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NATIONAL INTEROPERABILITY FRAMEWORK OBSERVATORY

Analytical Model
CYPRUS

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

DIGIT

Directorate-General for Informatics

ISA²

See Alignment Examples in NIFO toolbox

See implementation and monitoring examples in NIFO Toolbox

EIF Element - Reference - Category *See reference: the European Interoperability Framework See definitions listed in the ISA EIF brochure*	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]*	Implementation 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				**implementation**			**NIF monitoring**	
Subsidiarity and proportionality Ref: EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'subsidiarity and proportionality' principle?	Principle 1 "Subsidiarity and proportionality" of the Cyprus eGIF: Government decisions shall be taken as close as possible to the citizen. The decision making responsibilities of local and regional authorities shall be enriched since they are in direct contact with citizens. Central Government shall not take action unless this is more effective than action taken at regional or local level, and this action shall enable the achievement of agreed policy objectives. Local and regional authorities shall be in close cooperation among themselves to exchange information and coordinate the delivery of joint electronic services, conforming, where applicable, to policy actions taken by the Government.	1	*[describe here]*	*[describe project here]*	0		0
User-centricity EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'user-centricity' principle?	Principle 2 "Proximity to citizens" of the Cyprus eGIF: Government should be at the disposal of the people and not the other way around. The target for future services should be the provision of personalised eServices at the maximum possible sophistication level, that will allow service users, i.e. citizens and businesses, to be able to interact with public administrations any time, as easily as possible. In order to gain acceptance and approval from end users, electronic environments shall have a consistent design and shall be friendly and understandable, which means they shall be readable, predictable and interactive.	2	1. The Citizen Service Centres (KEP) are, for Cyprus, the first implementation of the idea of "One-Stop-Shop" for citizens, namely, the provision of many public services from a single point of contact. This is an innovative step towards the creation of a modern public administration that works with a citizen-centered approach, offering more than 70 public services. http://www.mof.gov.cy/mof/papd/papd.nsf/page50_gr/page50_gr?OpenDocument . 2. The Government Gateway Portal is given the name "Ariadni". Gradually it will enable users to access all electronic services (eServices)		2	The Citizen Service Centres (KEP) keep statistical information and have a customer satisfaction mechanism. As a result, due to the response this kind of service has received by the public, the initiative has been expanded, and a number of Cyprus Postal Offices have also become KEP (in addition to providing traditional postal services). Currently a number of KEP services is provided, whereas in the future more services are expected to be provided through Postal Services, in more geographic areas.	2
Inclusion and accessibility EIF, Chapter 2, Underlying principles Recommendation 2 Category: Principles	Does the NIF contain the 'inclusion and accessibility' principle?	Principle 4 "Accessibility" of the Cyprus eGIF: eGovernment services shall be accessible to everyone without discrimination. Solutions developed as well as the web sites themselves must be barrier-free and accessible to all. In this direction, efforts shall be made to allow web content and eServices to be accessible to a wider range of people regardless of their computer literacy, including people with disabilities or cognitive limitations.	2	*[describe here]*	1. For the development of new Information Systems, the Web Accessibility Guidelines are included as a prerequisite, in all tender documents. 2. In addition, for a number of existing systems efforts are being made to change them to comply with these Guidelines (i.e.. eFiling, Taxisnet). 3. Gradually all government websites will meet these guidelines (i.e. www.cyprus.gov.cy, www.www.mlsi.gov.cy/dsid)	1	All websites/web systems compatible with Web Accessibility Guidelines are tested against compatibility with suitable tools purchased. Personnel responsible for updating the websites undertakes suitable training.	1
Security and privacy EIF, Chapter 2, Underlying principles Recommendation 3 Category: Principles	Does the NIF contain the 'Security and privacy' principle?	Principle 6 "Trust and security" of the Cyprus eGIF: Citizens have to be able to trust the electronic service channels as much as they do the traditional ones, having no doubt about the integrity of information sent or received or about the identity of the government organisation's website with which they transact. Citizens also put a high value on the protection of their privacy. The citizens' confidence in the public administration with regard to sensitive data protection must be gained. This means that public administrations must guarantee the privacy of citizens and the confidentiality of information provided by businesses.	2	*[describe here]*	1. Ariadni, the Government Gateway Portal, covers all security features. 2. The eSignatures project is proceeding in collaboration with the office for Government reform under the Deputy Minister to the President. This project will enable the Cyprus Government to issue its own certificate.	1	Periodic Security Auditing and Penetration Testing take place for all IT Systems.	1
Multilingualism EIF, Chapter 2, Underlying principles Recommendation 4 Category: Principles	Does the NIF contain the 'Multilingualism' principle?	Principle 9 "Multilingualism" of the Cyprus eGIF: In the case of eGovernment services targeted to non-Greek speakers, the provision of the services in other languages shall be foreseen in order to raise their adoption level and usability. To this end, technical architectures and standards employed for the development of the information systems and services shall not raise any obstacles for the provision of government content and services in multiple languages.	2	*[describe here]*	1. Government websites are available in the Greek, English and Turkish (perhaps not all) languages. 2. Information systems that offer eServices to the public, such as Ariadni (https://cge.cyprus.gov.cy/re/public/), Taxisnet (https://taxisnet.mof.gov.cy/displayWelcome.do), EKE (http://www.businessincyprus.gov.cy), are provided as a minimum in Greek and English. 3. Government organisations choose to publish information of interest (such as guidelines provided by the Ministry of Education to citizens moving to Cyprus on how to locate educational services for their children), are published in a number of languages.	1	*[describe monitoring procedure here]*	0
Administrative simplification EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Administrative simplification' principle?	Principle 3 "Administrative simplification" of the Cyprus eGIF: Government organisations shall focus on the simplification of government services prior to their automation.	2	The planned structure of the eGovernment Strategy is Government - wide. However, as explained in the next column, this is not in place yet, even though the need for administrative simplification is identified in all functional reviews.	The Department of Information Technology Services (DITS) completed the revision of its eGovernment Strategy (Strategy) in 2014. One of the basic principles of the Strategy is the Business Process Reengineering (BPR) and simplification of processes. Due to the financial crisis of 2013 and the functional reviews that are taking place, the mechanisms proposed in the Strategy on the implementation of this principle have not been set in place, yet. The Strategy planned that prior to an information system implementation, DITS in collaboration with the Public Administration and Personnel Department (PAPD) will revisit the processes for simplification.	1	*[describe monitoring procedure here]*	0

