NATIONAL INTEROPERABILITY FRAMEWORK OBSERVATORY

Analytical Model
SLOVAKIA

The content of this Analytical Model reflects the status as collected in 2016.

DIGIT

Directorate-General for Informatics

ISA² Programme

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Analysis of the NIFs

EIF Element - Reference - Category	Measurement	NIF element present - Reference - (Text in English)	NIF-EIF alignment scoring 2: fully 1: partially 0: not aligned	Large scale implementation [describe if and how implementation of the element is a common practice]	Only implementation examples [describe an implementation example specific to each element]	Implementa-tion scoring 2: Common practice 1: some examples 0: not observed	NIF monitoring	Monitoring scoring 2: Monitored 1: Partially monitored 0: not observed
		NIF-EIF Alignment		**NIF implementation**			**NIF monitoring**	
Subsidiarity and proportionality Ref: EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'subsidiarity and proportionality' principle?	"Basic Local Self-Government Technological and Communication Infrastructure has two solution levels: - Operation of transferred state administration services; - Operation of local competencies, which may have an individual or joint solution (data centre of towns and municipalities and other joint data centres). Operation of infrastructure for the performance of transferred state administration services should be state guaranteed, so this level should be solved similarly to state administration services respecting the fact that responsibilities are with the respective ministries. Currently, towns and municipalities proceed independently in procuring and operating SW applications necessary for the handling of their agenda. There are many suppliers providing APV and public administration services on various platforms and with various levels of quality. Despite limited budgets, especially in smaller municipalities, in each individual case it is necessary to deal with administration services provision, i.e., implementation, operation support, protection, changes, etc. of IS supporting such agendas. This results in serious compromises between the office needs and reality of the available IT level. There is minimum coordination in infrastructure development or competencies implementation. Since such digitalisation of administration sections ranks among the crucial conditions of successful eGovernment introduction in the SR, even the development of such infrastructure could be partially state guaranteed. For example, to provide eServices, local self-government should also have available the technological infrastructure for the provision of a safe communication platform and guaranteed services availability. Specialised Municipal Data Centre (MDC) was built and serves as a platform for self-government authorities and self-governing regions the necessary applications as a service. The organizational status of MDC is supported in the new National e-Government concept (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c) - p47 - section 6.2.8 Government cloud.	2	[describe project here]	Municipal Data Centre (MDC) was build in the project: "DCOM", which is used by small villages and towns.	1	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring e-services on every level of government.	1
User-centricity EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'user-centricity' principle?	"The government's efforts will ensure a coherent approach (focused on effective cooperation) that will change the traditional view of public sector service delivery – shifting the perception to a citizen-centric viewpoint and away from a service provider [...]." Section 2 - p.10. **Citizen-centric personalized services:** The public administration will create and administer individual personalized electronic accounts for citizens and businesses. Thanks to these accounts, the client can monitor all his/her electronic transactions and personalized data (through the central portal). The public administration will update the individual data just once in the integrated information system, provided that the updating takes place automatically in all information systems. The accounts will respect the variability of people entering into relations with the public administration. Each person will be able to create a personalized view that will inform him/her about the most important services and information related to his/her needs. p.17. 'eGovernment Strategy (http://www.informatizacia.sk/ext_dok-egovernment-strategy-of-the-slovak-republic/5896c) The National e-Government concept defines "**User.centricity**" as a main business principle of e-Government architecture on p.13 section 3.2.1 Business principles. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	The government of Slovakia allows holders of eID smart cards to use the Internet to update records in the country's civil registration. The Central Government Portal www.slovensko.sk aims to be a single access point to services for the public and public authorities. The portal provides a common registry, authentication and authorisation services, in addition to services for electronic filing and payments, and will channel the flow of government information. ref: https://joinup.ec.europa.eu/community/epractice/news/slovakia-allow-chip-card-use-civil-registry	[describe project here]	2	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring e-services attributes, such as the 'user centricity' principle.	1
Inclusion and accessibility EIF, Chapter 2, Underlying principles Recommendation 2 Category: Principles	Does the NIF contain the 'inclusion and accessibility' principle?	"The government's eff orts will ensure a coherent approach (focused on effective cooperation) that will change the traditional view of public sector service delivery – shifting the perception to a citizen-centric viewpoint and away from a service provider [...]." Section 2 - p.10. **Citizen-centric personalized services:** The public administration will create and administer individual personalized electronic accounts for citizens and businesses. Thanks to these accounts, the client can monitor all his/her electronic transactions and personalized data (through the central portal). The accessibility will be adapted to the individual needs of the user. Projects for eInclusion, accessible services and improvement of digital skills are in a preparatory phase. The National e-Government concept defines the objective for eInclusion - We are going to improve digital skills and access of disadvantaged citizens to the digital single market. p8 section 3.1 Objectives of e-Government modernization. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	[describe here]	[describe project here]	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring e-services attributes, such as 'accessibility'.	1
Security and privacy EIF, Chapter 2, Underlying principles Recommendation 3 Category: Principles	Does the NIF contain the 'Security and privacy' principle?	One of the eGovernment priorities is to develop a basic framework of state information **security**. It "defines the principal distribution of competencies, resources, tendencies, and priorities, as well as a basic description of respective tasks with the aim of providing the cyberspace protection.".Ref: Section 6.2.10 Cybersecurity p. 49 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c). That framework is the "Slovak national strategy for information security" – http://www.enisa.europa.eu/activities/Resilience-and-CIIP/national-cyber-security-strategies-ncsss/Slovakia_National_Strategy_for_ISEC.pdf	2	[describe here]	[describe project here]	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring e-services attributes, such as 'security'.	1
Multilingualism EIF, Chapter 2, Underlying principles Recommendation 4 Category: Principles	Does the NIF contain the 'Multilingualism' principle?	Not specifically in NIF, although mandatory standards within Edict No. 55/2014 strive for multilingualism in various themes - web content in English (Art. 15), web accessibility (rule 4 in Annex 1), English XML elements (Annex 2), multilingualism in e-forms (Annex 3 - point 2.2.1 (f), point 4.2.8 and 4.2.9), multilingualism within data elements and code list (Edict No. 276/2014 updating Edict No. 55/2014) - data elements D.3.2 and D.3.3 + Annex 13).	1	[describe here]	[describe project here]	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring e-services attributes, such as 'language availability'.	1

