



# NATIONAL INTEROPERABILITY FRAMEWORK OBSERVATORY

## Analytical Model *NETHERLANDS*

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

**DIGIT**

Directorate-General for Informatics

ISA<sup>2</sup> Programme

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ISA<sup>2</sup>

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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](#)

EIF Element - Reference - Category	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]	Implementation scoring 2: Common practice 1: some examples 0: not observed	NIF monitoring	Monitoring scoring 2: Monitored 1: Partially monitored 0: not observed
<p>Subsidiarity and proportionality EIF, Chapter 2, Underlying principles Category: Principles</p> <p>Ref:</p> <p><a href="#">See reference: the European Interoperability Framework v2</a> <a href="#">See definitions listed in the ISA EIF brochure</a></p>	<p>The EIF is translated and described in a local country framework, namely NORA (Nederlandse Overheid Referentie Architectuur):</p> <ul style="list-style-type: none"> <li>- NORA is primarily concerned with the 'information' and interoperability aspect, with due regard for the principle of subsidiarity. NORA is referred to as the Dutch Interoperability Framework.</li> <li>- NORA describes norms and measures relevant for involved parties. The different organisations are free to build further on this baseline to include internal quality aspects.</li> </ul> <p>See <a href="http://www.noraonline.nl">www.noraonline.nl</a></p>	2	<p>NORA is the national information framework of the Netherlands. All governmental domains like the global government, the provinces, the municipalities, and so on use their own specific IF's which ought to be derivate family members from NORA, like 'Matryoshka Nesting Dolls'.</p> <p><a href="http://noraonline.nl/wiki/Visie_op_dochters">http://noraonline.nl/wiki/Visie_op_dochters</a></p>	<p>See for example <a href="http://www.earonline.nl">www.earonline.nl</a> or <a href="http://www.gemmaonline.nl">www.gemmaonline.nl</a>, which are the IF's of the global government and the municipalities.</p> <p>See all other implementations <a href="http://noraonline.nl/wiki/Tabel_met_alle_dochters">http://noraonline.nl/wiki/Tabel_met_alle_dochters</a></p>	2	<p>All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.</p> <p>Also, still not all projects follow it.</p>	1
<p>User-centricity EIF, Chapter 2, Underlying principles Category: Principles</p>	<p>The EIF is translated and described in a local country framework, namely NORA (Nederlandse Overheid Referentie Architectuur). The basic principles of NORA include:</p> <ul style="list-style-type: none"> <li>- Proactive - users will be provided with the service they need</li> <li>- Packages - users are offered related services as a package. When services, or their component parts, are closely related as seen from the user's perspective - they are offered to users as a package. The user gets the impression that they are just one single service.</li> <li>- Open to feedback - users can provide input about the service. Users can submit corrections, complaints, etc. to the service provider, either on request or on their own initiative.</li> </ul> <p>See <a href="http://noraonline.nl/wiki/Principes">http://noraonline.nl/wiki/Principes</a></p>	2	<p>The vision document 'better government services and action plan e-Government services' states that the government must put the citizen central to service delivery. It provides examples of eGovernment services where this principle has been implemented, including:</p> <ul style="list-style-type: none"> <li>- Digital client dossier: electronic forms have been made available and are prefilled, ensuring one-time request for information and reducing administrative burdens, it has also led to rationalisation of request for evidence and contributed to shorter for - Answers for Businesses: the Dutch Point of Single Contact provides a single electronic platform for businesses where all relevant information is provided procedures can be fulfilled electronically (see: <a href="http://www.answersforbusiness.nl/">http://www.answersforbusiness.nl/</a>).</li> </ul> <p>See: <a href="http://e-overheid.nl/images/stories/Publicaties/visieenactieprogrammabetererepubliekdienstverlening.pdf">http://e-overheid.nl/images/stories/Publicaties/visieenactieprogrammabetererepubliekdienstverlening.pdf</a></p>		2	<p>All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.</p> <p>Also, still not all projects follow it.</p>	1
<p>Inclusion and accessibility EIF, Chapter 2, Underlying principles Recommendation 2 Category: Principles</p>	<p>The EIF is translated and described in a local country framework, namely NORA (Nederlandse Overheid Referentie Architectuur). The basic principles of NORA include:</p> <ul style="list-style-type: none"> <li>- Findability - Users can easily find a required service</li> <li>- Accessibility - Users have easy access to the service. Service providers attune their accessibility to the methods preferred by the users.</li> </ul> <p>See <a href="http://noraonline.nl/wiki/Basisprincipes">http://noraonline.nl/wiki/Basisprincipes</a></p>	2	<p>Web Guidelines contain the principles and guidelines for the accessibility of web content ; they are part of the open standards of the Dutch Government - see: <a href="https://lijsten.forumstandaardisatie.nl/open-standaard/webrichtlijnen">https://lijsten.forumstandaardisatie.nl/open-standaard/webrichtlijnen</a></p> <p>The website "MijnOverheid" - <a href="http://mijn.overheid.nl">mijn.overheid.nl</a> meets the requirements of WCAG 2.0, level AA. The requirements are specified in the standard by the Standardisation Board on June 23, 2011 as the official government standard.</p> <p>Samenwerkende Catalogi - (<a href="https://www.logius.nl/diensten/samenwerkende-catalogi/">https://www.logius.nl/diensten/samenwerkende-catalogi/</a>) The Collaboration Catalogue connects the product catalogs of various government organizations. It is the standard for publishing and exchanging metadata about products and services within the Government, such as applying for a license or applying for a travel document.</p>		2	<p>Each year the implementation of these building blocks / standards is monitored by the Dutch Office for Standardization.</p>	2
<p>Security and privacy EIF, Chapter 2, Underlying principles Recommendation 3 Category: Principles</p>	<p>In the Netherlands, the European Interoperability framework (EIF) is translated and described in a local country framework, namely NORA (Nederlandse Overheid Referentie Architectuur). The basic principles of NORA include:</p> <ul style="list-style-type: none"> <li>- Confidentiality - users can rely on the information not being misused. The service provider guarantees that information is available to authorised persons only and will be solely used for the purpose for which it was collected.</li> <li>- Derived principles (AP) 15 and 35 to 40 operationalise security and privacy demands on public services</li> </ul> <p>See <a href="http://noraonline.nl/wiki/Principes">http://noraonline.nl/wiki/Principes</a></p>	2	<p>DigiD stands for Digital Identity. It is a personal combination of a username and a password. For added security, you can choose to log in with SMS code. DigiD you can safely use the electronic government services.</p> <p>The government is working with industry on a new system of electronic identification. Part of this eID system is a DigiD in the form of a debit card. From 2015 the eID system enters into force.</p> <p>See: <a href="https://www.digid.nl/">https://www.digid.nl/</a></p> <p>The National Cyber Security Center (NCSC) is concerned with the security of digital systems of government. Previously GOVCERT.NL did. The NCSC protects databases and connections example against hackers and viruses. The NCSC coordinates in ICT incidents and therefore is available 24/7.</p> <p>See: <a href="https://www.ncsc.nl/">https://www.ncsc.nl/</a></p> <p>eRecognition</p> <p>Entrepreneurs log in with eRecognition on government websites such as citizens do with their DigiD. eRecognition guarantees that the person who logs in fact authorized to do so.</p> <p>The government is working with the industry to new agreements for electronic identification. eRecognition will be part of the eID system . From 2015 the eID system enters into force.</p> <p>See: <a href="https://www.eherkenning.nl/">https://www.eherkenning.nl/</a></p>		2	<p>All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.</p> <p>Also, still not all projects follow it.</p>	1
<p>Multilingualism EIF, Chapter 2, Underlying principles Recommendation 4 Category: Principles</p>	<p>Not explicitly mentioned in NORA framework, but multilingualism and other user centered qualities follow from AP 19 "The requirements of the service are derived from the user's perspective". As implication it states that the service is provided in accordance with "the competences and preferences of the users."</p> <p>The aspect of multilingualism in descriptions of systems and architecture is covered by the implication of AP 1 (reusability of services): "the service (is described in such a way, that the results and conditions can be understood in any other context."</p> <p>See NORA principles for cooperation and service delivery, AP 19 &amp; 1, <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a></p>	1		<p>Information about many public services in The Netherlands is available in several languages. For example at the Tax office (<a href="http://www.belastingdienst.nl/wps/wcm/connect/bldcontent/en/belastingdienst/individuals/">http://www.belastingdienst.nl/wps/wcm/connect/bldcontent/en/belastingdienst/individuals/</a>) or at municipalities (<a href="http://www.denhaag.nl/en.htm">http://www.denhaag.nl/en.htm</a>).</p>	1		0