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		NIF-EIF Alignment		**F implementation**			**NIF monitoring**	
Transparency EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Transparency' principle?	Principle 5 "Transparency" of the Cyprus eGIF: Openness and improved transparency are two of the cornerstones of eGovernment. Any government transformation will only be accepted if all those affected by it, from government organisations employees to those in business, are involved in the process, and developments are carried out in a transparent way. Citizens and businesses should be able to understand administrative processes, track administrative procedures that involve them, and have insight into the rationale behind decisions that could affect them. End users (citizens or businesses) feedback about the quality of the public services provided shall be sought so that existing services are improved or new ones are developed based on this contribution. The concept is the use of ICT to make public sector decisions and actions more open to scrutiny.	2	The publication of the decisions of the Council of Ministers was taken on 13.2.2014 by the Council of Ministers themselves. Also, the prerequisite of Public Consultation for each draft of law.	1. Most existing procedures in the Government, related to servicing the citizen, have been documented and are available online, at www.proceduresinfo.gov.cy. This site is also accessible directly from Ariadni and it complies with Web Accessibility Guidelines. Most frequently accessed processes by the citizen are shown first. The information is categorised so that it is easier for the citizen/business. 2. Decisions of the Council of Ministers are published on the website of the Secretariat of the Council of Ministers (http://www.cm.gov.cy/cm/cm_2013/cm.nsf/dml_interim_main_en/dml_interim_main_en?OpenDocument). 3. The Council of Ministers does not accept to discuss a draft of law, unless public consultation takes place beforehand. Therefore, all Government Organisations publish on their websites and advertise to the press public consultation on drafts of law.	1	*Decisions have been taken for electronic surveys to be available online (or forms to be completed) for users to provide comments. Implementation for some websites already took place. As a method of measuring customer satisfaction, an electronic survey is expected to be sent randomly to services users (this is still to be implemented).*	1
Preservation of information EIF, Chapter 2, Underlying principles, Recommendation 5 Category: Principles	Does the NIF contain the 'Preservation of information' principle?	Principle 7 "Preservation of Information" of the Cyprus eGIF: Evidence on the delivery of a service was always of paramount importance in the traditional paper-based public administration. This is even more important in the modern electronic public administration since services have become more accessible, thus easier to use, to citizens and business, and their results (e.g. certificates, statements) are acceptable even at court procedures, if properly secured (e.g. with electronic signatures, timestamps, etc.). Government organisations shall keep records of transactions with citizens and businesses in their information systems, retain their legibility, reliability and integrity, and ensure their accessibility as long as needed, taking into account security and privacy. Records shall be kept at least for as long is foreseen by the applicable European and national legal framework. Standards and technologies included in the eGovernment Interoperability Framework shall be preferred for assuring the long-term preservation of information.	2	All information is retained for at least 7 years, as per the National Law.	[describe project here]	2	[describe monitoring procedure here]	0
Openness EIF, Chapter 2, Underlying principles, Recommendation 6 Category: Principles	Does the NIF contain the 'Openness' principle?	Principle 5 "Transparency" of the Cyprus eGIF: Openness and improved transparency are two of the cornerstones of eGovernment. Any government transformation will only be accepted if all those affected by it, from government organisations employees to those in business, are involved in the process, and developments are carried out in a transparent way. Citizens and businesses should be able to understand administrative processes, track administrative procedures that involve them, and have insight into the rationale behind decisions that could affect them. End users (citizens or businesses) feedback about the quality of the public services provided shall be sought so that existing services are improved or new ones are developed based on this contribution. The concept is the use of ICT to make public sector decisions and actions more open to scrutiny.	2	[describe here]	The Cyprus National open data portal is available at: www.data.gov.cy A lot of additional information is currently available at the Open Data Portal.	1	The Responsible Authority is the Public Administration and Personnel Department	1
Reusability EIF, Chapter 2, Underlying principles, Recommendation 7 Category: Principles	Does the NIF contain the 'Reusability' principle?	Principle 8 "Reusability" of the Cyprus eGIF: The reuse of existing functionality components, which a) conform to the eGIF's principles and standards, and b) are available for reuse at least within the Cyprus Government, shall be examined by priority when developing eGovernment information systems and services. This way, development time and cost may be reduced and conformance of the new system/service to the eGIF may be easier to be achieved.	2	[describe here]	The Government Gateway Portal is given the name "Ariadni". Gradually it will enable users to access all electronic services (eServices) available by the Government of Cyprus over the Internet. At the moment, approx. 33 eServices are available on the Portal. In the next two years, the services are expected to increase by 40. Using the common reusable components of the platform, deployment of additional eServices in the future is expected to be expedited. Ariadni aims to the full electronic completion of a service, by retrieving required information from the interconnected back-end systems, thus minimising or completely avoiding any bureaucratic procedures. Individuals, organisations, and agents need to register (once) in order to login to the system. Ariadni will provide the platform with the necessary common core services enabling the delivery of eServices and the execution of online transactions in a secure manner (e.g. user identity management, security infrastructure, transaction routing and processing, application integration, certificates and other information, payment engine, etc.). (https://cge.cyprus.gov.cy/re/public/)	1	A KPI, measuring the number of "Ariadni" registered users compared to the users who complete a transaction has been decided to be measured. Measurement results are not available yet.	1
Technological neutrality and adaptability EIF, Chapter 2, Underlying principles, Recommendation 8 Category: Principles	Does the NIF contain the 'Technological neutrality and adaptability' principle?	Principle 10 "Open standards and technologies" of the Cyprus eGIF: Open standards and technological neutrality offer opportunities for more cost-effective use of resources and delivery of services, while promoting interoperability. The use of common standards can make ICT solutions fully interoperable, in turn facilitating reuse, sharing and scalability across organisational and national boundaries. eGovernment must avoid becoming dependent upon a specific software or hardware monopoly or being locked on one particular technology. Furthermore, commoditized design enables flexibility and agility of supply. Through opening up the market, costs will come down, innovation will increase and services will improve.	2	All new tendering procedures request for compatibility with the Cyprus eGovernment Interoperability Framework , and so on technological neutrality and adaptability.	1. Service Oriented Architecture is the architecture promoted at the moment, so all future systems will follow this architecture (as a requirement in the Tender Documents), which enables technological neutrality and adaptability. Even if this is not the case for a number of systems at the moment, eServices are feasible through Ariadni (the government gateway portal) and web services built between the two systems (Ariadni and the back end system). 2. All systems that will be implemented in collaboration with EU Structural Funds will be aligned with the Cyprus NIF - as a prerequisite to be published in the Tender Documents.	2	[describe monitoring procedure here]	0