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			NIF-EIF Alignment		**NIF implementation**		**NIF monitoring**	
Administrative simplification EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Administrative simplification' principle?	The public administration will considerably reduce the administrative burden on citizens and companies by removing the need to personally visit civic offices. The public administration will ensure creation of a system of electronic public procurement that will solve all stages of procurement before selection (eNotice, eTendering, eSubmission, eSignature) and after selection (eOrdering, eInvoicing, ePayments). The public administration will be reformed to make simplified life events with very low administrative burden possible. The reform will be inline with the Operational Programme Effective Public Administration (http://www.minv.sk/?opevs). The National Concept of e-Government (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c) relies on the reform of the public sector business processes with the help of a coordination mechanism between the Operational Programs Effective Public Administration and Integrated Infrastructure.	2	The Slovak Republic wants to reduce the administrative burden on citizens and companies, and to avoid the need to repeatedly request information. The Ministry of Finance signed a contract for a base registry to make it possible for public administrations to exchange data and information. The EUR 13 million project will also result in standards for data sharing between public administrations. (Ref: https://joinup.ec.europa.eu/community/epractice/news/slovakia-project-reduce-administrative-burden)	[describe project here]	2	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring e-services attributes, such as 'a number of steps in a business process'.	1
Transparency EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Transparency' principle?	Transparency of official processes is addressed by the Slovak eGov strategy. Section 3-1-a) 'eGovernment Strategy (http://www.informatizacia.sk/ext_dok-egovernment-strategy-of-the-slovak-republic/5896c) "Transparent access to the services - users has the access to the every relevant information regarding a service provision (such as status of the service, time needed to proceed the results, ...). Ref: Section 3.2.1 Business principles p. 14 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c).	2	[describe here]	[describe project here]	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring e-services attributes.	1
Preservation of information EIF, Chapter 2, Underlying principles, Recommendation 5 Category: Principles	Does the NIF contain the 'Preservation of information' principle?	Data must be persisted, accessible and shared Ref: Section 3.2.2 Data principles p. 15 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c).	2	[describe here]	Project: Electronic archive.	1	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring data-objects.	1
Openness EIF, Chapter 2, Underlying principles, Recommendation 6 Category: Principles	Does the NIF contain the 'Openness' principle?	"Data are open" Ref: Section 3.2.2 Data principles p. 15 and Section 6.2.7 Open data p.45 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c). "Application interfaces are open" Ref: Section 3.2.3 Application principles p. 15 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c). "Technology standards are open" Ref: Section 3.2.4 Technology principles p. 15 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c).	2	Project: Central management of reference data. [describe here]		1	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring data-objects and open-data datasets.	1
Reusability EIF, Chapter 2, Underlying principles, Recommendation 7 Category: Principles	Does the NIF contain the 'Reusability' principle?	"Once is enough: Public administration subjects will not request natural persons and legal entities to prove and present facts already registered by another public administration subject [...] (i.e., data will be registered once and used many times). Efficient application of the "once only" principle assumes the establishment of a public administration data and metadata central vocabulary." Ref: Section 3.2.1 Business principles p. 14 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c). "Reusability of software: Wherever public administration is already a holder of proprietary rights to a system, design or architecture, it is expected that such a system, design or architecture will be reused [...]. Public administration will present itself as a single entity in the process of software procurement in order to ensure that licences are transferable. [...] In the case of any custom-built software developed within public administration institutions, its delivery in an EUPL form will be required, wherever possible." Ref: Table 1: Principles for effective use of SW products - p. 12 - The Concept of Software Products Usage for Public Administration (http://www.informatizacia.sk/ext_dok-concept-of-sw-usage-for-pa/9508c).	2	- The Slovak Republic's Bureau of Statistics has used PCs running Ubuntu Linux for recording votes in the country's municipal election (Ref: https://joinup.ec.europa.eu/community/osor/news/slovak-statisticians-rely-open-source-voting-machines) - Project: Central management of reference data.	[describe here]	1	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring reusability of data as well as shared services.	1
Technological neutrality and adaptability EIF, Chapter 2, Underlying principles, Recommendation 8 Category: Principles	Does the NIF contain the 'Technological neutrality and adaptability' principle?	"Technology neutrality and interoperability" Ref: Section 3.2.4 Technology principles p. 15 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c). "Modularity and adaptability" Ref: Section 3.2.3 Application principles p. 15 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c).	2	[describe here]	[describe project here]	0	[describe monitoring procedure here]	0