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Administrative simplification EIF, Chapter 2, Underlying principles Category: Principles	The goal of Administrative Simplification is one of the key concepts throughout the Dutch Government Reference Architecture (Nederlandse Overheid Referentie Architectuur, NORA): "Dutch citizens want a public sector that does not require information that is already available and reduces the administrative burden..." See "A properly functioning public sector" p 7, <a href="http://www.e-overheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf">http://www.e-overheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf</a> This goal is further operationalised in the principles such as derived principle (AP) 12 "users are not asked for information which is already registered" and derived principle (AP) 13 "all used information-objects are from a (unique) source registration". Other principles further elaborate on different aspects of Administrative Simplification such as personalisation of services (AP 20) and bundling of services across organisations and domains (AP 21). See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	Actal, the Dutch Advisory Board on Regulatory Burden, is an independent and external advisory body that advises government and Parliament on how to minimize regulatory burdens for firms, citizens, and professional workers in healthcare, education, safety and welfare. Actal wants to contribute to a society in which government achieves its goals while minimizing the hindrance of regulation. Actal bases its opinions on signals from society. It thereby seeks new ways to reduce the regulatory burdens in the Netherlands. It challenges regulators to take up these opportunities. Actal works with organisations within and outside the Netherlands, including its sister organisations in other European Member States. See: <a href="http://www.actal.nl/english/about-actal/">http://www.actal.nl/english/about-actal/</a>		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Transparency EIF, Chapter 2, Underlying principles Category: Principles	The EIF is translated and described in a local country framework, namely NORA (Nederlandse Overheid Referentie Architectuur). The basic principles of NORA include: '- Transparent - Users have access to information relevant to them. Before, during and after the service is provided, the service provider gives the user information about the result, the process and the information used. See <a href="http://noraonline.nl/wiki/Transparant">http://noraonline.nl/wiki/Transparant</a>	2	MijnOverheid - My Government ( <a href="https://mijn.overheid.nl/#tabs-mijnoverheid">https://mijn.overheid.nl/#tabs-mijnoverheid</a> ) gives you access to your mail (Berichtenbox <a href="https://mijn.overheid.nl/info/berichtenbox">https://mijn.overheid.nl/info/berichtenbox</a> ), your personal data and the state of your current interactions at increasing government departments such as the Tax Office, Land Registry, RDW, SVB, UWV and municipalities.  Wetsontwerp Open Overheid: The Bill containing rules on access to information of public interest (Act open government) is under consideration by the parliament.	Dataoverheid.nl ( <a href="https://data.overheid.nl">https://data.overheid.nl</a> ) is the Dutch open data portal that provides access to national datasets.	1	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Preservation of information EIF, Chapter 2, Underlying principles, Recommendation 5 Category: Principles	The EIF is translated and described in a local country framework, namely NORA (Nederlandse Overheid Referentie Architectuur). The basic principles of NORA include: '- Redundancy - Users are not confronted with redundant questions. The service provider uses information that is already known, to the service provider or to other service providers, and makes information available to other service providers. See <a href="http://noraonline.nl/wiki/Basisprincipes">http://noraonline.nl/wiki/Basisprincipes</a>	2	The NORA contains a specific theme on preservation: <a href="http://noraonline.nl/wiki/Digitale_Duurzaamheid">http://noraonline.nl/wiki/Digitale_Duurzaamheid</a> and the National Archive has a country wide community to develop this theme to keep it up to date and in alignment with Dutch legislation.	The DUTO project is set up to implement and monitor these principles starting from 2017	1	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Openness EIF, Chapter 2, Underlying principles, Recommendation 6 Category: Principles	NORA (Nederlandse Overheid Referentie Architectuur) describes the "Openness principle" in AP 8 "The service uses open standards". This is an operationalisation of recommendation 4. Also 'technological neutrality' is enhanced in AP 10 and 11. They prescribe providing alternative channels besides the internet for users which don't have access to internet or are handicapped, alphabetic etc. See <a href="http://noraonline.nl/wiki/Principes">http://noraonline.nl/wiki/Principes</a> More important, the Dutch government has the policy for Open Government, Open Data and Open Standards.	2	The publication of open data by the ministries is a common practice: <a href="https://data.overheid.nl">data.overheid.nl</a> . See inventory by Ministry: <a href="https://data.overheid.nl/inventarisatie-departementen-2015">https://data.overheid.nl/inventarisatie-departementen-2015</a> Wetsontwerp Open Overheid: The Bill containing rules on access to information of public interest (Act open government) is under consideration by the parliament.	