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		NIF-EIF Alignment		**implementation**			**NIF monitoring**	
Effectiveness and efficiency EIF, Chapter 2, Underlying principles Category: Principles	Does the NIF contain the 'Effectiveness and efficiency' principle?	Introductory part of chapter 3.1 "General Principles" of the Cyprus eGIF was revised in order to further highlight the effectiveness and efficiency principle: "In the process of planning, designing, implementing and delivering eGovernment services, government organisations shall ensure that the following general principles are considered, thus assuring that solutions serve businesses and citizens in the most effective and efficient way and provide the best value for money:". All the NIF principles combined constitute the Principle of Efficiency and Effectiveness	2	All Government Organisations use the eProcurement Platform compulsory. The eOASIS is the only Office Automation System of the Government. The Government Data Warehouse has been completed and greatly enhances the effectiveness and effectiveness of the Government. Accessibility to the Data Warehouse requires login. The website however can be provided.	1. As of November 2009, Cyprus has a fully operational eProcurement Platform and a linked subsystem for electronic catalogues and electronic ordering. - www.eprocurement.gov.cy 2. The Government Data Warehouse is in place, since the end of 2015. The Data Warehouse (central repository of data) enables easy access to accurate, consistent and integrated government data for better and faster decision making and for statistical purposes. The Government Data Warehouse is a single cohesive database with a subject-centric approach, in order to provide a consolidated view of Civil Service data, optimised for reporting and analysis. With the implementation of this project, the data of the Government Information Systems will turn into high-quality information for policy, strategy and management decision making. 3. For Government employees, an Office Automation system has been put into operation since 1998. At first it was a pilot system and covered only a small number of Government Organisations and then it was installed to more Government Organisations, but not to the entire Government. The system undertook a number of updates and improvements. Today, the latest version, eOASIS, is aligned with the Cyprus NIF and is also very fast and simple to use and therefore very efficient. A study undertaken by a third party organisation proved recently the large benefits of this system for the Government. Upon the completion of installations to all Government Organisations (provided such a decision is taken), electronic exchange of communication within the entire Government will be feasible. The system is not available outside the Government Node. 4. Also for Government Employees, the eCollaboration Platform that was built first to cover the needs of the Cyprus Presidency for the EU in 2012 has been expanded and today meets the collaboration needs of a number of Government Organisations. This platform has been put in use for a variety of needs. It is accessible online but a login is	2	[describe monitoring procedure here]	0
Conceptual model EIF, Chapter 3 Category: Conceptual model	Does the NIF contain a conceptual model?	Paragraph 8.2 of the Cyprus eGIF states: The Cyprus Government has established a reference architecture to be used for the development of government information systems and applications that interoperate, share functionality components and exchange data.	2	[describe here]	Service Oriented Architecture is the architecture promoted at the moment, so all future systems will follow this architecture (as a requirement in the Tender Documents), which enables technological neutrality and adaptability. Even if this is not the case for a number of systems at the moment, eServices are feasible through Ariadni (the government gateway portal) and web services built between the two systems (Ariadni and the back end system).	1	[describe monitoring procedure here]	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)	Paragraph 8.2 of the Cyprus eGIF also states: The reference architecture, which adopts the conceptual model for public services introduced by the European Interoperability Framework and is based on Service Oriented Architecture (SOA), is depicted in figure 4 in the eGIF (Cyprus Government SOA Architecture). The architecture comprises the following layers: • The presentation layer, which is responsible for the presentation and the delivery of eGovernment services to users (i.e. citizens and businesses) through available channels (web, mobile web). • The business process layer, where the business process workflow is designed and executed. Business processes may be simple, i.e. only one organisation is responsible for them, or complex, i.e. they span across two or more organisations. Orchestration of the business processes is also performed in this layer of the SOA architecture. • The services layer, which is responsible for the publication and registration of all available services implemented at the SOA logic implementation layer to an appropriate services registry so as to facilitate their discovery. • The SOA logic implementation layer, which comprises the components/ services/functions that are used in order to retrieve data from the databases of government information systems for the purposes of the execution of specific government business processes at the higher levels of the architecture. Web services are most commonly used at this layer. • The data and applications layer, which consists of the government information systems that support the business processes and the databases that keep the data required for their execution. Base registries, i.e. "registries that provide reliable sources of basic information on items such as persons, companies, vehicles, licences, buildings, locations and roads", according to the European Interoperability Framework's definition, are among the databases found at this layer.	2	[describe here]	Service Oriented Architecture is the architecture promoted at the moment, so all future systems will follow this architecture (as a requirement in the Tender Documents), which enables technological neutrality and adaptability. Even if this is not the case for a number of systems at the moment, eServices are feasible through Ariadni (the government gateway portal) and web services built between the two systems (Ariadni and the back end system).	1	[describe monitoring procedure here]	0

