

NATIONAL INTEROPERABILITY FRAMEWORK OBSERVATORY

Analytical Model **SWEDEN**

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

DIGIT ISA² Programme

Directorate-General for Informatics

ec.europa.eu/isa2

ISA²

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EUROPEAN COMMISSION

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Analysis of the NIFs	See Alignment Examples in NIFO toolbox	See implementation and monitoring examples in NIFO Toolbox
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	NIF-EIF Alignment			NIF implementation			NIF monitoring		
Elf 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	
See reference: the European Interoperability Framework v2 See definitions listed in the ISA EIF brochure									
Subsidiarity and proportionality Ref: EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'subsidiarity and proportionality' principle?	Applying the subsidiarity and proportionality: Subsidiarity in this context means that decisions are taken as close to the partners as possible or by individual party if only one party is involved. The principle of proportionality limits the action to that which is necessary to achieve the agreed collaboration, leaving maximum freedom for the implementation of the partners. This means that the architecture only includes digital participatory manner. How an individual authority formulates its internal architecture and its processes, how it manages its concept, its internal information and its information storage is an internal matter. There is no intrinsic value in coordinating more than what is necessary to be able to collaborate on the digital meeting. Instead, achieving a greater flexibility of participating parties themselves can determine and manage its internal operations, the only thing that is interesting is that the parties deliver agreed services. This affects the architecture as a whole and the relationships between cooperating parties with respect to the cooperation agreement, availability, etc. For this, a federation and / or other sub- groups need to be established. See: Principles for Digital Cooperation. http://www.esamverka.se/download/18.7e784787153f0f33aa51c892/1464275194972/V%C3%A4gledande+ principer+f%C3%86r+digital+samverkan+1.3.pdf	2	This is implemented in the Swedish government structure as a whole, not only as regards eGov. The decision-making in individual agencies is delegated by the Swedish government to the director general in yearly and/or more long-term documents on the government of the agencies' area of responsibility.	[describe project here]	2	Monitored as it is part of the constitution. The yearly and/or more long-term documents on government are followed up by the responsible ministry on a yearly basis, or more often depending on the subject.	2	
User-centricity EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'user-centricity' principle?	In the new e-society, citizens will decide when and how digital meetings should take place. Thereby the perspective changes, from government-centered to consumer-oriented, from the authorities' own business processes to citizens processes based on their changing life events. Such processes can include both the public and private sectors. Remote conferencing in the new e-society could take place through various digital channels: smart phones, touchpads, in social media, in public and private web portals, on agency-specific websites, as well as through future, today unknown client platforms. When using e- services available in multiple digital channels, it should be possible to e.g. start a case in one channel and finish it in another one. Digital encounters that are tailored to the needs of citizens provide increased availability, greater simplicity, greater efficiency, improved data quality and greater transparency and participation. It should be possible to access these services at any time of day depending on the citizens needs. By being in the citizens known environments greater simplicity and understandability is achieved, which creates the potential for reducing the "digital alienation". Citizens' life is easier when their processes are supported across agency boundaries. Information quality is increased when the users' initial registrations are done digitally, reducing the risk of misreporting and misinterpretation of the documents received. Through digital channels you can allow greater transparency and citizens can follow for example the administrative process and the status. To meet the needs of citizens, the authorities and other public organizations provide services so that they are easily available in the digital channels of choice, in the citizens 'digital room' and environments. See also Guidelines for agencies' use of social media: http://www.esamverka.se/download/18.7e784787153f0f33aa51c81d/1464273265830/Riktlinjer+f%C3%B6r+myndigheters+anv%C3%A4Andning+av+sociala+medier+1.0.pdf When an	2	[describe here]	This principle is implemented by many agencies in different individual projects. E.g. the digital service for collecting information from a number of agencies in order to obtain a high quality basis for decision-making when it comes to people in need of social welfare support: https://www.forsakringskassan.se/myndigheter/etjanster/ssbtek	1	[describe monitoring procedure here]	0	

