NIFO Factsheet – Bulgaria

Main interoperability highlights

The most recent developments in the field of eGovernment in Bulgaria are based on the 'Concept of eGovernment in Bulgaria 2010-2015' and the 'Common Strategy for eGovernment in Bulgaria 2011-2015[1]', updated taking into account change in information technology and public relations, and named the "e-Governance Development Strategy – 2014-2020 in the Republic of Bulgaria[2]" which was adopted by the Council of Ministers. The specific actions to achieve the Strategy's objectives are defined in the Roadmap to the e-Governance Strategy 2014-2020. It covers both further development and building upon the achieved results from the implementation of Strategy 2011 – 2015 in the Republic of Bulgaria.

Established in the Strategy, the vision for e-Governance foresees until 2020:

- introduced effective business models for public administrations;
- established digital administration taking into account latest management technologies and achievements of ICT;
- achieved interoperability at a national level – from fragmentary and closed to integrated and technologically independent solutions;
- established mechanisms for coordinated planning and implementation of all eGovernance development initiatives;
- ensured provision of administrative services through the unique eGovernance portal at any time, from any location and using various devices.

The government is set to apply its good management practices, including modern ICT, in its work to achieve a series of objectives, among which interoperability at a national and European level. Interoperability is recognized as one of the important prerequisites for successful communication with users of eServices provided by eGovernance systems. It guarantees the exchange of electronic documents across various systems and facilitates the development of new eServices. Semantic, syntactic, technological and organizational interoperability and the use of internationally recognized (open) standards, in accordance with the European Interoperability Framework, are a warrantee to establish a unified information/communication infrastructure. It is also the basis for the implementation of administrative services that are customer oriented.

The 'eGovernance Development Strategy – 2014-2020 in the Republic of Bulgaria' lays the foundation upon which sector policies, strategies, objectives and activities of ministries and agencies are being deployed.

Bulgaria has put forward legislative provisions to support interoperability. They are set in the Law on eGovernance and the Ordinance on the general requirements for interoperability and

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[1] http://www.mtitc.government.bg/page.php?category=462&id=4698

[2] https://www.mtitc.government.bg/page.php?category=619&id=7032

information security[3]. A working group is currently drafting an amendment to the existing Law on eGovernance.

The latest version of the Bulgarian National Interoperability Framework (NIF) for governmental information systems dates from June 2006. No release date for a next version has been communicated.[4] Currently, the project for updating of the NIF is in progress; it aims at reviewing the NIF taking into account the European Interoperability Framework v2 and experience from the implementation of the current NIF and practices from other countries.

Summary of the NIF

The Bulgarian NIF is built around seven basic principles. Principle 1 requires the usage of open internationally adopted standards. Principle 2 recognises Service Oriented Architecture (SOA) as a basis for building governmental information systems. Principle 3 requires all services to be realised as transactions of formalised information objects. Principle 4 requires data of citizens and business to be gathered only once and shared among appropriate e-Service providers. Principle 5 requires an integration (intermediary) environment to ensure a common interface for the information exchange between different governmental units, citizens and businesses. Principle 6 requires the security aspects for intersystem information exchange. Principle 7 requires conformity testing of the standards for interoperability through assessment procedures.

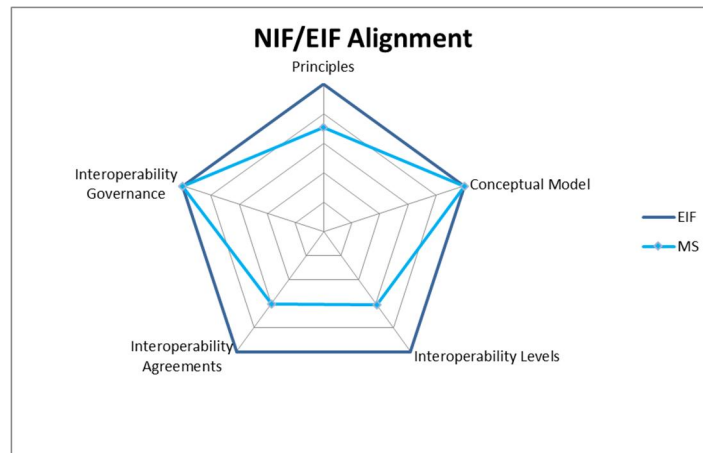For the practical application of the NIF, the following requirements are defined:

- The NIF has to be an integral part of the eGovernment strategy;
- It is necessary to establish and ensure the maintenance of the centralised registries;
- An instructions manual for the order and the conditions of the optional NIF conformance certification needs to be adopted;
- The creation and exploitation of basic components.