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		NIF-EIF Alignment		**NIF implementation**			**NIF monitoring**	
Effectiveness and efficiency EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Effectiveness and efficiency' principle?	e-Government means more effective public administration. The use of electronic services reduces the costs, which will create the conditions for reducing official fees for citizens and companies handling their official matters electronically. The fewer number of identical acts and fewer mistakes in entering transactions will mean less work with monitoring, identifying mistakes and rectifying them. A larger number of informed users will need less user support and can be served more quickly. The systems in which citizens administer their personal data will reduce the direct costs of tax payers, and will reduce the costs related to the use of non-topical information. In order to achieve a permanently sustainable efficiency of the public administration, the Slovak Government will invest in a robust framework for ICT. By changing its way of functioning and by using information technologies, the public administration will be more effective (more efficient, cheaper and quicker). Investments will be scrutinized under the principles of "Effectiveness and Value for Money". The common building blocks of eGovernment will be reused. Ref: Section 3.2.3 Business principles p. 14 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c).	2	[describe here]	[describe project here]	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring total cost of ownership, effectiveness and efficiency of public IT.	1
Conceptual model EIF, Chapter 3 Category: Conceptual model	Does the NIF contain a conceptual model?	See: Strategic Architecture of Public Administration p.24 Section 4 and Reference Architecture of e-Government solutions p.27 Section 5 The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	[describe here]	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) can be used for conceptual modelling of e-Gov systems and services.	1	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) can be used for conceptual modelling of e-Gov systems and services.	1
Public administrations should develop a component-based service model, allowing the establishment of (European) public services by reusing, as much as possible, existing service components. EIF, Recommendation 9 Category: Conceptual model	Is the conceptual model a component-based service model? (e.g. SOA)	See: Reference Architecture of e-Government solutions p.27 Section 5 The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	[describe here]	[describe project here]	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) can be used as a register of SOA services.	1
Public administrations should agree on a common scheme to interconnect loosely coupled service components and put in place the necessary infrastructure when establishing (European) public services. EIF, Recommendation 10 Category: Conceptual model	Does the NIF encourage the use of common schemes to interconnect loosely coupled service components?	See: Integrated architecture p.27 Section 5.1 and Integration and orchestration p.28 Section 6.2.3 The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	[describe here]	[describe project here]	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) can be used as a register of interconnected services and their schemes.	1
Interconnection of service components. EIF, Recommendation 10 Category: Conceptual model	Does the NIF encourage to put in place the infrastructure to interconnect loosely coupled service components?	See: Integrated architecture p.27 Section 5.1 and Integration and orchestration p.28 Section 6.2.3 The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	[describe here]	[describe project here]	0	[describe monitoring procedure here]	0
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. EIF, Recommendation 11 Category: Conceptual model	Does the NIF encourage to make the authentic sources of information available to others?	"In terms of improving the use of data in the public sector, each public institution has to make available data in its records as reference data through the data integration platform and it has to uses reference data from other institutions in its own processes" See: p.43 Section 5.1 Data management and big data The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	[describe here]	Project: Central management of reference data.	1	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring data-objects.	1
Access control EIF, Recommendation 11 Category: Conceptual model	Does the NIF encourage access and control mechanisms to ensure compliance to security and privacy legislation?	eGovernment principle: "Privacy Protection: Electronic communication with public administration must provide for personal data protection and respect individual decisions on data use for other purposes than originally declared. In this respect, full conformity with existing European and national legislative regulations on data protection will be reached. Personal data protection needs to be coordinated with the existing procedures listed in directive 2016/679/EC. Therefore, technology providing for increased privacy protection should be applied." Ref: section 6.2.10 - Cybersecurity p. 49 - The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c). Furthermore, the access to the electronic portfolio of a citizen or a business and to the module of electronic inboxes is possible only by using eID. In order to authorize an electronic service call, even the secured electronic signature must be used. The security measures are described in the Law of eGovernment 305/2013 and in the Data Protection Law 122/2013.	1	[describe here]	- A pilot version of a MyData service was launched. Thanks to this service, the citizens and businesses can see the data that the pubic administration stores about them in its databases. - Projects: eID and Shared components of the Central Portal of Public Administration that created standardized access control mechanisms for security and privacy.	1	[describe monitoring procedure here]	0
Public administrations, when working to establish (European) public services, should develop interfaces to authentic sources and align them at semantic and technical level. EIF, Recommendation 12 Category: Conceptual model	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	Standardization and mainly data standards are about interfaces (Edict No 55/2014). Reference data in the reference registers are considered authentic sources - Unified interpretation - Central reference registers and code lists are available online and useable for legal acts as also defined in the Law of eGovernment 305/2013 (Ref: Section 6.2.3 Integration and Orchestration - p.37 and Section 6.2.6 Data management and Big Data p. 43 - The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c)	2	[describe here]	Project: Central management of reference data that provides consolidated data from the central reference registers to other information systems.	2	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is monitoring data-objects.	1