Dataoverheid.nl ( <a href="https://data.overheid.nl">https://data.overheid.nl</a> ) is the Dutch open data portal that provides access to national datasets.	2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Reusability EIF, Chapter 2, Underlying principles, Recommendation 7 Category: Principles	The EIF is translated and described in a local country framework, namely NORA (Nederlandse Overheid Referentie Architectuur). The basic principles of NORA include: '- Uniformity - Users experience uniformity in service provision through the use of standard solutions. Using generic solutions, which are widely applied within the public sector, certain elements of one service can be harmonised with corresponding elements in other services. This can be achieved, for example, by using shared processes and systems (shared services) or by applying open standards to provider-specific processes and systems; both will have the same standardising effect. See <a href="http://noraonline.nl/wiki/Gebruik_open_standaarden">http://noraonline.nl/wiki/Gebruik_open_standaarden</a> Also, the re-use is set as principles in AP6 - use of standard solutions and AP7 - use of the building blocks of the Generic Digital Infrastructure (GDI).	2	Legislation on the Generic Digital Infrastructure (GDI). Common practice: (see: <a href="https://www.digicommissaris.nl/image/2016/7/5/factsheet_en_web04.pdf">https://www.digicommissaris.nl/image/2016/7/5/factsheet_en_web04.pdf</a> ) Re-use of building blocks of the GDI which consists of standards, products and services that are jointly used by all governments, many public organizations and in some cases by private parties. GDI is an indispensable part of the digital basic services that allow organizations to do their work. The GDI is by its nature not organization, industry or domain specific. Examples of building blocks are: DigiD and Idensys for identification and authentication, Overheid.nl services, the system for base registries ( <a href="http://www.digitaleoverheid.nl/onderwerpen/stelselinformatiepunt/stelsel-van-basisregistraties">http://www.digitaleoverheid.nl/onderwerpen/stelselinformatiepunt/stelsel-van-basisregistraties</a> ), and Digi Network for connectivity (see <a href="https://www.logius.nl/diensten/diginetwerk/">https://www.logius.nl/diensten/diginetwerk/</a> ).		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Technological neutrality and adaptability EIF, Chapter 2, Underlying principles, Recommendation 8 Category: Principles	NORA (Nederlandse Overheid Referentie Architectuur) describes the 'Technological neutrality' principle in AP 10 and 11. They prescribe providing alternative channels besides the internet (which is the preferred channel for services, prescribed in AP9) for users which don't have access to internet or are handicapped, alphabetic etc. See <a href="http://noraonline.nl/wiki/Gebruik_open_standaarden">http://noraonline.nl/wiki/Gebruik_open_standaarden</a>	2	<u>Agenda digital 2017</u> The Dutch government coalition agreement states that citizens and businesses by 2017 must be able to arrange all the services they need digitally with the government.	All governmental organizations have a website with facilities to make contact in the way civilians need or want.	2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Effectiveness and efficiency EIF, Chapter 2, Underlying principles Category: Principles	NORA (Nederlandse Overheid Referentie Architectuur) describes the "efficiency and effectiveness" principle as benefits of using the framework: - Savings by making use of generic solutions and avoiding double work; - Improved quality, for instance by making use of unambiguous, reliable information; - Ensuring the cohesion between developments within and outside the own organisation; - Standardization. This improves flexibility, as the organisation is better able to cooperate with other bodies, citizens and businesses. The use of NORA will increase the effectiveness of investments by coordinating and harmonising the efforts of the various departments and bodies. See NORA, Cost and Benefits, <a href="http://www.e-overheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf">http://www.e-overheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf</a>	2	The Dutch government keeps an eye on the progress of departments and local government in making better services to the public. This is mostly done by control on (the architecture of) big IT related programs and projects. For example: Bureau ICT Control which is instituted by law. Also each year the quality of services is monitored by an independent marketing organization. Ingenerl the services are valued at an average of 7.1 out of 10 score.		2	The Dutch government keeps an eye on the progress of departments and local government in making better services to the public. This is mostly done by control on (the architecture of) big IT related programs and projects. For example: Bureau ICT Control which is instituted by law. Also each year the quality of services is monitored by an independent marketing organization. Ingenerl the services are valued at an average of 7.1 out of 10 score.	2