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		NIF-EIF Alignment		**implementation**			**NIF monitoring**	
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?	Recommendation 9 of the Cyprus eGIF describes: In case government organizations work together for the provision of a service, they shall be aware of the objectives of this collaboration and the information to be exchanged. Appropriate "business interoperability interfaces" shall be defined by all parties involved in order to facilitate the collaboration. Also, paragraph 9.1 of Implementation Guidelines, describes the procedure to be followed so that Public Administrations can encourage the use of common schemes for interconnection: Government organisations planning to develop information systems for the provision of eServices to citizens and businesses shall specify the necessary interoperability requirements and specifications to be followed as well as the technical standards to be used in the appropriate document (e.g. requirements document, design document, specifications document). A list of preferred technologies may complement the technical standards to be used, in case this is in line with public procurement legislation and procedures. For information systems that will be developed through public procurement contracts, the elaboration of an interoperability study should be included in the obligations of the Contractor described in the tender documents of the competition. At least the following topics must be adequately covered by the interoperability study: • Description of the business processes to be supported by the information system: o Process title, o Process description (start event, steps, end event), including graphical representation, o Roles responsible for each step of the process, o Information exchanged during the execution of the process, o Information exchange requirements with other organisations or entities. • Description of the technical environment and the technical standards to be used for the interconnection and exchange of information with third party information systems: o Logical and technical architecture of the system, o Schemas for the representation of the information and metadata, o XML schemas and web services. Similar topics shall be also addressed for all interoperability interfaces (processes and information systems) of the information system to be developed. Government organizations shall ensure the results of the interoperability study comply with the principles, recommendations and standards of the eGIF. It should be noted that the interoperability study may be part of another project deliverable or document.	2	[describe here]	[describe project here]	0	[describe monitoring procedure here]	0
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?	Principle 8 "Reusability" of the Cyprus eGIF: The reuse of existing functionality components, which a) conform to the eGIF's principles and standards, and b) are available for reuse at least within the Cyprus Government, shall be examined by priority when developing eGovernment information systems and services. This way, development time and cost may be reduced and conformance of the new system/service to the eGIF may be easier to be achieved. Recommendation 13 in section 6.7 "Reuse of existing functionality modules and base registries" Government organisations shall investigate the possibility of reusing existing government-wide services instead of developing the same services in their own ICT infrastructure. Primary functional areas to be examined in terms of reusability potential include user identity management, electronic payments, electronic signatures and data warehousing.	2	[describe here]	Examples of Cyprus government information systems that support the above mentioned functional areas are the Government Gateway "ARIADNI" and the Government Data Warehouse (GDW). Another key concept involved in the effort of achieving interoperability, both at organizational and semantic level, is this of "base registries". Base registries are these government registries that provide timely and reliable information on several items, such as persons, companies, buildings, vehicles, categories of professionals, forests, water resources, road network, etc. Today, these registries are in most cases not available to government organisations that need to use this kind of data. Instead, their use is generally limited to the government organization that is authorized to maintain them. According to the eGovernment Strategy of the Republic of Cyprus, base registries shall be made accessible at least by government organisations with proper authorization. Recommendation 14. Government organisations shall open up the registries they are responsible for, and allow	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?	Paragraph 6.7 of the Cyprus eGIF "Reuse of existing functionality modules and base registries" describes the following: Several government organisations may wish to develop and deliver electronic services to citizens and businesses but not have the necessary ICT infrastructure or financial resources to do so. In these cases, the reuse of existing functionality modules, e.g. for users authentication and electronic payments, may provide a satisfactory and cost-effective solution. Recommendation 13 of the Cyprus eGIF states: Government organisations shall investigate the possibility of reusing existing government-wide services instead of developing the same services in their own ICT infrastructure. Primary functional areas to be examined in terms of reusability potential include user identity management, electronic payments, electronic signatures and data warehousing As the paragraph continues, Another key concept involved in the effort of achieving interoperability, both at organizational and semantic level, is this of "base registries". Base registries are these government registries that provide timely and reliable information on several items, such as persons, companies, buildings, vehicles, categories of professionals, forests, water resources, road network, etc. Today, these registries are in most cases not available to government organisations that need to use this kind of data. Instead, their use is generally limited to the government organization that is authorized to maintain them. According to the eGovernment Strategy of the Republic of Cyprus, base registries shall be made accessible at least by government organisations with proper authorization. Recommendation 14 of the Cyprus eGIF states: Government organisations shall open up the registries they are responsible for, and allow other properly authorised government organisations to have access to them.	2	[describe here]	The Government Gateway Portal is given the name "Ariadni". Gradually it will enable users to access all electronic services (eServices) available by the Government of Cyprus over the Internet. At the moment, approx. 33 eServices are available on the Portal. Using the common reusable components of the platform, deployment of additional eServices in the future is expected to be expedited. Ariadni aims to the full electronic completion of a service, by retrieving required information from the interconnected back-end systems, thus minimising or completely avoiding any bureaucratic procedures. Individuals, organisations, and agents need to register (once) in order to login to the system. Ariadni will provide the platform with the necessary common core services enabling the delivery of eServices and the execution of online transactions in a secure manner (e.g. user identity management, security infrastructure, transaction routing and processing, application integration, certificates and other information, payment engine, etc.). (https://cge.cyprus.gov.cy/re/public/)	1	[describe monitoring procedure here]	0

See Alignment Examples in NIFO toolbox   *See implementation and monitoring examples in NIFO Toolbox*

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		NIF-EIF Alignment		**implementation**			**NIF monitoring**	
Access control EIF, Recommendation 11 Category: Conceptual model	Does the NIF encourage access and control mechanisms to ensure compliance to security and privacy legislation?	Paragraph 5 of the Cyprus eGIF explains the Legal Interoperability as below. Paragraph 5.1 Context and scope, states, among other, the following: • Protection of the data involved in the execution of the business processes or the delivery of the services. • Protection of users data. The legal validity of the results of the business processes or the services to be automated shall also be ensured. Recommendation 4 of the Cyprus eGIF: Government organisations shall make all appropriate modifications or additions to the legal framework in order to ensure the legal validity of the results of the business processes or the services they provide via electronic means. The protection of the data involved in the execution of a business process or the delivery of a service via electronic means (including user's information) is one of the main issues to be addressed during any automation endeavour. Recommendation 5 of the Cyprus eGIF: The sensitivity of the data involved in electronic transactions with government organisations shall be taken into consideration during the automation of a business process or service. The provisions of the data protection act and other relevant legal framework shall be ensured [e.g. Laws 138(I)/2001, 37(I)/2003, 28(III)/2001, 30(III)/2003].	2	[describe here]	1. All Government Departments that have systems that exchange information apply and gain the approval of the Commissioner for Data Protection as a prerequisite. Also, where applicable, the consent of citizens/businesses is sought. 2. Currently, the eGovernment Law has been sent to the Attorney General's Office for review. This law also includes relevant clauses.	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?	Paragraph 7 Semantic Interoperability of the Cyprus eGIF describes, among others, the following: Similarly to achieving interoperability at legal or organisational level, where the challenges refer to bridging the differences on the legal framework that regulates the operation of the interoperating organisations, and identifying the organisational entities that will be communicating and defining the corresponding procedures, interoperability at a semantic level refers to the identification of a common communication code in terms of the data exchanged, their structure and their exact meaning for all parties involved. Therefore, key issues to be addressed in the effort of two or more government organisations to achieve semantic interoperability include: • Semantic models development approach • Semantic models custodians • Data schemas and ontologies • Semantic-based definition languages The achievement of semantic interoperability is a prerequisite for the investigation of interoperability at the technical level. The eGIF document describes how each of the above bullets will be achieved and sets the corresponding recommendations, which are stated below: Recommendation 15 of the Cyprus eGIF: Government organisations shall use the hybrid approach for the development of semantic models. According to this approach, it is recommended that government organisations first investigate whether a global semantic model exists in the business area of interest and, if yes, whether it meets their own specific needs. Based on the results of this investigation, government organisations should: • In case a global semantic model exists and meets, at least partially, the needs, extend this global semantic model for internal use purposes • In case a global semantic model does not exist or does not meet the needs, create their own semantic model for the specific business area In both cases, it is recommended that the semantic models (either new or derived from global models) are published, e.g. to the web portal of government organisations, other government portals or a government repository of reusable semantic models. Recommendation 16 of the Cyprus eGIF: In every business area of interest, a government organisation shall be assigned the responsibility of designing, developing and maintaining the global semantic model for the representation of data in the specific business area. This organization shall act as "custodian" for the specific semantic model. Recommendation 17 of the Cyprus eGIF: Government organisations shall use XML-based data schemas for the representation of data. In case Core Data Components are officially defined and standardised in the Cyprus government, government organisations shall try to reuse them in the data schemas to be developed.	2	The Government Data Warehouse (which is being implemented) is a Government-wide Project.	The Government Data Warehouse Project is an example where semantic models have been developed. 2. The Government Data Warehouse is in place, since the end of 2015. The Data Warehouse (central repository of data) enables easy access to accurate, consistent and integrated government data for better and faster decision making and for statistical purposes. The Government Data Warehouse is a single cohesive database with a subject-centric approach, in order to provide a consolidated view of Civil Service data, optimised for reporting and analysis. With the implementation of this project, the data of the Government Information Systems will turn into high-quality information for policy, strategy and management decision making.	1	[describe monitoring procedure here]	0