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		NIF-EIF Alignment		**NIF implementation**			**NIF monitoring**	
Interoperability levels EIF, Chapter 4 Category: Interoperability levels	Does the NIF describe the four levels of interoperability?	The EU interoperability levels are used in practice: Standards explanation - interoperability (http://www.informatizacia.sk/interoperabilita/3481s) Standards working groups separation (PS4 - Working Group on Technical Interoperability, PS5 - Working Group on Organizational Interoperability + semantic is split mainly between PS1, PS3 and PS7 + the whole standardization within SR is within legislation environment - http://www.informatizacia.sk/expertne-skupiny/595s) Mandatory analysis of influences on information society for documents to be approved by Slovak Government (points 6.2 and 6.4 and partially 6.13 and 6.15 - http://www.vlada.gov.sk/dolozka-vybranych-vplyvov-sablona/) The interoperability levels are defined in Section 3.3 Approach to the e-Government p. 16 - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c).	2	*[describe here]*	*[describe project here]*	0	*[describe monitoring procedure here]*	0
Legal interoperability: Public administrations should carefully consider all relevant legislation relating to data exchange, including data protection legislation, when seeking to establish a European public service. EIF, Chapter 4 Recommendation 14 Category: Interoperability levels, legal artefacts	Does the NIF impose to consider all relevant legislation related to data exchange?	See: Section 2.3: Legislation and relations to other documents; Annex 1: Legislative framework for information security in the Slovak Republic. - National Strategy for Information Security in the Slovak Republic (http://www.enisa.europa.eu/activities/Resilience-and-CIIP/national-cyber-security-strategies-ncsss/Slovakia_National_Strategy_for_ISEC.pdf)	1	*[describe here]*	*[describe project here]*	0	*[describe monitoring procedure here]*	0
Organisational interoperability - business process alignment. Public administrations should document their business processes and agree on how these processes will interact to deliver a (European) public service. EIF, Chapter 4 Recommendation 15 Category: Interoperability levels, organisational artefacts	Does the NIF describe that the business processes are documented in an agreed way in order for other administrations to understand the overall business process?	See: Business architecture p.25 Section 4.1 The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-s+C31r_2016/23668c). Also there exists a mandatory code list about areas and agendas of competence with individual public institutions. The process and e-service definition is required both within the data entered into the Central Metainformation System of Public Administration and within projects funded by structural funds under information society area. Secondly, a defined documentation is required in all public IT projects.	2	*[describe here]*	*[describe project here]*	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is being used for business process modelling.	1
Inter-governmental coordination. EIF, Chapter 4 Recommendation 15 Category: Interoperability levels, organisational artefacts	Does the NIF encourage to agree on how these processes will interact among the different levels of public administrations?	See: Interdepartmental and internal use and sharing of systems: "Mastering of common, standardized modular business processes by public administration offices will help to cancel or to change duplication and unnecessary or insufficient processes. The supporting processes implemented in each institution will be unified and uniformed with duplication eliminated by the introduction of central applications for information systems that support specific functions such as human resources, wages, accounting, public procurement, registration and others". The National Concept of eGovernment (http://www.informatizacia.sk/ext_dok-nkivs-s+C31r_2016/23668c) Act No. 305/2013 on e-Government sets-up mandatory conditions for public administrations' interaction in e-environments. There are also several organizational requirements within various standards (for example information security).	1	*[describe here]*	*[describe project here]*	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is being used for business integration modelling.	1
Organisational interoperability - organisational relationships. Public administrations should clarify their organisational relationships as part of the establishment of a (European) public service. EIF, Chapter 4 Recommendation 16 Category: Interoperability levels, organisational artefacts.	Does the NIF encourage public administrations to clarify their organisational relationships as part of the establishment of a (European) public service?	See: Business architecture p.25 Section 4.1 The National Concept of eGovernment. (http://www.informatizacia.sk/ext_dok-nkivs-s+C31r_2016/23668c). Organizational models are part of the business architecture.	1	*[describe here]*	*[describe project here]*	0	Recently built Meta-information System of Public Administration (https://metais.finance.gov.sk/) is being used for business organization modelling.	1
Organisational interoperability - change management. Public administrations working together to provide (European) public services should agree on change management processes to ensure continuous service delivery. EIF, Chapter 4 Recommendation 17 Category: Interoperability levels, organisational artefacts	Does the NIF encourage public administrations to agree on change management processes to ensure continuous service delivery?	This exists actually only within eGovernment projects under structural funds - see integration manual (OPIS regulation No. 14/2014 - http://www.informatizacia.sk/usmernenia/10086s)	1	*[describe here]*	*[describe project here]*	0	*[describe monitoring procedure here]*	0
Semantic interoperability. Public administrations, when working together to establish (European) public services, should use a common taxonomy of basic public services. EIF, Chapter 4 Recommendation 13 Category: Interoperability levels, semantic artefacts.	Does the NIF encourage the usage of a common taxonomy of basic public service?	The establishment of a public administration data and metadata central vocabulary: the Metainformation System. Taxonomy for public services classification is also established by legislative document (Art. 47 of Edict No. 55/2014 on Standards for Information Systems of Public Administration).	2	*[describe here]*	*[describe project here]*	0	*[describe monitoring procedure here]*	0