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Conceptual model EIF, Chapter 3 Category: Conceptual model	NORA (Nederlandse Overheid Referentie Architectuur) chooses for SOA (Service Oriented Architecture) to be the standard for the public administrations especially in the development of e-government. See <a href="http://noraonline.nl/wiki/Security_Principles_for_Cloud_and_SOA_(TOGAF)">http://noraonline.nl/wiki/Security_Principles_for_Cloud_and_SOA_(TOGAF)</a>	2	See the Basic architecture for public sector organisations (page 43 in the document NORA's strategy supplement - <a href="http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf">http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf</a> ) All administrative levels use their own from NORA derived architecture framework. These frameworks are available online: - EAR ( <a href="http://www.earonline.nl">www.earonline.nl</a> ) for national government - PETRA ( <a href="http://www.wikixl.nl/wiki/petra">http://www.wikixl.nl/wiki/petra</a> ) for regional government (provinces) - GEMMA ( <a href="http://www.gemmaonline.nl">http://www.gemmaonline.nl</a> ) for local government		1	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Public administrations should develop a component-based service model, allowing the establishment of (European) public services by reusing, as much as possible, existing service components. EIF, Recommendation 9 Category: Conceptual model	NORA (Nederlandse Overheid Referentie Architectuur) proposes that an SOA (Service Oriented Architecture) should be used by public administrations, which is by definition a component-based architecture. See NORA, SOA, <a href="http://www.e-overheid.nl/images/NORA/soa%20dossier.pdf">http://www.e-overheid.nl/images/NORA/soa%20dossier.pdf</a>	2	See the Basic architecture for public sector organisations (page 43 in the document NORA's strategy supplement - <a href="http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf">http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf</a> ) The conceptual (SOA) model is based on loosely coupled services, namely: - contractual services for people and businesses to government - business services for internal processes - information services for collecting and querying (shared) data - all services will be connected by information exchange services Also AP1 and AP3 are prescribing the re-use of services (See NORA principles for cooperation and service delivery, <a href="http://www.e-overheid.nl/images/NORA/nora%203%200%20principes%20voor%20samenwerking%20en%20dienstverlening%201%200.pdf">http://www.e-overheid.nl/images/NORA/nora%203%200%20principes%20voor%20samenwerking%20en%20dienstverlening%201%200.pdf</a> ) All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Public administrations should agree on a common scheme to interconnect loosely coupled service components and put in place the necessary infrastructure when establishing (European) public services. EIF, Recommendation 10 Category: Conceptual model	NORA (Nederlandse Overheid Referentie Architectuur) describes the basic architecture for public sector organisations and an overview of standard building blocks. These are the links that ensure that the work processes of different organisations are interconnected. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a> AP 1, 2 and 3 prescribe the availability and reusability of authentic sources to other organisations. AP 13 instead describes the use of these authentic sources by service providers. NORA refers with 'authentic source' not only to key- or base registries, but to any source which has the lead in generating specific data, implying that for any given data, there must be one authentic source.	2	See the Basic architecture for public sector organisations (page 43 in the document NORA's strategy supplement - <a href="http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf">http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf</a> ) The conceptual (SOA) model is based on loosely coupled services, namely: - contractual services for people and businesses to government - business services for internal processes (red box) - information services for collecting and querying (shared) data - all services will be connected by information exchange services Also AP1 and AP3 are prescribing the re-use of services. (See NORA principles for cooperation and service delivery, <a href="http://www.e-overheid.nl/images/NORA/nora%203%200%20principes%20voor%20samenwerking%20en%20dienstverlening%201%200.pdf">http://www.e-overheid.nl/images/NORA/nora%203%200%20principes%20voor%20samenwerking%20en%20dienstverlening%201%200.pdf</a> ) All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Interconnection of service components. EIF, Recommendation 10 Category: Conceptual model	NORA (Nederlandse Overheid Referentie Architectuur) describes the basic architecture for public sector organisations and an overview of standard building blocks. These are the links that ensure that the work processes of different organisations are interconnected. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a> AP1, 2 and 3 prescribe the availability and reusability of authentic sources to other organisations. AP 13 instead describes the use of these authentic sources by service providers. NORA refers with 'authentic source' not only to key- or base registries, but to any source which has the lead in generating specific data, implying that for any given data, there must be one authentic source.	2	See the Basic architecture for public sector organisations (page 43 in the document NORA's strategy supplement - <a href="http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf">http://www.digitaleoverheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf</a> ) The conceptual (SOA) model is based on loosely coupled services, namely: - contractual services for people and businesses to government - business services for internal processes - information services for collecting and querying (shared) data - all services will be connected by information exchange services Also AP1 and AP3 are prescribing the re-use of services and AP6 and 7 the (re)use of standard solutions and building blocks. (See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a> ) All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.	The "digikoppeling serviceregister" lists services that are available from the government service bus: <a href="https://serviceregister.overheid.nl/soa/systinet/platform/doc/index.html">https://serviceregister.overheid.nl/soa/systinet/platform/doc/index.html</a> <a href="https://register.digikoppeling.nl/overview/webServiceIndex">https://register.digikoppeling.nl/overview/webServiceIndex</a>	2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
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	The NORA principles for cooperation and service delivery encourages to make authentic sources available to others. AP 29 The service provider shall bear the consequences for providing services which do not fit with agreements and standards (the service provider has to provide workarounds) AP 17 All used info-objects are systematically described (to support semantic and technical interoperability). AP 1 and 2 describe the availability and reusability of authentic sources to other organisations. See NORA principles for cooperation and service delivery, <a href="http://www.e-overheid.nl/images/NORA/nora%203%200%20principes%20voor%20samenwerking%20en%20dienstverlening%201%200.pdf">http://www.e-overheid.nl/images/NORA/nora%203%200%20principes%20voor%20samenwerking%20en%20dienstverlening%201%200.pdf</a>	2	The stelselcatalogus describes all authentic source of (base registries) information <a href="http://www.e-overheid.nl/onderwerpen/stelselinformatiepunt/stelsel-van-basisregistraties/stelselvoorzieningen/stelselcatalogus/authentieke-gegevens">http://www.e-overheid.nl/onderwerpen/stelselinformatiepunt/stelsel-van-basisregistraties/stelselvoorzieningen/stelselcatalogus/authentieke-gegevens</a> Also AP13 prescribes the use of base-registers (authentic sources).		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1



