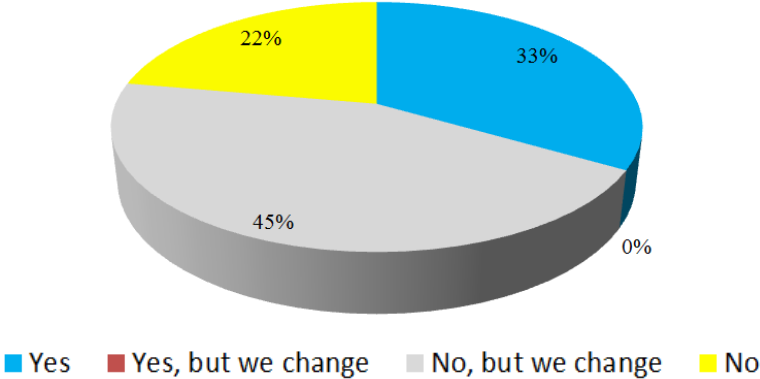
Comment
ORM, NIAM, SBVR, UML, object-oriented analysis, object-oriented modelling, aspect-oriented modelling, model-driven architecture (MDA), UN-CEFACT UMM

Q15: *Is your framework / are your regulations mandatory?*

GRAPH

Semic.eu: n=9

Semic.eu



III. Abbreviations

BELGIF	Belgian Government Interoperability Framework
CCI	Cadre Commun d'Interopérabilité (part of the French e-GIF RGI)
e-GIF	e-Government Interoperability Framework
EA	Enterprise Architecture
EIF	European Interoperability Framework
G2B (A2B)	Government-to-Business
G2C (A2C)	Government-to-Citizens
G2G (A2G)	Government-to-Government
G2N (A2N)	Government-to-Non Profit Organisation
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
ICT	Information and Communication Technology
OIO	Offentlig Information Online (Danish series of interoperability artefacts)
PEGS	pan-European e-Government Service
RGI	Référentiel Général d'Interopérabilité (French e-GIF since 2009)
RM-ODP	Reference Model of Open Distributed Processing
SAGA	Standards and Architectures for e-Government Applications
SAGA.ch	Standards and Architectures for e-Government Applications Switzerland
UK e-GIF	e-Government Interoperability Framework of the United Kingdom