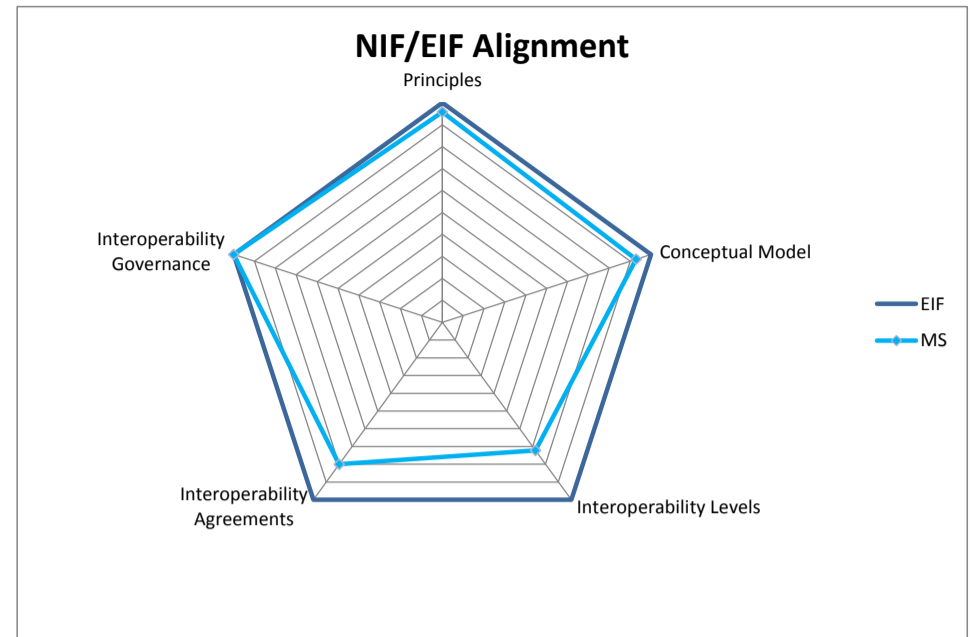| EIF Element - Reference - Category	Measurement	NIF-EIF Alignment		NIF implementation			NIF monitoring	
		NIF element present - Reference - (Text in English)	NIF-EIF alignment scoring 2: fully 1: partially 0: not aligned	Large scale implementation [describe if and how implementation of the element is a common practice]	Only implementation examples [describe an implementation example specific to each element]	Implementa-tion scoring 2: Common practice 1: some examples 0: not observed	NIF monitoring	Monitoring scoring 2: Monitored 1: Partially monitored 0: not observed
Public administrations should support the establishment of sector specific and cross-sectoral communities that aim to facilitate semantic interoperability and should encourage the communities to share results on national and European platforms. EIF, Recommendation 18 Category: Interoperability levels, semantic artefacts	Does the NIF encourage public administrations to support the establishment of sector specific and cross-sectoral communities that aim to facilitate semantic interoperability and that share results on national and European platforms?	The Committee for Standards of Information Systems of Public Administration within Ministry of Finance includes working groups on both thematic and cross-sectoral topics, including semantic aspects like terminology, code lists etc. (http://www.informatizacia.sk/committee-for-standardization-of-is-pa/4671s)). There are others created within different sectors, eHealth, spatial data or open data for example. The consultation before publishing sector specific standards touching information systems of administration systems is required by law (Art. 4 (1)(c) of Act No. 275/2006 on information systems of public administration)	1	'The Committee for Standards of Information Systems of Public Administration within Ministry of Finance includes working groups on both thematic and cross-sectoral topics, including semantic aspects like terminology, code lists etc. (http://www.informatizacia.sk/committee-for-standardization-of-is-pa/4671s)).	[describe project here]	2	[describe monitoring procedure here]	0
Technical interoperability. Public administrations should agree on the formalised specifications to ensure technical interoperability when establishing European public services. EIF, Recommendation 19 Category: Interoperability levels, technical artefacts.	Does the NIF encourage public administrations to agree on the formalised specification to ensure technical interoperability when establishing European public services.	Standards are published by legislative document (edict), the competency over its publishing falls to Deputy Prime Minister's Office for Investments and Informatization. See http://www.informatizacia.sk/standards-for-is-pa/4632s	2	Standards are published by legislative document. The latest edict is: No. 55/2014 on Standards of Information Systems of Public Administration came into force on 15 March 2014. This decree lays down specific standards for information public administration systems: technical standards related to technical equipment, network infrastructure and software resources; standards of accessibility and functionality of websites relating to the application software by law; standard terminology for electronic services, related to the network infrastructure, and standards for electronic government services, related to data registers, code and application Software.	[describe project here]	2	[describe monitoring procedure here]	0
Public administrations, when establishing (European) public services, should base interoperability agreements on existing formalised specifications, or, if they do not exist, cooperate with communities working in the same areas. EIF, Recommendation 20 Category: Interoperability agreements.	Does the NIF encourage: - Interoperability agreements to be based on existing formalised specifications? Or - if they do not exist, to cooperate with communities working in the same areas.		0		[describe project here]	0	[describe monitoring procedure here]	0
Public administrations should use a structured, transparent and objective approach to assessing and selecting formalised specifications. EIF, Recommendation 21 Category: Interoperability agreements.	Does the NIF encourage Public administrations to use a structured, transparent and objective approach to assess and select formalised specifications?	See: Methodology to Edict n°312-2010 (http://www.informatizacia.sk/ext_dok-metodicky_pokyn_k_vynosu_312-2010/12608c). Assessment of any specifications passes through defined structure of expert approval (Committee on Standardization of Information Systems of Public Administration + its working groups) and Public Consultation + every proposal has to attach filled criteria (Criteria to Assess Standards Proposal v4.3 (http://www.informatizacia.sk/standardizacne-dokumenty/4495s), based on CAMSS. Working groups are open to any expert individual, meeting records are published and all assessments pass through several levels.	2	'The list of mandatory technical specifications to be used in information systems for public administrations has been defined using specific criteria based on the CAMSS. http://www.informatizacia.sk/standardizacne-dokumenty/4495s	[describe project here]	2	[describe monitoring procedure here]	0
When establishing (European) public services, public administrations should prefer open specifications, taking due account of the coverage of functional needs, maturity and market support. EIF, Recommendation 22 Category: Interoperability agreements.	Does the NIF encourage public administrations to prefer open specifications, taking due account of the coverage of functional needs, maturity and market support?	See above	2	'The list of mandatory technical specifications to be used in information systems for public administrations has been defined using specific criteria based on the CAMSS. http://www.informatizacia.sk/standardizacne-dokumenty/4495s	[describe project here]	2	[describe monitoring procedure here]	0
Contribution to the standardisation process Public administrations should lead or actively participate in standardisation work relevant to their needs. EIF, Chapter 5, Recommendation 23 Category: Interoperability agreements.	Does the NIF encourage public administrations to lead or actively participate in standardisation work relevant to their needs?	"Standardisation activity coordination – standards are a tool for reaching interoperability and the necessary level of information protection. [...] It is necessary to define competencies and provide coordination of standards creation and issuing in crucial organisations such as SSO, MR SR, NSO SR, MC SR, MH SR and GCCO SR. When accepting the approved standards, it is necessary to have Slovak representatives in international standardisation organisations."	2		Deputy prime minister Office has a leading role in the definition of mandatory standard technical specifications for the entire public sector (public administrations, education sector, state television...)	1	[describe monitoring procedure here]	0
Public administrations, when working together to establish (European) public services, should agree on minimum service requirements for secure data exchange. EIF, Recommendation 13 Category: Interoperability agreements.	Does the NIF encourage public administrations to agree on minimum service requirements for secure data exchange?	(Section 6.2.10 Cybersecurity, p. 49, - The National Concept of e-Government. (http://www.informatizacia.sk/ext_dok-nkivs-sr_2016/23668c).	2	[describe here]	[describe project here]	0	[describe monitoring procedure here]	0