Analysis of the NIFs

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Administrative simplification EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Administrative simplification' principle?	The utility must be controlling. Development and management of the administration -wide solutions will be based on as complete an analysis as possible of the fair needs and customer benefits , and how the costs and benefits (economic and quality) are distributed between the participating actors and relevant stakeholders. This analysis should include not only the cost of IT development, but - based on a life cycle perspective - also includes operational and management costs , and operating costs to make the necessary adjustments so that the benefits sought to be realized. The usefulness of a particular administrative common solution must be clear before the solution is developed. The distribution of costs and benefits between the participating actors is necessary to develop in order to create acceptance and understanding for the joint management of the solution lifecycle. Importantly, this primary should not be done to streamline the government 's own administration and activities, but to give greater benefit from a citizen perspective. Every effort requires taking out a needs- benefit analysis in order to clarify both the costs and benefits, before deciding whether to develop a new service / process . This analysis shall continually monitor and ensure a positive, understood and measurable net benefit actually realized. The development of management common solutions may involve complex cost-benefit models , such as can the benefits that are realized by a joint solution occur in departments other than the one who made the investment, which will affect current funding and management models. Some initiatives related to the development of management point solutions will carry themselves, while others need to be understood as an enabler for the development of other solutions. Business models should be developed , where it is clear how costs and revenues are allocated. Guidance for needs driven development: http://www.esamverka.se/download/18.2433cb56155155cbad918ce3/1465828744466/Behovsdriven+utveckling++ne+v%	1		This is implemented by the Swedish government through a political initiative. http://www.regeringen.se/regeringens-politik/naringspolitik/forenkla-for-foretagen/	1	Regelradet.se Rule Council is committed to providing Swedish entrepreneurs a simpler life. The Council's task is to examine proposals for new and amended regulations from ministries and agencies may have a financial impact on the business world. New or amended rules should not need to put unnecessary administrative costs for companies. Monitoring is carried out on annual basis. http://www.regelradet.se/wp- content/uploads/2016/02/Arsrapportregelradet_2015.pdf	2
Transparency EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Transparency' principle?	In the new e-society, citizens will decide when and how digital meetings should take place. Thereby the perspective changes, from government-centered to consumer-oriented, from the authorities' own business processes to citizens processes based on their changing life events. Such processes can include both the public and private sectors. Remote conferencing in the new e-society could take place through various digital channels: smart phones, touchpads, in social media, in public and private web portals, on agency-specific websites, as well as through future, today unknown client platforms. When using e- services available in multiple digital channels, it should be possible to e.g. start a case in one channel and finish it in another one. Digital encounters that are tailored to the needs of citizens provide increased availability, greater simplicity, greater efficiency, improved data quality and greater transparency and participation. It should be possible to access these services at any time of day depending on the citizens needs. By being in the citizens known environments greater simplicity and understandability is achieved, which creates the potential for reducing the "digital alienation". Citizens' life is easier when their processes are supported across agency boundaries. Information quality is increased when the users' initial registrations are done digitally, reducing the risk of misreporting and misinterpretation of the documents received. Through digital channels you can allow greater transparency and citizens can follow for example the administrative process and the status. To meet the needs of citizens, the authorities and other public organizations provide services so that they are easily available in the digital channels of choice, in the citizens 'digital room' and environments. See also Guidelines for agencies' use of social media: http://www.esamverka.se/download/18.7e784787153f0f33aa51c81d/1464273265830/Riktlinjer+f%C3%B6r+myndigheters+anv%C3%A4ndning+av+sociala+medier+1.0.pdf When an		[describe here]	Verksamt.se is a collaboration among several Swedish government agencies, targeting those that are considering to start or ar running already or want to close a company in Sweden. Verksamt.se provides users with the overview of procedures, drafts and working documents. Verksamt.se is the or the Swedish Point of Single Contact and part of the EUGO network. The website digitalasverige.se is launched to make available data on Sweden's digitisation, for anyone to search, compare and share; it was announced on 13 March 2014. This data provides the Digitisation Commission (Digitaliseringskommissionen) with the data it uses in its analyses and proposals on digitisation. The aim is that the Digitisation Commission will work as openly and transparently as possible and digitalasverige.se is part of that. See also the website "Openaid.se" which The Swedish International Development Cooperation Agency built in collaboration with the The Ministry for Foreign Affairs (UD): http://openaid.se/aid/		[describe monitoring procedure here]	0

Analysis of the NIFs		See Alignment Examples in NIFO toolbox	See implementation and monitoring examples in NIFO Toolbox						
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Preservation of information EIF, Chapter 2, Underlying principles, Recommendation 5 Category: Principles	Does the NIF contain the 'Preservation of information' principle?	The National Archives of Sweden is a government agency responsible for the long-term preservation of electronic records and other kinds of information. The right format of storing and preserving information should be selected to ensure long-term accessibility. See: http://riksarkivet.se/ The National Archives of Sweden (RA-FS and RA-MS) regulations provide binding rules for government departments and bodies holding public documents from the state archives. With support of the Archives Act and the Archives Ordinance requirements are set on how documents should be prepared, organized, reported, compressed, stored, protected, and handed over. See outline of the regulation: http://riksarkivet.se/Media/Bilder/doi-T/RA-FS%20modell.jpg More information on the regulations: http://riksarkivet.se/generella-foreskrifter Electronically signed documents: http://riksarkivet.se/Media/pdf-filer/elektroniskt-underskrivna-handlingar.pdf	2	The National Archives of Sweden is a government agency responsible for the long-term preservation of electronic records and other kinds of information. The National Archives is responsible for providing directives for the other government agencies in the area of preservation of information.	[describe project here]	2	The directive on Public Sector Information, which addresses reuse of archived information has been implemented in national legislation.	1	
Openness EIF, Chapter 2, Underlying principles, Recommendation 6 Category: Principles	Does the NIF contain the 'Openness' principle?	Make open data available 14/PSI15 Government information should be made available to external parties as widely as possible but taking into account confidentiality and privacy aspects. This means that the scope within which data can be made available is limited. Semantic technologies will be used to describe data and make it freely available in a format that can be searched and interpreted mechanically. Related concepts and information models and exchange formats should be freely published. In a broader perspective, all public documents should be freely available for reading by third parties in digital channels. This means that when an agency creates a "gathering data" containing public documents they should be made available digitally. Open data enables innovation and leads to greater transparency because incorrect master data becomes visible, which can increase the quality of information. Access to public documents contributes to greater democracy in the society. Investment costs are incurred by individual agencies, while profits in many cases end up with other parties. Investment decisions need to go beyond own organization and bring benefits to the society as a whole. One area of focus is when authorities provide information to private operators, scientists, organizations and individual citizens. It needs to be known to the public what of kind of information an agency holds and how it can be made available. See also Guide for re-use of public information: http://www.vidareutnyttjande.se/ Principles for digital cooperation: http://www.esamverka.se/download/18.7e784787153f0f33aa51c892/1464275194972/V%C3%A4gledande+ principer+f%C3%B6r+digital+samverkan+1.3.pdf	2		This is implemented by the Swedish government through a legislation (2010:566). As an example: Sweden launched its open data portal: http://oppnadata.se/	1	This is monitored as national legislation.	2	