# Analysis of the NIFs

[See Alignment Examples in NIFO toolbox](#)

[See implementation and monitoring examples in NIFO Toolbox](#)



EIF Element - Reference - Category	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]	Implementation scoring 2: Common practice 1: some examples 0: not observed	NIF monitoring	Monitoring scoring 2: Monitored 1: Partially monitored 0: not observed
Access control EIF, Recommendation 11 Category: Conceptual model	NORA ensures compliance to security and privacy legislation. Specific Design Principles on these aspects are: AP35 - AP40. The underlying principles AP 37, on identification, authentication and authorizations; and AP 38, on information security by zonation and filters; encourages the public administrations to ensure security. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a> DigiD assures the digital authentication for public service providers. DigiD is the digital authentication system for the government and public service providers. DigiD ensures that you can conduct reliable business with citizens through your website. See <a href="http://noraonline.nl/wiki/DigiD">http://noraonline.nl/wiki/DigiD</a>	2	The Dutch government has setup 13 base registries. Provinces, municipalities and water boards have access to this information and they can use in their own work. The Ministry of the Interior and Kingdom Relations (BZK) is coordinating the System of Basic registration. See: <a href="http://noraonline.nl/wiki/Stelsel_van_Basisregistraties">http://noraonline.nl/wiki/Stelsel_van_Basisregistraties</a> In addition, a common vision of service delivery has been established, the government-wide implementation agenda for eGovernment services (INUP) provides the actions for implementation to be used by all levels of government including the following elements: - The realization of a digital front office of the government for citizens; - The realization of a digital front office of public companies; - Linking the 13 basic records to establish a working system of basic registrations; and - Implementation Support for municipalities: Operation NUP 'helps all municipalities in the implementation of the various components of the basic infrastructure. See: <a href="http://www.rijksoverheid.nl/onderwerpen/digitale-overheid/betere-dienstverlening-en-ee-kleinere-overheid">http://www.rijksoverheid.nl/onderwerpen/digitale-overheid/betere-dienstverlening-en-ee-kleinere-overheid</a>		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.  Also, in case of Information Security and Privacy, all governmental organizations have specific civil servants appointed to monitor these aspects and report on that each year towards the top-management.	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	NORA encourage the development of interfaces. Underlying principle AP 13 encourages the public administration explicitly to create interfaces to use authentic sources. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a> Also, AP17 prescribes more specific the alignment on the semantic level. The NORA has defined 3 levels for interoperability of services: Process - Information- Technical	2	The Dutch government works on the development of the National Semantic View. This will be done by searching for vocabularies (data dictionaries, etc.) and encouraging the owners to convert them to rdf and publish them as Linked (Open) Data. See <a href="http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak">http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak</a>		1	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Interoperability levels EIF, Chapter 4 Category: Interoperability levels	NORA touches upon five levels of interoperability: legal, organisational, semantic, application and network interoperability. See <a href="http://noraonline.nl/wiki/Vijflaagsmodel">http://noraonline.nl/wiki/Vijflaagsmodel</a> Legal operability is also covered in the policy frameworks document. NORA file Policy Frameworks gives an overview of all the policy instruments (e.g. rules, regulations) on which NORA is based and which the public organizations should follow. See <a href="http://noraonline.nl/wiki/Beleidskaders">http://noraonline.nl/wiki/Beleidskaders</a>	2	The Dutch government works on the development of the National Semantic View, see <a href="http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak">http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak</a> , which will be aligned with (1) the National Legal View for which <a href="https://www.overheid.nl/english">https://www.overheid.nl/english</a> is a basis, and (2) the National Organisational View which shall contain the governmental functions and processes, and (3) the National Technical View which will be the infrastructure of (open) data and api's.		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
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	NORA is not redundantly imposing rulings which are already imposed by law itself; instead NORA assumes that services are provided in accordance with relevant legislation. See <a href="http://noraonline.nl/wiki/Beleidskaders">http://noraonline.nl/wiki/Beleidskaders</a>  All legislation is electronical available to the Dutch: <a href="http://wetten.overheid.nl/zoeken/">http://wetten.overheid.nl/zoeken/</a>	2		From 2014-2018 a large programme Omgevingswet (Environment) is executed, which applies the legal framework of the Netherlands and has impact on all municipalities and 100's of other governmental organizations	1		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	NORA describes that the business processes are documented. AP 5 prescribes that the service is systematically described. AP 2: "The steps in the service delivery process are available as a service". Implications: The service provider has investigated which of the process steps, mutations and info-objects have value for other organisations; these process steps are described and available as separate and reusable services". See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	Most government bodies use the agreed methodologies TOGAF and PRINCE for architecture projects and design projects. Use of these methods secures the description of business processes. AP5 prescribes that a service is well defined (See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a> )		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Inter-governmental coordination. EIF, Chapter 4 Recommendation 15 Category: Interoperability levels, organisational artefacts	NORA describes how these processes will interact. AP 28 "Service provider and user have reached service level agreements on the service delivery" NORA also explains that individual organisations are responsible for reaching these agreements. The absence of governance should be seen as a stimulus to be proactive, initiate governance, seek partners etc. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	Cooperation in so called information-chains is provided with a dossier on how to organise coordination: <a href="http://www.noraonline.nl/wiki/Ketensturing">http://www.noraonline.nl/wiki/Ketensturing</a>		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
Organisational interoperability - organisational relationships. Public administrations should clarify their organisational relationships as part of the establishment of a (European) public service. EIF, Chapter 4 Recommendation 16 Category: Interoperability levels, organisational artefacts.	The Dutch Government Reference Architecture (Nederlandse Overheid Referentie Architectuur, NORA) encourages public administrations to clarify their organisational relationships. NORA provides the following principle (AP) 28: "Service provider and user have reached service level agreements on the service delivery". NORA also explains that individual organisations are responsible for reaching these agreements. See NORA principles for cooperation and service delivery, p.5, <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	AP5 prescribes that these organizations need to clarify these services, included the necessary cooperation with other organizations. (See NORA principles for cooperation and service delivery, <a href="http://www.e-overheid.nl/images/NORA/nora%203%20principes%20voor%20samenwerking%20en%20dienstverlening%201%20200.pdf">http://www.e-overheid.nl/images/NORA/nora%203%20principes%20voor%20samenwerking%20en%20dienstverlening%201%20200.pdf</a> )		1	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1