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
Interoperability levels EIF, Chapter 4 Category: Interoperability levels	Does the NIF describe the four levels of interoperability?	Paragraph 3.2 of the Cyprus eGIF: The Cyprus eGIF adopts the four interoperability levels proposed by the European Interoperability Framework as depicted in figure 3 of the eGIF (Interoperability levels). Legal interoperability: When two or more organisations wish to exchange information or collaborate for the provision of interoperable eServices, the legal framework that regulates their operation must be investigated in order to see whether they have the right to be involved is such endeavours. Possible modifications to the legal framework may also be identified. Legal interoperability also addresses the legal validity of the actions of the collaborating organisations, the legal validity of the eServices provided as well as the protection of data exchanged. Organisational interoperability refers to the definition of mutually agreed goals and the alignment of the internal business processes of the organisations that wish to collaborate for the exchange of information or the provision of interoperable eServices. Organisational interoperability is commonly ensured via legal provisions or bilateral agreements between organisations. Semantic interoperability ensures that exchanged data have the same meaning and are understood in the same way by involved organisations. Vocabularies, data elements sets, codelists and other semantic models are most commonly used for ensuring interoperability at the semantic model. Technical interoperability refers to the interoperability between information systems at a technical level. Technical interoperability is ensured via the use of common technical standards and specifications. It shall be noted that interoperability at a certain level cannot be achieved prior to establishing interoperability at all higher interoperability levels, e.g. technical interoperability may be achieved only if interoperability at legal, organisational and semantic level is achieved. The Cyprus eGIF, similarly to the EIF, introduces an additional layer to the interoperability stack, the "political context", which indicates that the exchange of information between two or more organisations shall have the support of the management of the organisations at the political level.	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?	Apart from paragraph 3.2, paragraph 5 of the Cyprus eGIF analyses the Legal Interoperability with the following recommendations: Recommendation 2: The legal framework that regulates a business process or a service of a government organisation shall be clearly indicated in the documentation of the process/service. Recommendation 3: The legal framework shall be properly adjusted so as to reflect the automation of a business process or a service of a government organisation, prior to the automation of the process/service. Recommendation 4: Government organisations shall make all appropriate modifications or additions to the legal framework in order to ensure the legal validity of the results of the business processes or the services they provide via electronic means. Recommendation 5: The sensitivity of the data involved in electronic transactions with government organisations shall be taken into consideration during the automation of a business process or service. The provisions of the data protection act and other relevant legal framework shall be ensured [e.g. Laws 138(I)/2001, 37(I)/2003, 28(III)/2001, 30(III)/2003]. Recommendation 6: Government organisations that exchange information or collaborate for the provision of interoperable eServices shall ensure that proper modifications have been performed to their legal frameworks in a coordinated way.	2	[describe here]	1. All Government Departments that have systems that exchange information apply and gain the approval of the Commissioner for Data Protection as a prerequisite. Also, where applicable, the consent of citizens/businesses is sought. 2. Currently, the eGovernment Law has been sent to the Attorney General's Office for review. This law also includes relevant clauses. 3. When establishing a new information system, the law of the interested Department is studied and any changes needed are made.	1	[describe monitoring procedure here]	0

| 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
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?	Apart from paragraph 3.2, paragraph 6 of the Cyprus eGIF analyses the Organisational Interoperability with the following recommendations: Recommendation 7: Government organisations shall have detailed documentation of the services they provide to citizens, businesses and other organisations. The documentation shall include graphical representation of the services as well as descriptions of the organisational entities and documents involved in the service provision. Metadata shall also be kept for each service. Recommendation 9: In case government organisations work together for the provision of a service, they shall be aware of the objectives of this collaboration and the information to be exchanged. Appropriate "business interoperability interfaces" shall be defined by all parties involved in order to facilitate the collaboration. Recommendation 10: The business interoperability interfaces of the collaborating organisations shall work together to identify and perform the necessary changes to the business processes that support the delivery of services in order to make them interoperable and improve the experience of the service consumers (i.e. citizens, businesses). Recommendation 11: In case government organisations work together for the provision of a service, they may sign agreements (e.g. Memoranda of Understanding) that define the terms and conditions of their collaboration. Also, paragraph 9.1 of Implementation Guidelines, describes the procedure to be followed so that Public Administrations can encourage the use of common schemes for interconnection: Government organisations planning to develop information systems for the provision of eServices to citizens and businesses shall specify the necessary interoperability requirements and specifications to be followed as well as the technical standards to be used in the appropriate document (e.g. requirements document, design document, specifications document). A list of preferred technologies may complement the technical standards to be used, in case this is in line with public procurement legislation and procedures. For information systems that will be developed through public procurement contracts, the elaboration of an interoperability study should be included in the obligations of the Contractor described in the tender documents of the competition. At least the following topics must be adequately covered by the interoperability study: • Description of the business processes to be supported by the information system: o Process title, o Process description (start event, steps, end event), including graphical representation, o Roles responsible for each step of the process, o Information exchanged during the execution of the process, o Information exchange requirements with other organisations or entities.	2	[describe here]	[describe project here]	0	[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?	Please refer to paragraph 6 of the Cyprus eGIF (Recommendation 9) Recommendation 9: In case government organisations work together for the provision of a service, they shall be aware of the objectives of this collaboration and the information to be exchanged. Appropriate "business interoperability interfaces" shall be defined by all parties involved in order to facilitate the collaboration.	2	[describe here]	[describe project here]	0	[describe monitoring procedure here]	0
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?	Please refer to paragraph 6 of the Cyprus eGIF (Recommendation 11) Recommendation 11: In case government organisations work together for the provision of a service, they may sign agreements (e.g. Memoranda of Understanding) that define the terms and conditions of their collaboration.	2	[describe here]	[describe project here]	0	[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?	Please refer to paragraph 6 of the Cyprus eGIF (Recommendation 11) Recommendation 11: In case government organisations work together for the provision of a service, they may sign agreements (e.g. Memoranda of Understanding) that define the terms and conditions of their collaboration. These agreements may indicatively include: • The objectives of the collaboration. • The business interoperability interfaces defined by all parties. • The information to be exchanged. • The response times of a party to the requests of the other party. • The measures that ensure the quality of service from all parties. • The measures that ensure the protection of information exchanged. • The change management processes that ensure continuous service delivery.	1	[describe here]	[describe project here]	0	[describe monitoring procedure here]	0