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Reusability EIF, Chapter 2, Underlying principles, Recommendation 7 Category: Principles	Does the NIF contain the 'Reusability' principle?	Make available and reuse services in a uniform way. There is currently operational processes and services provided by individual agencies. The purpose is not to break up and build on these, instead, new services are developed for reuse. For each sector a sector manager needs to be appointed. To be able to collaborate on managing common services (FGT) specifically required to: - responsibility and obligation to provide services is established, - forming collaboration groups / federations around such services, - stakeholders will take to develop and manage such FGT, - be coordinated and prioritized at national level, - there is an economic model in financing the development, management and operation, - guidelines be developed for the FGT in a coordinated manner to meet the users in a variety of digital meetings, - a common support function may need to be established, - guidelines be developed for the FGT to interact with the authorities' own channel solutions, - operation of FGT, including storage of common data in a manner that maintains high personal integrity, - private option is enabled, both for competitive reasons and to get new impulses, - legal considerations are handled. Through a displaced focus from agency -centered digital meetings at the users' terms, it is required that services developed by government agencies and other stakeholders using uniform service interfaces and concepts. To enable this an architecture for digital interactions is needed. By designing processes, basic services, e-services and plan joint services in a similar manner enables reuse of information and functionality for new application areas. An important aspect here is that government information - in the basal or aggregated form - will be made available to external actors, which the architecture must support. Sector by sector, a more detailed interaction needed, such as in health care, social security, Geodata or pension areas. Within each sector, sectoral standards have to be developed and managed. By making available	2	[describe here]	Vinnova, the Swedish Government Agency for Innovation Systems, invested 380,000 euro to develop of a platform for public e-services. This will host about ten e-government services which will be delivered through the cloud, offering services that can be used by all municipalities. One of these municipal services is 'Fixa min gata', the Swedish equivalent of Britain's FixMyStreet. It reuses the open source code of the British solution. https://joinup.ec.europa.eu/elibrary/case/swedishpublic-open-source-movement-working-bottom	1	[describe monitoring procedure here]	0
Technological neutrality and adaptability EIF, Chapter 2, Underlying principles, Recommendation 8 Category: Principles	Does the NIF contain the 'Technological neutrality and adaptability' principle?	When interface information and services are designed open standards should be used. A standards maturity and establishment level also needs to be considered to assure that the choice of the standard is not an obstacle to cooperation. If there is a lack of appropriate open standards, established industry standards should be used. Proprietary, closed standards should as far as possible be avoided. The choice of standards must not intrude on the partner's right to choose internal technology platform for the production or consumption of services. Standardized interfaces reduces costs and helps to increase reuse and an open market. Open standards are preferable because they can be used freely without the owner of the standard setting up unreasonable or discriminatory barrier, costs or contractual restrictions. Proprietary solutions entail lock-in effects that can have adverse economic and practical implications for the partners. See Principles for Digital cooperation: http://www.esamverka.se/download/18.7e784787153f0f33aa51c892/1464275194972/V%C3%A4gledande+principer+f%C3%B6r+digital+samverkan+1.3.pdf	2		The political ambitions can be found in the budget bill for 2016. In this document, the government proposes that digital services should as far as possible be based on open standards and, if possible, use software that free the administrations from the dependency on single technical solutions.	1	[describe monitoring procedure here]	0