# Analysis of the NIFs

[See Alignment Examples in NIFO toolbox](#)

[See implementation and monitoring examples in NIFO Toolbox](#)

EIF Element - Reference - Category	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]	Implementation scoring 2: Common practice 1: some examples 0: not observed	NIF monitoring	Monitoring scoring 2: Monitored 1: Partially monitored 0: not observed
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	The Dutch Government Reference Architecture (Nederlandse Overheid Referentie Architectuur, NORA) ensures continuous service delivery based on change management processes. NORA provides the following principles AP31: "The quality of the service is governed on basis of cyclical feedback", AP25: "Delivery of the service is continuously guaranteed". See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	All governmental organizations follow a project / program methods like Princell and MSP. ICTU is an governmental organization that specifically helps the governmental organizations with change processes related to their services. The larger projects are reviewed by a special Gateway-bureau. Also a new bureau is set up to review projects that have high-risk profiles.		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow 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.	In the NORA SOA document, the description of different types of services is provided. This provides a classification and grouping of different services. It distinguishes services based on different classifications e.g. content vs. technology, front-office vs. back-office, controlling vs. controlled services, presentation vs. logic vs. data storage and primary vs. secondary. See: <a href="http://www.noraonline.nl/images/noraonline/5/5b/NORA_dossier_SOA.pdf">http://www.noraonline.nl/images/noraonline/5/5b/NORA_dossier_SOA.pdf</a> NORA links the different national taxonomies, including the definitions of core registry data "stelselcatalogus." The national map of semantic operability is here: <a href="http://www.noraonline.nl/wiki/Landkaart_semantische_interoperabiliteit">http://www.noraonline.nl/wiki/Landkaart_semantische_interoperabiliteit</a> AP17 NORA prescribes the use of a common taxonomy between the governmental organizations and their business partners. The NORA also contains a specific theme on the (international) taxonomy: <a href="http://noraonline.nl/wiki/Semantiek">http://noraonline.nl/wiki/Semantiek</a>	2	All known taxonomies are shown in NORA: <a href="http://noraonline.nl/wiki/Gegevenswoordenboeken">http://noraonline.nl/wiki/Gegevenswoordenboeken</a> One of these is the "Stelsel Catalogue", which contains the definitions used by the 13 Base-registers, available via Linked Data: <a href="http://stelselcatalogus.logius.nl/">http://stelselcatalogus.logius.nl/</a> .		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
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	NORA is a developed to be the centrepiece in a system of sector- or domain specific architectures, which a.o. develops semantic standards. See for example EAR for the ministries, GEMMA on the municipal level, PETRA for provinces, WILMA for District Water Boards and KARWEI for the social security sector. The NORA community addresses the cooperation between these domains and sectors. See 22 known sectors and domains: <a href="http://noraonline.nl/wiki/Tabel_met_alles_dochters">http://noraonline.nl/wiki/Tabel_met_alles_dochters</a> See also for specific info per domain: <a href="http://noraonline.nl/wiki/Domeinen">http://noraonline.nl/wiki/Domeinen</a>	2	All results of national platforms are shared here: <a href="http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak">http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak</a> Organizations which are actively using Linked Data: <a href="http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak#Semantische_intermediairs">http://noraonline.nl/wiki/Nationaal_Semantisch_Vlak#Semantische_intermediairs</a>		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures. Also, still not all projects follow it.	1
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.	NORA proposes the public administrations to use principles and a set of agreements concerning the design of government services, including actual information on used technical standards within Building Blocks etc. See <a href="http://noraonline.nl/wiki/Bouwstenen_en_gebruikte_standaarden/alle">http://noraonline.nl/wiki/Bouwstenen_en_gebruikte_standaarden/alle</a> NORA also describes the use of (open) standards, specifications and building blocks (AP 6,7, 8) See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	A formalised specification to ensure interoperability is called Digikoppeling (or previous, the Government Service Bus): <a href="http://www.logius.nl/producten/gegevensuitwisseling/digikoppeling/">http://www.logius.nl/producten/gegevensuitwisseling/digikoppeling/</a>		2	Each year the implementation of these building blocks / standards is monitored by the Dutch Office for Standardization.	2
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.	NORA proposes the public administrations to use the principles and a set of agreements concerning the design of government services. See NORA, Strategy Supplement, p. 24, <a href="http://www.e-overheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf">http://www.e-overheid.nl/images/stories/architectuur/nora_maart%202010-eng.pdf</a> NORA also describes the use of (open) standards, specifications and building blocks (AP 6,7, 8) See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	The use of Building Blocks and standards ensures the re-use of formalised specifications.		1	Each year the implementation of these building blocks / standards is monitored by the Dutch Office for Standardization.	2
Public administrations should use a structured, transparent and objective approach to assessing and selecting formalised specifications. EIF, Recommendation 21 Category: Interoperability agreements.	The Dutch Standardisation Forum has drafted an open procedure for making a list of standards. Organisations need to comply or explain to the standards on the list. The review process for open standards, one of the lists, consists of six stages. 1. Application 2. Intake 3. Expert Research 4. Public consultation 5. Advice from the Forum standardization 6. Adoption by the College standardization See Standardisation Forum, <a href="http://www.forumstandaardisatie.nl">http://www.forumstandaardisatie.nl</a>	2		The selection and use of the formalized specifications is recently supported by tooling, see <a href="http://beslisboom.othersight.nl/content/beslisboom-ptlu">http://beslisboom.othersight.nl/content/beslisboom-ptlu</a> .	1	National 'Monitor Open Standard Policy' - <a href="http://noraonline.nl/wiki/Monitor_Open_Standardenbeleid_2015">http://noraonline.nl/wiki/Monitor_Open_Standardenbeleid_2015</a> (dutch text)	1
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.	NORA proposes in the underlying principle AP8 that public administrations should use open standards. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	The Forum and College for Standardisation promote interoperability and use of open standards within the Dutch government. The College manages the list of recommended and mandatory open standards that apply to the entire public sector. The Forum Standardisation supports the Dutch Government in the use, development and establishment of open standards for electronic data exchange, and in particular to support and advise the College for Standardisation. In this way, it promotes interoperability, not only within the Dutch government system itself, but also within governmental agencies, as well as for citizens and businesses. The Forum Standardisation uses criteria for the selection of open standards that include criteria for functional needs, market support and maturity. See: <a href="http://forumstandaardisatie.nl/">http://forumstandaardisatie.nl/</a> See: <a href="https://www.forumstandaardisatie.nl/content/aanmelden-en-beheren-van-standaarden#paragraaf-3">https://www.forumstandaardisatie.nl/content/aanmelden-en-beheren-van-standaarden#paragraaf-3</a>		2	Each year the implementation of these building blocks / standards is monitored by the Dutch Office for Standardization.	2