Alignment NIF/EIF

The Bulgarian NIF is strongly aligned with the EIF on the 'conceptual model' and the 'interoperability governance'. The 'Principles' are well aligned with EIF. The 'interoperability levels and 'agreements' are fairly aligned with the EIF.

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[3] https://www.mtitc.government.bg/page.php?category=487&id=3635

[4] https://www.mtitc.government.bg/page.php?category=464&id=3648

NIF/EIF Alignment

The Bulgarian NIF aligns with nine of the EIF **principles**. These principles are: subsidiarity and proportionality, user-centricity, inclusion and accessibility, security and privacy, multilingualism, transparency, preservation of information, reusability and technological neutrality and adaptability. The Bulgarian NIF adds to this the following two principles: multi-lateral relations and priority to decentralised responsibility.

The Bulgarian NIF puts forward the **classical reference model** for open distributed processing (international standard ISO/IEC 1076 : 1998), which defines the infrastructure for distributed processing of information between heterogeneous technological resources and multiple organizational domains. Service Oriented Architecture (SOA) is accepted as the basis for building of the information systems within the governmental information systems. In order to ensure a common interface in the information exchange must be realised through 'integration (intermediary) environment'. The single entry of the data and their multiple uses as well as the semantic interoperability between the various applied systems of the e-Government is realised through the Register of the information objects. Evidences of an infrastructure to interconnect loosely coupled service components were not observed.

The **interoperability levels** described in the NIF are fairly aligned with the ones described by the EIF. The Bulgarian NIF does not describe the interoperability level 'legal' as such but provides a law of electronic governance and an ordinance on the general requirements for interoperability and information security. No observations could be made regarding the organisational relationships and change management. Semantic interoperability is based on resources providing morphological compatibility (e.g. nomenclatures, thesauruses, ontologies) and on resources providing syntactical compatibility (e.g. XML-schemes, models and schemes of metadata). Technical interoperability is distributed on standards, methods, architecture, etc.

The **interoperability agreements** described in the NIF are fairly aligned with the ones described by the EIF. Standards are selected and updated, by formalised criteria, by a double-unit.

Governance of the NIF is organised in a top-down manner. The Ministry of Transport, Information Technologies and Communications, mandated in the Law on e-Governance, manages the framework and the rule set. New connections to the central communications infrastructure and/or new document types need to be certified beforehand. Development of eServices is laid down in The Ordinance of the General Requirements for Interoperability and Information Security to the Law on e-Governance.

More detailed information on NIF / EIF alignment is provided on the NIFO Community on JoinUp on the Compare NIFs page.

Example of alignment – EIF Principle 8: Preservation of information:

The Bulgarian national interoperability framework defines the following requirements with regard to preservation of information:

- Storage of transactional information: in order to ensure traceability of the transaction process and demonstrability of the participants in its individual steps, the storage of copies has to be provided;
- Management of electronic recordings: the MoReg specification for management of electronic recordings, based on the European Regulation 94/C 235/03;
- Management of the life cycle of information: the management of the life cycle of the information in the e-Government systems has to be consistent with the Recommendations of the so called "Data Management Forum (DMF)".

See Bulgarian national interoperability framework for governmental information systems, chapter 5, Principle 3, http://www.mtitc.government.bg/upload/docs/en_BUL__FRAMEWORK.pdf

Example of alignment – EIF Conceptual model 5: *Public administrations should make their authentic sources of information available to others while implementing access and control mechanisms to ensure security and privacy in accordance with the relevant legislation*:

In Bulgaria, all data of companies and citizens should be entered only once when interacting with governmental information systems.

The administration units are obliged to use the data already gathered and the holders of the information resources are obliged to provide access to all providers of e-Services using the respective information resource on the basis of regulated rights to access.