Figure		NIF-EIF Alignment		NIF implementation			NIF monitoring	
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Effectiveness and efficiency EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Effectiveness and efficiency' principle?	Development and management of services should be based on an analysis of the actual need and customer satisfaction, as well as on how the costs and benefits (financial and qualitative) are distributed among participating actors and stakeholders. This analysis should not only cover the costs of IT development, but, based on a life cycle perspective, also cover operating and administrative expenses and operating costs to make the necessary adjustments so that the benefits sought can be realized. The benefits must be governing and must be evident before a solution developed. The distribution of costs and benefits between participating stakeholders is essential to develop to create acceptance and understanding for the joint management throughout the solution's lifecycle. It is important that this is not primarily made to streamline the government's own administration and activities, but to give increased benefit from a citizen perspective. See Principles for Digital cooperation: http://www.esamverka.se/download/18.7e784787153f0f33aa51c892/1464275194972/V%C3%A4gledande+ principer+f%C3%B6r+digital+samverkan+1.3.pdf	2		The political ambitions can be found in the budget bill for 2015. In this document, the government launched a new four-year programme to reinforce the governance and coordination of ICT in the government administration.	1	Monitored as part of the implementation of the eGov-programme.	1
Conceptual model EIF, Chapter 3 Category: Conceptual model	Does the NIF contain a conceptual model?	In the Swedish guideline document "Vägledning för digital samverkan", chapter 3, the conceptual model for digital collaboration is described. The model to be used for digital collaboration in public administration is based on service-based information exchange using standardised interfaces. See Guideline for Digital Collaboration: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	Not applicable?	0	Not applicable?	0
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)	In the guideline document "Vägledning för digital samverkan" chapter 3 and 5 in Conceptual model for digital collaboration Architecture principle, built on Service oriented architecture (SOA) The model to be used for digital collaboration in public administration is service-based information exchange using standardized interfaces. (Chapter 5.2) See Guideline for Digital Collaboration: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digital+samverkan+4.1.pdf See Principles for Digital Collaboration: http://www.esamverka.se/download/18.7e784787153f0f33aa51c892/1464275194972/V%C3%A4gledande+principer+f%C3%B6r+digital+samverkan+1.3.pdf	2	[describe here]	An example is the National Service Catalogue: http://tjanster.esamverka.se/tjanste/public/home.sea m and the national secure eMessage service: http://minameddelanden.se/	1	[describe monitoring procedure here]	0
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		In the guideline document "Vägledning för digital samverkan" chapter 3 and 5 in Conceptual model for digital collaboration The model to be used for digital collaboration in public administration is service-based information exchange using standardized interfaces. (Chapter 5.2) The use of standardized interfaces enables an efficient exchange of information with a minimum of technical, organizational and operational dependencies between activities. This means that the consumer does not need to have knowledge of the technical implementation details that the producer uses to create the service. Conversely, the producer does not need to know how the consumer uses the information or the technology supporting the service. See Guidelines for Digital Collaboration: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	E.g. the digital service for collecting information from a number of agencies in order to obtain a high quality basis for decision-making when it comes to people in need of social welfare support: https://www.forsakringskassan.se/myndigheter/e-tjanster/ssbtek	1	[describe monitoring procedure here]	0

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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?	At the technical level there are two dominant technical standards for the public sector as well interoperability: RIV and SHS. Architecture Document Version 1.2: https://www.forsakringskassan.se/myndigheter/e-tjanster/shs https://www.forsakringskassan.se/myndigheter/e-tjanster/shs https://www.forsakringskassan.se/myndigheter/e-tjanster/shs https://www.forsakringskassan.se/myns/mcm/connect/a2271ef0-01e0-4f48-aae6- 0fd819d7f025/shs_architecture_ver_1_2_01.pdf?MOD=AJPERES&attachment=true&CACHE=NONE&CONTEN TCACHE=NONE Healthcare service platform: Service contracts are governed by RIV Technical specification. The purpose of this guideline is to describe how to realize the exchange of information between two parties. RIV Technical Notes are an integral part of the national architecture as it is described in the T-book. There is also a specification without hard links to healthcare-specific infrastructure: http://www.cehis.se/images/uploads/dokumentarkiv/Referensarkitektur_vard_omsorg_VIT-bokens_tekniska_arkitektur_Rapport_110314_REV_B.pdf Open source projects for realization of joint service contracts are listed in the reference architecture for eHealth: http://rivta.se/	2	[describe here]	SHS is a major information communication platform and a concept for safe and reliable Internet exchanges of information between public organizations. Authorities, businesses and the general public can communicate with one other using this system. Healthcare service platform, RIV Technical specification: http://www.inera.se/TJANSTERPROJEKT/HSA/SHS Specification and version 2.0 with WS basic profile: https://www.forsakringskassan.se/myndigheter/etjanster/shs	1	[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 the guideline document "Vägledning för digital samverkan" chapter 3 and 5 in Conceptual model for digital collaboration and Architect principle, Build Service oriented (SOA)	2	[describe here]	An example is the National Service Catalogue: http://tjanster.esamverka.se/tjanste/public/home.sea m E.g. the digital service for collecting information from a number of agencies in order to obtain a high quality basis for decision-making when it comes to people in need of social welfare support: https://www.forsakringskassan.se/myndigheter/e-tjanster/ssbtek	1	[describe monitoring procedure here]	0
Access control EIF, Recommendation 11 Category: Conceptual model	Does the NIF encourage access and control mechanisms to ensure compliance to security and privacy legislation?	In the guideline document "Vägledning för digital samverkan" chapter 4 - 6 52 "Skydda den personliga integriteten" It is always the one who decides over the handling of personal data who is responsible to make sure that the Personal Data Act (PDA) is being followed. Responsibility means making sure that the services that are used do not entail privacy risks and therefore clear demands needs to be formulated towards those who deliver the services. When designing a new service an analysis of which personal data that are relevant to collect and manage should be made. Some basic principles of privacy protection are to not collect more information than is needed, not keeping it longer than is needed and to not use it for anything other than what it was collected for. The development of digital services is often complicated. You have to take many types of requirements into account, not least in terms of the protection of personal privacy. To avoid pitfalls that are expensive to fix afterwards and that makes it difficult to follow the law, it is important to take into account the privacy aspects in the early stages of the process. Other important parts of privacy protection include providing information about how the data should be treated, to ask for consent and to allow transparency through the ongoing process. If the service should include personal data, the recommendations made by The Swedish Data Protection Authority, "Privacy by design '(built-in privacy), should be applied. The concept involves allowing privacy issues affect the system's entire lifecycle – from pre-study and definitions of requirements through design and development to application and dismantling. For the protection of sensitive privacy data, there are some specific actions that should be taken into account. To maintain "Privacy by design" you should aim to: ** inimitize the amount of personal data ** inimitize the amount of personal data ** let the service control user rights. You must especially take into account that aggregated infor	2	Implemented in national legislation See: https://www.msb.se/sv/Forebyggande/Informations sakerhet/Informationssakerhet-i- samhallet/Regler/Nationellt/	[describe project here]	2	This is monitored as national legislation.	2
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?	In the guideline document "Vägledning för digital samverkan" chapter 3 and 5 in Conceptual model for digital collaboration. "There are situations where multiple operators provide the same information. In these cases, the primary source of the information should be identified. If the information needs to be corrected, updated or removed this should be done at the primary source. The primary source is then responsible for providing the updated information."	2	[describe here]	different subject areas depending on the authorities involved. See for example The Swedish Tax Agency service "Navet": https://www.skatteverket.se/foretagochorganisatione r/myndigheter/informationsutbytemellanmyndigheter	1	[describe monitoring procedure here]	0