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]	Implementation 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				**implementation**			**NIF monitoring**	
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?	Apart from paragraph 3.2, paragraph 7 of the Cyprus eGIF analyses the Semantic Interoperability with the following recommendations: Recommendation 15: Government organizations shall use the hybrid approach for the development of semantic models. Recommendation 16: In every business area of interest, a government organization shall be assigned the responsibility of designing, developing, maintaining the global semantic model for the representation of data in the specific business area. This organization shall act as "custodian" for the specific semantic model. Recommendation 17: Government organizations shall use XML-based data schemas for the representation of data. Recommendation 18: Ontologies may be used for the representation of data, in case this is justified by the complexity of the environment (entities, relationships, metadata) to be represented. Recommendation 19: Government organizations shall use standardized definition languages for the representation of data, as defined in the eGovernment Interoperability Framework. The SOA architecture describes different layers, that are composed of different services and components: • The presentation layer: presentation and delivery of eGovernment services; • The services layer: which includes the service registry and all available services implemented; • The SOA logic implementation layer: which comprises the components/ services/functions that are used in order to retrieve data from the databases of government information systems; • The data and applications layer: which consists of the government information systems that support the business processes and the databases.	2	The Government Data Warehouse is a Government-wide Project (which is being implemented)	The Government Data Warehouse Project is an example where semantic models have been developed. 2. By the end of 2015, the Government Data Warehouse will be in place. Currently, the System is being tested. The objective of the Data Warehouse (central repository of data) is to enable easy access to accurate, consistent and integrated government data for better and faster decision making and for statistical purposes. The Government Data Warehouse will be a single cohesive database with a subject-centric approach, in order to provide a consolidated view of Civil Service data, optimised for reporting and analysis.	1	[describe monitoring procedure here]	0
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?	Please refer to Paragraph 7 of the Cyprus eGIF and especially to Recommendations 15 and 16. Recommendation 15: Government organizations shall use the hybrid approach for the development of semantic models. Recommendation 16: In every business area of interest, a government organization shall be assigned the responsibility of designing, developing, maintaining the global semantic model for the representation of data in the specific business area. This organization shall act as "custodian" for the specific semantic model.	2	The Government Data Warehouse is a Government-wide Project (which is being implemented)	The Government Data Warehouse Project is an example where semantic models have been developed. 2. By the end of 2015, the Government Data Warehouse will be in place. Currently, the System is being tested. The objective of the Data Warehouse (central repository of data) is to enable easy access to accurate, consistent and integrated government data for better and faster decision making and for statistical purposes. The Government Data Warehouse will be a single cohesive database with a subject-centric approach, in order to provide a consolidated view of Civil Service data, optimised for reporting and analysis.	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	Does the NIF encourage public administrations to agree on the formalised specification to ensure technical interoperability when establishing European public services?	The eGIF is accompanied by an Annex which includes a list of Technical Interoperability Standards that makes a distinction between mandatory, recommended and under-observation statuses.	2	[describe here]	Alignment with the Cyprus NIF is a prerequisite for all future Information Systems that will be procured. The eGIF is accompanied by an Annex which includes a list of Technical Interoperability Standards that makes a distinction between mandatory, recommended and under-observation statuses.	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.	Recommendation 1 of the Cyprus eGIF states: Government organisations that wish to exchange information or collaborate for the provision of interoperable eServices shall agree, at the political level, on the terms of this collaboration, prior to committing resources to its realisation. Specific agreements (e.g. Memoranda of Understanding) that define the high level terms of the collaboration may be signed for this purpose. Recommendation 13 of the Cyprus eGIF states: Government organisations shall investigate the possibility of reusing existing government-wide services instead of developing the same services in their own ICT infrastructure. Primary functional areas to be examined in terms of reusability potential include user identity management, electronic payments, electronic signatures and data warehousing. Recommendation 14 of the Cyprus eGIF states: Government organisations shall open up the registries they are responsible for, and allow other properly authorised government organisations to have access to them. Also, a number of other Recommendations of the Cyprus eGIF already mentioned above support this, such as Recommendations 6, 11, 15, 16, 18, 19 etc.	2	Ariadni is a Government-wide project expected to cover all eServices.	The Government Gateway Portal is given the name "Ariadni". Gradually it will enable users to access all electronic services (eServices) available by the Government of Cyprus over the Internet. At the moment, approx. 33 eServices are available on the Portal. Using the common reusable components of the platform, deployment of additional eServices in the future is expected to be expedited. Ariadni aims to the full electronic completion of a service, by retrieving required information from the interconnected back-end systems, thus minimising or completely avoiding any bureaucratic procedures. Individuals, organisations, and agents need to register (once) in order to login to the system. Ariadni will provide the platform with the necessary common core services enabling the delivery of eServices and the execution of online transactions in a secure manner (e.g. user identity management, security infrastructure, transaction routing and processing, application integration, certificates and other information, payment engine, etc.). (https://cge.cyprus.gov.cy/re/public/). Ariadni will implement this element.	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?	The updated Cyprus eGIF, includes an assessment method of the technical standards in para. 11.3.5 "Assessment of technical standards" (and subsequent subparagraphs). Please refer to the attached copy of the updated eGIF for full explanation.	2	[describe here]	[describe project here]	0	A team has been setup, consisting of eight Information Technology Officers who will meet once or twice a year to assess changes to the eGIF, based on the method. A form has been prepared for any interested organisation or individual to submit a suggestion.	1