Analysis of the NIFs

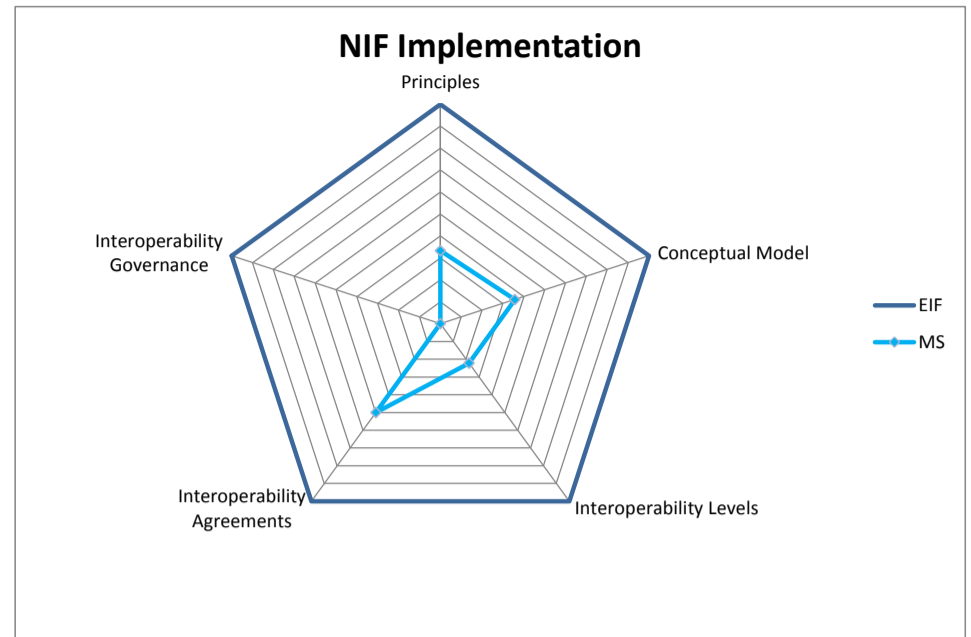| EIF Element - Reference - Category	Measurement	NIF element present - Reference - (Text in English)	NIF-EIF alignment scoring 2: fully 1: partially 0: not aligned	Large scale implementation [describe if and how implementation of the element is a common practice]	Only implementation examples [describe an implementation example specific to each element]	Implementa-tion scoring 2: Common practice 1: some examples 0: not observed	NIF monitoring	Monitoring scoring 2: Monitored 1: Partially monitored 0: not observed
		NIF-EIF Alignment		**NIF implementation**			**NIF monitoring**	
Governance Public administrations should establish a framework for the governance of their interoperability activities across administrative levels. EIF, Recommendation 25 Category: Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	Interoperability activities are governed by Ministry of Finance of the Slovak Republic, mainly through standards and Concepts on Information Systems Development ((the competence is given through Act No. 275/2006 on Information Systems of Public Administration (http://www.informatizacia.sk/legislativa-sr/684s)). Any public body wishing to establish further standards in its sector touching information systems of public administration has to have ministry's approval. 'The Committee for Standards of Information Systems of Public Administration was established within Ministry of Finance of the Slovak Republic and includes working groups on both thematic and cross-sectoral topics, including semantic aspects like terminology, code lists etc. (http://www.informatizacia.sk/committee-for-standardization-of-is-pa/4671s)).	2	[describe here]	[describe project here]	0	[describe monitoring procedure here, **Precise if monitoring procedures include stimulating and/or corrective measures**]	0