Analysis of the 11115		AUR PIR All	August 1					
European Commission		NIF-EIF Alignment		NIF implementation			NIF monitoring	
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 e xamples [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
Interoperability levels EIF, Chapter 4 Category: Interoperability levels	Does the NIF describe the four levels of interoperability?	A basic precondition for digital collaboration is the ability to interact, so-called interoperability. In order to cover different aspects this ability can be divided into four different perspectives, which in turn is part of the surrounding political context. The four perspectives of interoperability are: - Legal interoperability, which is about the legal possibilities and constraints to cooperate, on the basis of laws, regulations and civil contracts. - Organisational interoperability, which consists of two parts: the ability to define and describe the activities collaboration will support, and the ability to establish and maintain a common management and control around the aspects which you cooperate on. - Semantic interoperability, which is the ability to understand each other. The significance of the information exchanged must be perfectly clear to ensure that the exchange of information has the effect which was intended. - Technical interoperability, which is the ability to exchange technical information through services in a safe manner and with the quality that has been agreed upon. See: Guidelines for Digital Collaboration chapter 2.3: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	Not applicable?	0	Not applicable?	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?	A number of guidelines for legal aspects regarding e-gov have been developed. The guidelines highlight the importance of legislation on data exchange and data protection and the ramifications that may arise in electronic environments. See: http://www.esamverka.se/stod-och-vagledning/juridik/juridiska-vagledningar.html	2	[describe here]	E-gov initiatives are developed on a mainly voluntary basis in different subject areas depending on the authorities involved. The decision making in individual agencies is delegated by the Swedish government to the director general in yearly and/or more long-term documents on the government of the agencies' area of responsibility.	1	[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?	The national framework describes business framework in terms of cooperation but dos not provide descriptions of all the public administrations' business processes. The processes are described locally at the administrations but not in an aggregated way at the national level. The National Archive regulates that all authorities in Sweden have to implement a process classification structure (on a high level). See: https://riksarkivet.se/rafs?pdf=rafs/RA-FS%202008-04.pdf Digital interaction must be described in a way that all interacting actors understand and in a way which helps keeping discussions in line with subjects that are relevant for the current collaboration. Such a description is called an architecture for digital interaction or collaboration architecture. The architecture for digital collaboration aims to describe how players interact - not how they work internally, what systems they use or how their internal information is structured. See Guidelines for Digital Collaboration chapter 5: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	E-gov initiatives are developed on a mainly voluntary basis in different subject areas depending on the authorities involved. The decision making in individual agencies is delegated by the Swedish government to the director general in yearly and/or more long-term documents on the government of the agencies' area of responsibility.	1	[describe monitoring procedure here]	0
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?	The national framework and the guides encourage how to establish interacting processes. "Swedish administration is composed of independent and self-controlled agencies and municipalities, each of which resolves within a given framework of their own business organization and the use of technology solutions. Collaboration with other agencies, businesses and citizens is an important part of the authorities. For collusion within such a complex system as the Swedish government local government administration to work, various dependencies are minimized as far as possible. The dependencies that must be addressed is the interface in organization-wide processes and information interfaces. In practice this means that government agencies, municipalities and counties that work together to continue to operate in a lot of freedom in terms of processes, way of organizing their internal operations and in the selection of IT solutions. The guide says: Organisational interoperability ensures that the organizations concerned are prepared and have the ability to develop and digital collaboration. It includes: to Organization-wide activities are defined as processes, and that is managed, Roles are defined and synchronized between the organizations concerned, The formal contract to participate in this digital interaction is clarified, The responsibility for financing the digital interaction is evident Economic conditions for running the digital interaction is clarified, Each organization has the right skills and resources to participate, Service levels are defined and agreed between the relevant organizations and Services and information items managed in a life cycle perspective." See Guidelines for Digital Collaboration chapter 4: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	E-gov initiatives are developed on a mainly voluntary basis in different subject areas depending on the authorities involved. For example: http://www.esv.se/effektiv-statsforvaltning/e-handel/ The decision-making in individual agencies is delegated by the Swedish government to the director general in yearly and/or more long-term documents on the government of the agencies' area of responsibility.	1	[describe monitoring procedure here]	0