Analysis of the NIFs

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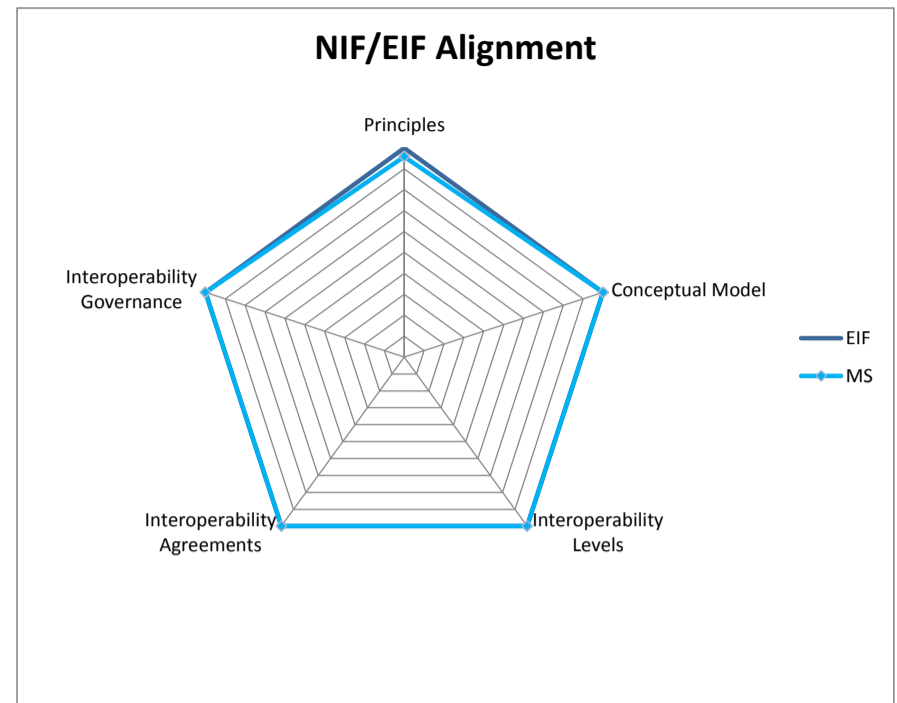
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	NIF element present - Reference - (Text in English)	NIF-EIF alignment scoring 2: fully 1: partially 0: not aligned	Large scale implementation [describe if and how implementation of the element is a common practice]	Only implementation examples [describe 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
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.	NORA fully acknowledges the Standardisation Forum, where public administrations actively participates in standardisation. See Standardisation Forum, <a href="http://www.forumstandaardisatie.nl">http://www.forumstandaardisatie.nl</a> Also, the management and control of the NORA itself is using the open ! BOMOS standard.	2	The Forum and College for Standardisation promote interoperability and use of open standards within the Dutch government. The College manages the list of recommended and mandatory open standards that apply to the entire public sector. Related themes for this standardisation work include: - International developments - Services - Semantics - Authorization and authentication - Open Data - Cloud See: <a href="http://forumstandaardisatie.nl/">http://forumstandaardisatie.nl/</a>		2	Standard procedure used by the Dutch Office for Standardization. And a standard procedure used by NORA management, see <a href="http://noraonline.nl/wiki/Wijzigingsproces_NORA">http://noraonline.nl/wiki/Wijzigingsproces_NORA</a>	2
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.	NORA proposes in the underlying principles to agree on minimum service requirements for secure data exchange. AP 28 Service provider and user have agreed on a Service Level Agreement. AP 33 The service agrees with the Quality baseline. The baseline is a normative framework within the organisation, but based on standards and agreements within the sector As said NORA explains that individual organisations are responsible on their own for reaching these agreements. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	The minimum set of requirements for secure data exchange is described in the Baseline Informatiebeveiliging Rijksdienst (BIG) <a href="http://www.noraonline.nl/wiki/BIR_(Baseline_Informatiebeveiliging_Rijksdienst)">http://www.noraonline.nl/wiki/BIR_(Baseline_Informatiebeveiliging_Rijksdienst)</a> Implementation is supported via information in the NORA: <a href="http://noraonline.nl/wiki/Beveiliging">http://noraonline.nl/wiki/Beveiliging</a>		2	All reference architectures contain design principles which are followed by a method of comply-or-explain. According to the community of architects, many projects follow the implementation of the reference architectures.  Also, in case of Information Security and Privacy, all governmental organizations have specific civil servants appointed to monitor these aspects and report on that each year towards the top-management.	2
Governance Public administrations should establish a framework for the governance of their interoperability activities across administrative levels. EIF, Recommendation 25 Category: Interoperability Governance	NORA encourages to use the architecture as a management instrument. NORA is a management tool. It is the responsibility of policy makers to formulate a policy concerning how the instrument should be used. NORA does not include the mechanics of the steering process as such. This makes it possible to use NORA in combination with various governance models and management methods. The only assumption made is that the process will follow the familiar 'plan-do-check-act' cycle. Within this cycle, NORA is relevant at the 'plan' stage, where the planned results are validated and appraised. Subsequently, the governance process ensures that the approved plans are actually implemented. See <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a> Also, the governance of the NORA itself is on the highest governmental level, see <a href="http://noraonline.nl/wiki/Afgeleide_principes">http://noraonline.nl/wiki/Afgeleide_principes</a>	2	All administrative levels use their own from NORA derived architecture framework. These frameworks are online available: - EAR ( <a href="http://www.earonline.nl">www.earonline.nl</a> ) for national government - PETRA ( <a href="http://www.wikixl.nl/wiki/petra">http://www.wikixl.nl/wiki/petra</a> ) for regional government (provinces) - GEMMA ( <a href="http://www.gemmaonline.nl">http://www.gemmaonline.nl</a> ) for local government - WILMA ( <a href="http://noraonline.nl/wiki/WILMA_(Waterschaps_Informatie_%26_Logisch_Model_Architectuur)">http://noraonline.nl/wiki/WILMA_(Waterschaps_Informatie_%26_Logisch_Model_Architectuur)</a> ) for the national waterships		2	On daily basis the communities of the reference architectures work together to make the Dutch interoperability framework more useful.	2