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
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?	Open standards and specifications are among the Principles of the Cyprus eGIF (Principle 8 "Open Standards and Technologies"). Also, a number of Recommendations support this, such as Recommendations 15, 16, 17, 18, 19 etc. Principle 8 "Open standards and technologies" of the Cyprus eGIF: Open standards and technological neutrality offer opportunities for more cost-effective use of resources and delivery of services, while promoting interoperability. The use of common standards can make ICT solutions fully interoperable, in turn facilitating reuse, sharing and scalability across organisational and national boundaries. eGovernment must avoid becoming dependent upon a specific software or hardware monopoly or being locked on one particular technology. Furthermore, commoditized design enables flexibility and agility of supply. Through opening up the market, costs will come down, innovation will increase and services will improve. Furthermore, several criteria of the standards assessment method are established to assure the open nature of technical standards, such as: 5.5-Is the specification publicly available for implementation and use on reasonable terms?	1	[describe here]	Alignment with the Cyprus NIF is a prerequisite for all future Information Systems that will be procured. The eGIF is accompanied by an Annex which includes a list of Technical Interoperability Standards that makes a distinction between mandatory, recommended and under-observation statuses.	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?	11.3 Appendix C: eGIF Governance "As the responsible body for eGovernment in general, DITS is a member of several EU and international Councils/ Groups/ Bodies related to ICT and eGovernment, such as the ISA Committee and the International Council for Information Technology in Government Administration (ICA). Furthermore, DITS is the key player in the conceptual design, detailed analysis, preparation and management of horizontal IT projects in the field of eGovernment either as the implementing body or as a contracting authority. Finally, DITS promotes the implementation of vertical/sectorial projects and participates in the design, tender, implementation monitoring and overall approval of key eGovernment systems. When necessary, usually during the design phase of an information system for a government administration, DITS officers work closely with the specific administration's officers in order to properly capture the business requirements of the new system. During this collaboration, government administration's officers are responsible, inter alia, for the recognition of the data sources to be used by the new system. In case standardized specifications exist for the representation of the respective data sources (e.g. international or national standards, codelists, data components, etc.), DITS encourages government administration's officers to adopt this standardized specification. In several cases, government administrations follow the standardization work performed at international level in their area of interest and have formed (officially or unofficially), probably together with DITS, respective expert groups." CHAPTER 7-SEMANTIC INTEROPERABILITY Recommendation 15. "Government organisations shall use the hybrid approach for the development of semantic models. According to this approach, it is recommended that government organisations first investigate whether a global semantic model exists in the business area of interest and, if yes, whether it meets their own specific needs. Based on the results of this investigation, government organisations should: • In case a global semantic model exists and meets, at least partially, the needs, extend this global semantic model for internal use purposes • In case a global semantic model does not exist or does not meet the needs, create their own semantic model for the specific business area In both cases, it is recommended that the semantic models (either new or derived from global models) are published, e.g. to the web portal of government organisations, other government portals or a government repository of reusable semantic models." Recommendation 16. "In every business area of interest, a government organisation shall be assigned the responsibility of designing, developing and maintaining the global semantic model for the representation of data in the specific business area. This organization shall act as "custodian" for the specific semantic model. For example, the Ministry of Health may be responsible for the design, development and maintenance of the global semantic model for the representation of diseases and related health problems, probably by adopting and extending a suitable international standard."	2	[describe here]	Indicative projects related to standardisation process are: the Government Gateway, the creation of the Government Data Warehouse, the eGovernment Interoperability Framework, the expansion of the web-based Office Automation System to other Ministries/Departments/Services of the public administration, the further development of the website for "e-Collaboration".	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?	Recommendation 11 of the Cyprus eGIF states: In case government organisations work together for the provision of a service, they may sign agreements (e.g. Memoranda of Understanding) that define the terms and conditions of their collaboration. These agreements may indicatively include: • The objectives of the collaboration. • The business interoperability interfaces defined by all parties. • The information to be exchanged. • The response times of a party to the requests of the other party. • The measures that ensure the quality of service from all parties. • The measures that ensure the protection of information exchanged. • The change management processes that ensure continuous service delivery.	2	[describe here]	[describe project here]	0	[describe monitoring procedure here]	0

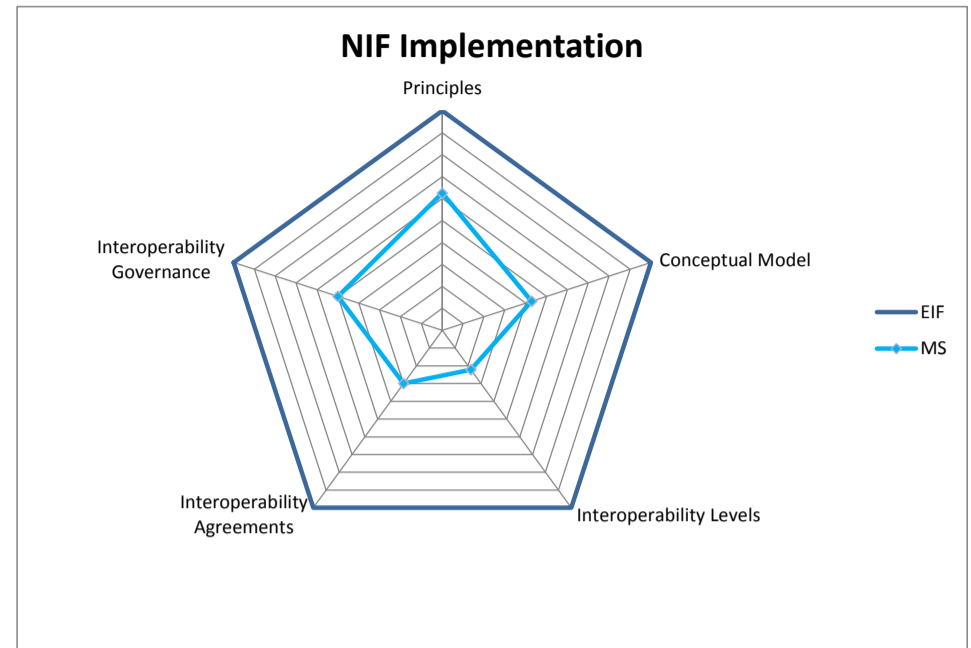| EIF Element - Reference - Category	Measurement	NIF element present - Reference - (Text in English)	NIF-EIF alignment scoring 2: fully 1: partially 0: not aligned	Large scale implementation [describe if and how implementation of the element is a common practice]	Only implementation examples [describe 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
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.	Paragraph 1.6 "eGIF Governance" of the Cyprus eGIF describes the following: The responsible body for the management of the National eGovernment Interoperability Framework of the Republic of Cyprus is the Department of Information Technology Services (DITS) of the Ministry of Finance. DITS's responsibilities as regards the eGIF and interoperability in general include inter alia: • Definition of the interoperability strategy of the Cyprus Government. • Formulation, maintenance and update of the eGIF. • Planning and execution of dissemination and awareness activities regarding the eGIF. • Monitoring of the adoption of the eGIF. • Gathering and evaluation of suggestions for updates and changes to the eGIF. • Monitoring of and participation in EU interoperability initiatives and events. Paragraph 11.3 of the Cyprus eGIF describes Governance in greater detail.	2	[describe here]	At the moment, Department of Information Technology Services DITS has published (only internally) the Cyprus NIF for all DITS Officers to consult and follow (i.e. When procuring a new Information System). DITS plans to conduct wider presentations to the Private Sector as well as other Government Organisations. Also, a form will be available on DITS website for all (not just within DITS) to suggest and changes, new standards for consideration etc.	1	A team has been setup, consisting of eight Information Technology Officers who will meet once or twice a year to assess changes to the eGIF, based on the method. A form has been prepared for any interested organisation or individual to submit a suggestion. A specific library has been created on the e-Collaboration Platform, where this team will be able to keep all the Cyprus eGIF information.	1