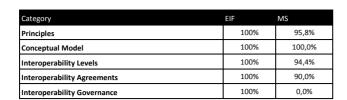
		NIF-EIF Alignment	NIF implementation			NIF monitoring		
EIF Element - Reference - Category	Measurement	NIF element present - Reference - (Text in English)	NIF-EIF alignment scoring 2: fully 1: partially 0: not aligned	Large scale implementation [describe if and how implementation of the element is a common practice]	Only implementation e xamples [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
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?	A lot of factors affect the choice of the type of organizational relationship. Except for the number and type of actors, the type of activity carried out have to be considered among other things. "Swedish administration is composed of independent and self -controlled agencies and municipalities, each of which resolves within a given framework of their own business organization and the use of technology solutions. Collaboration with other agencies , businesses and citizens is an important part of the authorities. For collusion within such a complex system as the Swedish government local government administration to work, various dependencies are minimized as far as possible. The dependencies that must be addressed is the interface in organization-wide processes and information interfaces. In practice this means that government agencies , municipalities and counties that work together to continue to operate in a lot of freedom in terms of processes , way of organizing their internal operations and in the selection of IT solutions . The guide says: Organisational interoperability ensures that the organizations concerned are prepared and have the ability to develop and digital collaboration. It includes: to Organization-wide activities are defined as processes, and that is managed , Roles are defined and synchronized between the organizations concerned , The formal contract to participate in this digital interaction is clarified , The responsibility for financing the digital interaction is evident Economic conditions for running the digital interaction is operations and service levels are defined and agreed between the relevant organizations and Service levels are defined and agreed between the relevant organizations and Services and information items managed in a life cycle perspective ." See Guidelines for Digital Collaboration chapter 4: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	E-gov initiatives are developed on a mainly voluntary basis in different subject areas depending on the authorities involved. For example see SFTI: http://sfti.se/index.html, See also the digital service for collecting information from a number of agencies in order to obtain a high quality basis for decision-making when it comes to people in need of social welfare support: https://www.forsakringskassan.se/myndigheter/etjanster/ssbtek The decision-making in individual agencies is delegated by the Swedish government to the director general in yearly and/or more long-term documents on the government of the agencies' area of responsibility.	1	[describe monitoring procedure here]	0
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?	Incidents are events that are not part of the regular operation of a service and which causes or may cause an interruption or a limitation of the service level for the service. Depending on the impact of the incident the way to handle it will differ, therefore the incidents should be classified on account to their consequences. Such classification should be developed as part of the preventive work in a collaboration group and be applied when incidents occur. The classification should include that escalation levels and arenas are clarified. It is important that the cooperation ensures the ability to deal with possible changes, risks and incidents and their consequences. It is the interaction manager has responsibility to ensure that procedures and forums established for this. This also includes levels, routines and responsibility for escalation. See Guidelines for Digital Collaboration chapter 7: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf See also Guidelines for Benefits Realisation: http://www.esv.se/effektiv-statsforvaltning/digitalisering/nyttorealisering/	2	[describe here]	E-gov initiatives are developed on a mainly voluntary basis in different subject areas depending on the authorities involved. For example: http://www.esv.se/effektiv-statsforvaltning/e-handel/ The decision making in individual agencies is delegated by the Swedish government to the director general in yearly and/or more long-term documents on the government of the agencies' area of responsibility.	1	Monitored by The Swedish National Financial Management Authority when comes to a large selection of central government authorities	it 1
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 Swedish NIF is based on the recommendation 13 and we have several principles that support a development towards the intention of this recommendation. Sweden participates in E-SENS and several working groups relating to this subject. Guideline for Digital for Collaboration chapter 5: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	1	[describe here]	See for example E-SENS: http://www.esv.se/effektiv- statsforvaltning/digitalisering/e-sens/ For information about E-SENS: http://www.esens.eu/	1	[describe monitoring procedure here]	0