Category	EIF	MS
Principles	100%	95,8%
Conceptual Model	100%	92,9%
Interoperability Levels	100%	72,2%
Interoperability Agreements	100%	80,0%
Interoperability Governance	100%	100,0%

NIF/EIF Alignment

Category	EIF Element	Scoring Max	MS
Principles	Subsidiarity and proportionality	2	2
	User-centricity	2	2
	Inclusion and accessibility	2	2
	Security and privacy	2	2
	Multilingualism	2	1
	Administrative simplification	2	2
	Transparency	2	2
	Preservation of information	2	2
	Openness	2	2
	Reusability	2	2
	Technological neutrality and adaptability	2	2
	Effectiveness and efficiency	2	2
	Total	**24**	**23**
Conceptual Model	Does the NIF contain a conceptual model?	2	2
	Is the conceptual model a component-based service model? (e.g. SOA)	2	2
	Does the NIF encourage the use of common schemes to interconnect loosely coupled service components.	2	2
	Does the NIF encourage to put in place the infrastructure to interconnect loosely coupled service components?	2	2
	Does the NIF encourage to make the authentic sources of information available to others?	2	2
	Does the NIF encourage access and control mechanisms to ensure compliance to security and privacy legislation?	2	1
	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	2	2
	Total	**14**	**13**
Interoperability Levels	Does the NIF describe the four levels of interoperability?	2	2
	Does the NIF impose to consider all relevant legislation related to data exchange?	2	1
	Does the NIF describe that the business processes are documented in an agreed way in order for other administrations to understand the overall business process?	2	2
	Does the NIF encourage to agree on how these processes will interact among the different levels of public administrations?	2	1
	Does the NIF encourage public administrations to clarify their organisational relationships as part of the establishment of a (European) public service?	2	1
	Does the NIF encourage public administrations to agree on change management processes to ensure continuous service delivery.	2	1
	Does the NIF encourage the usage of a common taxonomy of basic public service?	2	2
	Does the NIF encourage public administrations to support the establishment of sectorspecific and cross-sectoral communities that aim to facilitate semantic interoperability and that share results on national and European platforms.	2	1
	Does the NIF encourage public administrations to agree on the formalised specification to ensure technical interoperability when establishing European public services.	2	2
	Total	**18**	**13**
Interoperability Agreements	Does the NIF encourage: - Interoperability agreements to be based on existing formalised specifications? Or - if they do not exist, to cooperate with communities working in the same areas.	2	0
	Does the NIF encourage Public administrations to use a structured, transparent and objective approach to assess and select formalised specifications?	2	2
	Does the NIF encourage public administrations to prefer open specifications, taking due account of the coverage of functional needs, maturity and market support?	2	2
	Does the NIF encourages public administrations to lead or actively participate in standardisation work relevant to their needs?	2	2
	Does the NIF encourage public administrations to agree on minimum service requirements for secure data exchange?	2	2
	Total	**10**	**8**
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	2
	Total	**2**	**2**

Category	EIF	MS
Principles	100%	33,3%
Conceptual Model	100%	35,7%
Interoperability Levels	100%	22,2%
Interoperability Agreements	100%	50,0%
Interoperability Governance	100%	0,0%