Category	EIF	MS
Principles	100%	95,8%
Conceptual Model	100%	100,0%
Interoperability Levels	100%	94,4%
Interoperability Agreements	100%	90,0%
Interoperability Governance	100%	100,0%

NIF/EIF Alignment

Category	EIF Element	Scoring	
		Max	MS
Principles	Subsidiarity and proportionality	2	1
	User-centricity	2	2
	Inclusion and accessibility	2	2
	Security and privacy	2	2
	Multilingualism	2	2
	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	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**
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	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 administrations?	2	2
	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	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	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**	**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	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	1
	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	2
	Total	**2**	**2**
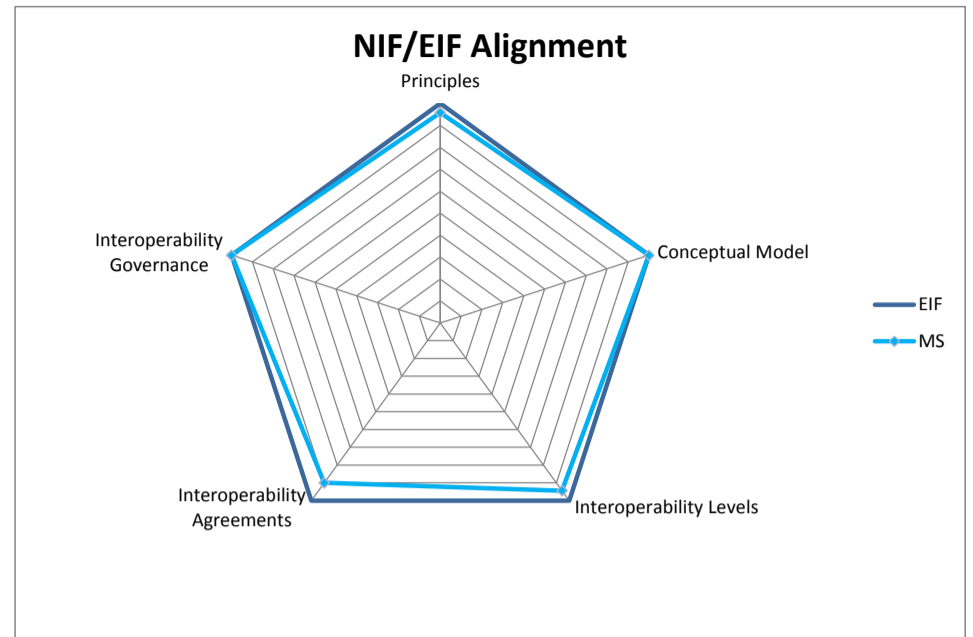
Category	EIF	MS
Principles	100%	62,5%
Conceptual Model	100%	42,9%
Interoperability Levels	100%	22,2%
Interoperability Agreements	100%	30,0%
Interoperability Governance	100%	50,0%

NIF Implementation

Category	EIF Element	Scoring	
		Max	MS
Principles	Subsidiarity and proportionality	2	0
	User-centricity	2	2
	Inclusion and accessibility	2	1
	Security and privacy	2	1
	Multilingualism	2	1
	Administrative simplification	2	1
	Transparency	2	1
	Preservation of information	2	2
	Openness	2	1
	Reusability	2	1
	Technological neutrality and adaptability	2	2
	Effectiveness and efficiency	2	2
	Total	**24**	**15**
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	0
	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	1
	Does the NIF encourage the development of interfaces to authentic sources that are aligned at semantic and technical level?	2	1
	Total	**14**	**6**
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	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	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**	**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	1
	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	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	0
	Total	**10**	**3**
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	1
	Total	**2**	**1**

Category	EIF	MS
Principles	100%	29,2%
Conceptual Model	100%	0,0%
Interoperability Levels	100%	0,0%
Interoperability Agreements	100%	10,0%
Interoperability Governance	100%	50,0%

Category	EIF Element	Scoring	
		Max	MS
Principles	Subsidiarity and proportionality	2	0
	User-centricity	2	2
	Inclusion and accessibility	2	1
	Security and privacy	2	1
	Multilingualism	2	0
	Administrative simplification	2	0
	Transparency	2	1
	Preservation of information	2	0
	Openness	2	1
	Reusability	2	1
	Technological neutrality and adaptability	2	0
	Effectiveness and efficiency	2	0
	Total	**24**	**7**
Conceptual Model	Does the NIF contain a conceptual model?	2	0
	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	0
	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	0
	Total	**14**	**0**
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	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**	**0**
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	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	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**	**1**
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	1
	Total	**2**	**1**

NIF Monitoring