Alialysis of the NiFs		See Angliment Examples III NIPO toolbox		See implementation and monitoring examples in NIPO Toolbox					
Europain		NIF-EIF Alignment		NIF implementation			NIF monitoring		
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 e xamples [describe an implementation example specific to each element]	Implementation 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 importance of digital meeting between citizens and the public administration is increasingly growing. Even among public authorities and between public authorities and companies the digital communication is increasing. In accordance with the Swedish Government's strategy "Med medborgaren I centrum" the digital meeting should be based on the needs of citizen's. See: http://www.regeringen.se/contentassets/24b07f6fd836497cb833d88c36cf51ee/med-medborgaren-i-centrumregeringens-strategi-for-en-digitalt-samverkande-statsforvaltning) This results in a shift from the point where the public authorities are the once that choose and controls which platform and which forms meetings with citizens should occur — to the reverse. Because of this, public authorities can no longer focus solely on their own areas of activity instead, they need to work together across agency boundaries. Digital collaboration makes it possible for public authorities, municipalities, county councils and private stakeholders to exchange information digitally and collaborate on issues that contribute to a legally secure and efficient exchange of information. With a common structure for the exchange of information, information becomes more accessible for others. Citizens and businesses need less and less acting coordinator in their own cases and distribute information that is already owned by another public authority. See Guidelines for Digital Collaboration: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	An example is the health-sector work which demands semantic interoperability. See: http://www.inera.se/TJANSTER PROJEKT/Arkitektur-och- regelverk/Verksamhetsarkitektur-och- Informationsstruktur/ See also "Dela Digitalt": http://www.deladigitalt.se/ See also "GEO-data": https://www.geodata.se/	1	[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.	In the guideline document "Vägledning för digital samverkan" chapter 5 it is explained that public administrations should use services to exchange data. That is connected with the guiding principle T2 Make services available and reused services in a standardised way (Tillgängliggör och återanvänd tjänster på ett enhetligt sätt). In different projects developed in collaboration between several public administrations formalised specification has been developed for reuse. For example to develop electronic archives for public documents and files. See the Principles for Digital Collaboration, 'Use of open standards' (T5) and 'Make services available and reused services in a standardised way' (T2): http://www.esamverka.se/download/18.7e784787153f0f33aa51c892/1464275194972/V%C3%A4gledande+principer+f%C3%B6r+digital+samverkan+1.3.pdf See Guidelines for Digital Collaboration chapter 5: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	In the project EARD specifications has been developed for re-use for public administration electronical archives. See: http://riksarkivet.se/fgs-earkiv See: http://riksarkivet.se/publicerade-rapporter-franeard	1	[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.	In the guideline document "Vägledning för digital samverkan" chapter 4 support is given on contents in an interoperability agreement. As described above the technical interoperability is encourage to be carried out by services. In the agreement the producer of the services and the consumer is advised to agree and document important issues such as Service Level Agreements, customer support and legal issues. See Guidelines for Digital Collaboration chapter 4: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf	2	[describe here]	E.g. the digital service for collecting information from a number of agencies in order to obtain a high quality basis for decision-making when it comes to people in need of social welfare support: https://www.forsakringskassan.se/myndigheter/e-tjanster/ssbtek	1	[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?	E-delegation has initiated an IT-standardization board where public administrations are encouraged to actively participate in standardisation work. The IT-standardization board is managed by the Swedish Standards Institute (SIS): http://www.sis.se/tema/IT-standardisering/	1	[describe here]	IT-standards are adopted on a mainly voluntary basis in different subject areas depending on the authorities involved. For example GEO-data: https://www.geodata.se/sv/Vad/Standarder/ The decision-making in individual agencies is delegated by the Swedish government to the director general in yearly and/or more long-term documents on the government of the agencies' area of responsibility.	1	[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?	There is a principle to use open standards (T5) if they exist and if not sector standards can be used. See: Principer för digital samverkan - chapter 4.2.5: http://www.esamverka.se/download/18.7e784787153f0f33aa51c892/1464275194972/V%C3%A4gledande+ principer+f%C3%B6r+digital+samverkan+1.3.pdf	2	[describe here]	The political ambitions can be found in the budget bill for 2016. In this document, the government proposes that digital services should as far as possible be based on open standards and, if possible, use software that free the administrations from the dependency on single technical solutions.	1	[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?	The Swedish Government gives separate regulations to public authorities to participate in developing international standards. E-delegation has initiated an IT-standardization board where public administrations are encouraged to actively participate in standardisation work. The IT-standardization board is managed by the Swedish Standards Institute (SIS). See: www.sis.se	2	[describe here]	Standards are developed by individual public authorities based on government regulation in different subject areas depending on the authorities involved.	1	Monitored based on government regulation in different subject areas depending on the authorities involved.	1	

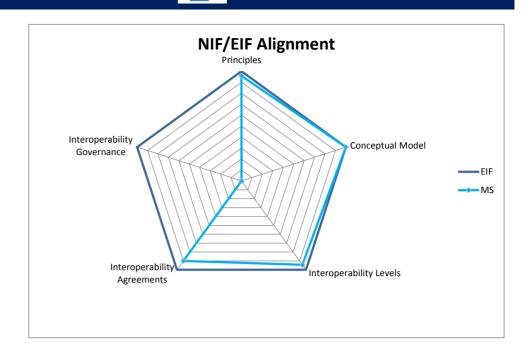
See Alignment Examples in NIFO toolbox	See implementation and monitoring examples in NIFO Toolbox
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Europani		NIF-EIF Alignment					NIF monitoring	
ElF Element - Reference - Category	Measurement	NIF element present - Reference - (Text in English)	NIF-EIF 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 e xamples [describe an implementation example specific to each element]	Implementation scoring 2: Common practice 1: some examples 0: not observed		Monitoring scoring 2: Monitored 1: Partially monitored 0: not observed
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?	Information security for public authorities in Sweden is regulated by MSB. See Guideline for Digital Collaboration chapter 5.7.2: http://www.esamverka.se/download/18.7e784787153f0f33aa51c876/1464274862194/V%C3%A4gledn+digit al+samverkan+4.1.pdf Each public administration has a responsibility for its part in the collaboration.	2	Information security for public authorities in Sweden is regulated by MSB.	[describe project here]	2	Monitored as National and EU legislation.	2
overnance ublic administrations should establish a framework or the governance of their interoperability activities cross administrative levels. IF, Recommendation 25 Category: teroperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	Not on a national level including all sectors. The health sector however has a governance framework.	0	[describe here]	[describe project here]	0	[describe monitoring procedure here, Precise if monitoring procedures include stimulating and/or corrective measures]	0