NIF Implementation

Category	EIF Element	Scoring	
		Max	MS
Principles	Subsidiarity and proportionality	2	1
	User-centricity	2	2
	Inclusion and accessibility	2	0
	Security and privacy	2	0
	Multilingualism	2	0
	Administrative simplification	2	2
	Transparency	2	0
	Preservation of information	2	1
	Openness	2	1
	Reusability	2	1
	Technological neutrality and adaptability	2	0
	Effectiveness and efficiency	2	0
	Total	**24**	**8**
Conceptual Model	Does the NIF contain a conceptual model?	2	1
	Is the conceptual model a component-based service model? (e.g. SOA)	2	0
	Does the NIF encourage the use of common schemes to interconnect loosely coupled service components.	2	0
	Does the NIF encourage to put in place the infrastructure to interconnect loosely coupled service components?	2	0
	Does the NIF encourage to make the authentic sources of information available to others?	2	1
	Does the NIF encourage access and control mechanisms to ensure compliance to security and privacy legislation?	2	1
	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	2	2
	Total	**14**	**5**
Interoperability Levels	Does the NIF describe the four levels of interoperability?	2	0
	Does the NIF impose to consider all relevant legislation related to data exchange?	2	0
	Does the NIF describe that the business processes are documented in an agreed way in order for other administrations to understand the overall business process?	2	0
	Does the NIF encourage to agree on how these processes will interact among the different levels of public administrations?	2	0
	Does the NIF encourage public administrations to clarify their organisational relationships as part of the establishment of a (European) public service?	2	0
	Does the NIF encourage public administrations to agree on change management processes to ensure continuous service delivery.	2	0
	Does the NIF encourage the usage of a common taxonomy of basic public service?	2	0
	Does the NIF encourage public administrations to support the establishment of sectorspecific and cross-sectoral communities that aim to facilitate semantic interoperability and that share results on national and European platforms.	2	2
	Does the NIF encourage public administrations to agree on the formalised specification to ensure technical interoperability when establishing European public services.	2	2
	Total	**18**	**4**
Interoperability Agreements	Does the NIF encourage: - Interoperability agreements to be based on existing formalised specifications? Or - if they do not exist, to cooperate with communities working in the same areas.	2	0
	Does the NIF encourage Public administrations to use a structured, transparent and objective approach to assess and select formalised specifications?	2	2
	Does the NIF encourage public administrations to prefer open specifications, taking due account of the coverage of functional needs, maturity and market support?	2	2
	Does the NIF encourages public administrations to lead or actively participate in standardisation work relevant to their needs?	2	1
	Does the NIF encourage public administrations to agree on minimum service requirements for secure data exchange?	2	0
	Total	**10**	**5**
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	0
	Total	**2**	**0**

Category	EIF	MS
Principles	100%	45,8%
Conceptual Model	100%	35,7%
Interoperability Levels	100%	16,7%
Interoperability Agreements	100%	0,0%
Interoperability Governance	100%	0,0%

NIF Monitoring

Category	EIF Element	Scoring	
		Max	MS
Principles	Subsidiarity and proportionality	2	1
	User-centricity	2	1
	Inclusion and accessibility	2	1
	Security and privacy	2	1
	Multilingualism	2	1
	Administrative simplification	2	1
	Transparency	2	1
	Preservation of information	2	1
	Openness	2	1
	Reusability	2	1
	Technological neutrality and adaptability	2	0
	Effectiveness and efficiency	2	1
	Total	**24**	**11**
Conceptual Model	Does the NIF contain a conceptual model?	2	1
	Is the conceptual model a component-based service model? (e.g. SOA)	2	1
	Does the NIF encourage the use of common schemes to interconnect loosely coupled service components.	2	1
	Does the NIF encourage to put in place the infrastructure to interconnect loosely coupled service components?	2	0
	Does the NIF encourage to make the authentic sources of information available to others?	2	1
	Does the NIF encourage access and control mechanisms to ensure compliance to security and privacy legislation?	2	0
	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	2	1
	Total	**14**	**5**
Interoperability Levels	Does the NIF describe the four levels of interoperability?	2	0
	Does the NIF impose to consider all relevant legislation related to data exchange?	2	0
	Does the NIF describe that the business processes are documented in an agreed way in order for other administrations to understand the overall business process?	2	1
	Does the NIF encourage to agree on how these processes will interact among the different levels of public administrations?	2	1
	Does the NIF encourage public administrations to clarify their organisational relationships as part of the establishment of a (European) public service?	2	1
	Does the NIF encourage public administrations to agree on change management processes to ensure continuous service delivery.	2	0
	Does the NIF encourage the usage of a common taxonomy of basic public service?	2	0
	Does the NIF encourage public administrations to support the establishment of sectorspecific and cross-sectoral communities that aim to facilitate semantic interoperability and that share results on national and European platforms.	2	0
	Does the NIF encourage public administrations to agree on the formalised specification to ensure technical interoperability when establishing European public services.	2	0
	Total	**18**	**3**
Interoperability Agreements	Does the NIF encourage: - Interoperability agreements to be based on existing formalised specifications? Or - if they do not exist, to cooperate with communities working in the same areas.	2	0
	Does the NIF encourage Public administrations to use a structured, transparent and objective approach to assess and select formalised specifications?	2	0
	Does the NIF encourage public administrations to prefer open specifications, taking due account of the coverage of functional needs, maturity and market support?	2	0
	Does the NIF encourages public administrations to lead or actively participate in standardisation work relevant to their needs?	2	0
	Does the NIF encourage public administrations to agree on minimum service requirements for secure data exchange?	2	0
	Total	**10**	**0**
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	0
	Total	**2**	**0**