See Bulgarian national interoperability framework for governmental information systems, chapter 5, Principle 4. (http://www.mtitc.government.bg/upload/docs/en_BUL__FRAMEWORK.pdf)

Implementation of NIF

Bulgaria provides examples of implementation of the NIF in the areas of principles; interoperability levels and interoperability agreements.
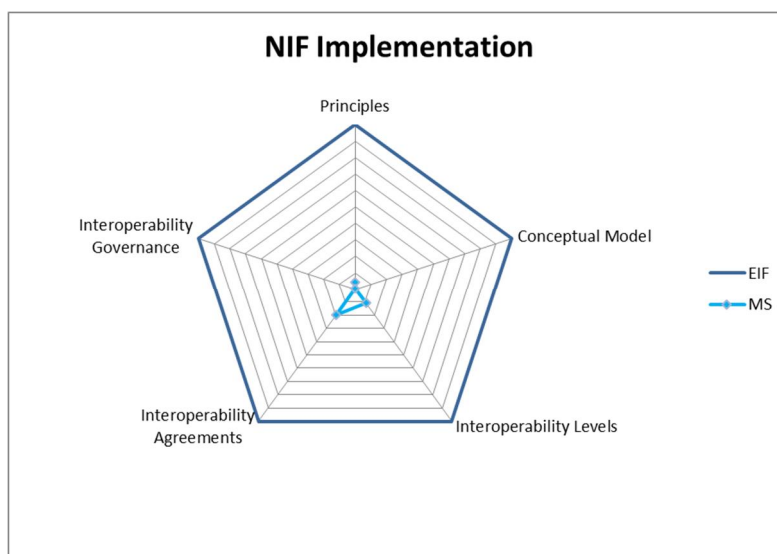
The principle of openness is implemented through the open data portal (https://opendata.government.bg).

In the area of the semantic interoperability level, a register of data sets, information objects and eServices is available online at: http://www.egov.bg/ereg-public/. It provides access to the register of electronic services.

In the area of interoperability agreements, the standards' registry is available online (http://interoperability.egov.bg/web/guest/40) and presents the list of technical specifications selected.

Other initiatives on interoperability

Law on electronic governance: This law lays down the activity of the administrative bodies related to work with electronic documents, provision of administrative services electronically and exchange of electronic documents between the administrative bodies.

Ordinance on the general requirements for interoperability and information security: The Ordinance provides:

- the general requirements for interoperability and network and information security,
- the keeping, storage and the access to the Register of the standards, and
- the methods for assessing the conformity to the requirements for interoperability and network and information.

The Minister of Transport, Information Technology and Communications certifies the compliance of information systems interoperability requirements and requirements for information security.

The Bulgarian Government created the **Public Administration Portal for Interoperability**[5] with the view to promote eGovernment interoperability. The portal maintains a national registry of standards to ensure interoperability[6], a registry of information objects and a registry of eServices[7], as well as rules and procedures for the certification of systems in accordance with European standards.

The Public Administration Interoperability Portal maintains current information for:

- the List of Certified Systems;
- the List of Certified Applications;
- the List of Certified Technical Specifications;
- the List of Test Sets of Documents[8];
- a link to the Registry for Interoperability.

The single portal of access to eServices has been upgraded[9] with funding from the European Social Fund. The portal links to the public administration interoperability portal.

All municipal administrations in Bulgaria can join the eGovernment cloud and take advantage of the 50 electronic administrative services developed by Sofia Municipality as a pilot project.[10] The project includes basic activities at its launch:

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[5] http://interoperability.egov.bg/ (EN version is under construction)

[6] http://interoperability.egov.bg/web/guest/40 (EN version is under construction)

[7] http://www.egov.bg/ereg-public/

[8] http://interoperability.egov.bg/web/guest/lists

[9] www.egov.bg

[10] http://www.focus-fen.net//news/2015/10/17/386558/all-bulgarian-municipalities-can-join-e-govt-cloud.html

1)   Analysis, identification and registration of the first data administrators and their services in the e-government registers;

2)   Analysis and selection of concrete services for electronic realisation;

3)   Realisation of priority administrative services;

4)   Development of reference model of architecture for the central administrations and municipal administrations;

5)   Improvement of the portal and further development of the e-government system in connection with the administrative servicing.

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