Analysis of the NIFs

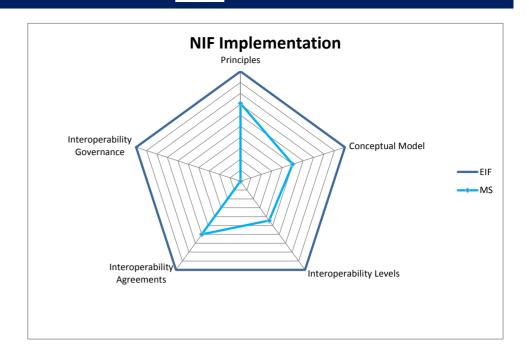


Category	EIF Element	Scoring	
		Max	MS
Principles	Subsidiarity and proportionality	2	2
	User-centricity	2	2
	Inclusion and accessibility	2	2
	,		
	Security and privacy	2	2
	Multilingualism	2	2
	Administrative simplification	2	1
	Transparency	2	2
	Preservation of information	2	2
	Openness	2	2
	Reusability	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	2	2
	model? (e.g. SOA)		
	Does the NIF encourage the use of common schemes to	2	2
	interconnect loosely coupled service components.		
	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
	information available to others? Does the NIF encourage access and control mechanisms to	2	2
	ensure compliance to security and privacy legislation?	2	2
	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	2	2
	Total	14	14
nteroperability 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	2
	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	2	2
	administrations? Does the NIF encourage public administrations to clarify their organisational relationships as part of the establishment of a (European) public service?	2	2
	Does the NIF encourage public administrations to agree on change management processes to ensure continuous service delivery.	2	2
	Does the NIF encourage the usage of a common taxonomy of basic public service?	2	1
	Does the NIF encourage public administrations to support	2	2
	the establishment of sectorspecific and cross-sectoral communities that aim to facilitate semantic interoperability and that share results on national and European platforms.		
	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	17
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	2
	Does the NIF encourage Public administrations to use a structured, transparent and objective approach to assess and select formalised specifications?	2	1
	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	9
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	0
	Total	2	0
	Total	_	1



Category	EIF	MS
Principles	100%	70,8%
Conceptual Model	100%	50,0%
Interoperability Levels	100%	44,4%
Interoperability Agreements	100%	60,0%
Interoperability Governance	100%	0,0%

Catagony	EIF Element	Cooring	
Category	Eir Eiement	Scoring Max	MS
Principles	Subsidiarity and proportionality	2	2
	User-centricity	2	1
	Inclusion and accessibility	2	2
	·		
	Security and privacy	2	2
	Multilingualism	2	2
	Administrative simplification	2	1
	Transparency	2	1
	Preservation of information	2	2
	Openness	2	1
	Reusability	2	1
	·	2	1
	Technological neutrality and adaptability		
	Effectiveness and efficiency	2	1
	Total	24	17
Conceptual Model	Does the NIF contain a conceptual model?	2	0
	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	1
	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	2
	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	2	1
	Total	14	7
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	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	1
	Does the NIF encourage to agree on how these processes will interact among the different levels of public	2	1
	administrations? 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	1
	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	1
	Total	18	8
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	1
	Does the NIF encourage Public administrations to use a structured, transparent and objective approach to assess and select formalised specifications?	2	1
	Does the NIF encourage public administrations to prefer open specifications, taking due account of the coverage of functional needs, maturity and market support?	2	1
	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	2
	Total	10	6
Interoperability	A governance framework exists to control the	2	0
Governance	interoperability activities across administrative levels.	_	
	Total	2	0



Category	EIF	MS
Category		
Principles	100%	58,3%
Conceptual Model	100%	14,3%
Interoperability Levels	100%	5,6%
Interoperability Agreements	100%	30,0%
Interoperability Governance	100%	0,0%

Category	EIF Element	Scoring	
Category	Lit Element	Max	MS
Principles	Subsidiarity and proportionality	2	2
	User-centricity	2	0
	Inclusion and accessibility	2	2
	Security and privacy	2	2
	Multilingualism	2	2
	Administrative simplification	2	2
	Transparency	2	0
	Preservation of information	2	1
	Openness	2	2
	Reusability	2	0
	Technological neutrality and adaptability	2	0
	Effectiveness and efficiency	2	1
	Total	24	14
Conceptual Model	Does the NIF contain a conceptual model?	2	0
	Is the conceptual model a component-based service	2	0
	model? (e.g. SOA)	-	
	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	2	0
	interconnect loosely coupled service components?		
	Does the NIF encourage to make the authentic sources of information available to others?	2	0
	Does the NIF encourage access and control mechanisms to	2	2
	ensure compliance to security and privacy legislation?		
	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	2	0
	Total	14	2
Interoperability Levels	Does the NIF describe the four levels of interoperability?	2	0
	Does the NIF impose to consider all relevant legislation	2	0
	related to data exchange? Does the NIF describe that the business processes are	2	0
	documented in an agreed way in order for other administrations to understand the overall business process?		
	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	1
	Does the NIF encourage the usage of a common taxonomy	2	0
	of basic public service? Does the NIF encourage public administrations to support	2	0
	the establishment of sectorspecific and cross-sectoral communities that aim to facilitate semantic interoperability and that share results on national and European platforms.		
	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	1
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	1
	Does the NIF encourage public administrations to agree on minimum service requirements for secure data exchange?	2	2
	Total	10	3
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	0
	Total	2	0
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