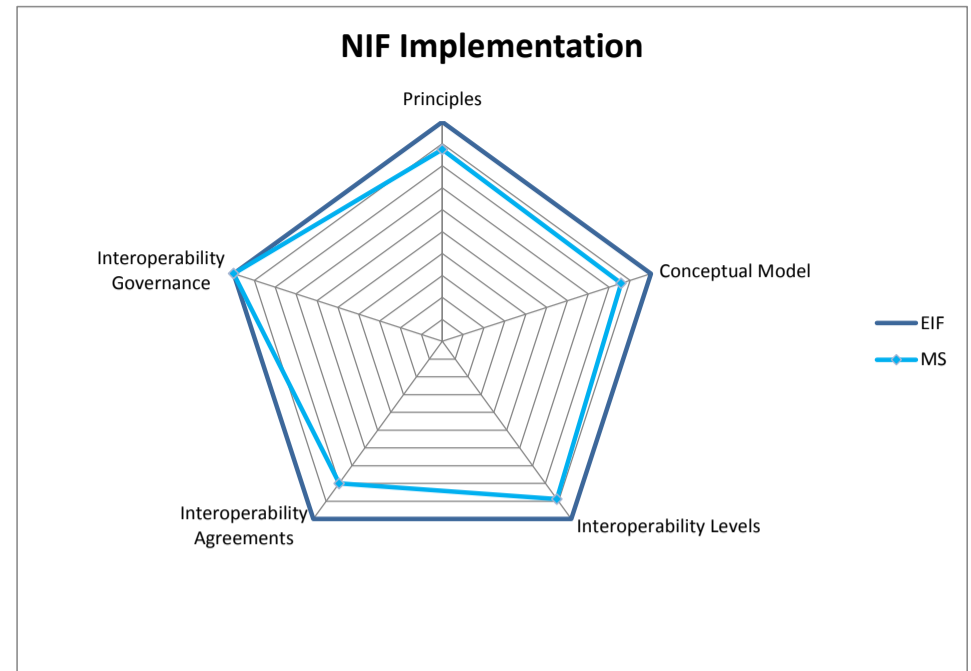
Category	EIF	MS
<b>Principles</b>	100%	95,8%
<b>Conceptual Model</b>	100%	100,0%
<b>Interoperability Levels</b>	100%	100,0%
<b>Interoperability Agreements</b>	100%	100,0%
<b>Interoperability Governance</b>	100%	100,0%

Category	EIF Element	Scoring		
		Max	MS	
<b>Principles</b>	Subsidiarity and proportionality	2	2	
	User-centricity	2	2	
	Inclusion and accessibility	2	2	
	Security and privacy	2	2	
	Multilingualism	2	1	
	Administrative simplification	2	2	
	Transparency	2	2	
	Preservation of information	2	2	
	Openness	2	2	
	Reusability	2	2	
	Technological neutrality and adaptability	2	2	
	Effectiveness and efficiency	2	2	
	<b>Total</b>		<b>24</b>	<b>23</b>
	<b>Conceptual Model</b>	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	
<b>Total</b>			<b>14</b>	<b>14</b>
<b>Interoperability Levels</b>	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	2	
	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	
	<b>Total</b>		<b>18</b>	<b>18</b>
<b>Interoperability Agreements</b>	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	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	
<b>Total</b>		<b>10</b>	<b>10</b>	
<b>Interoperability Governance</b>	A governance framework exists to control the interoperability activities across administrative levels.	2	2	
<b>Total</b>		<b>2</b>	<b>2</b>	



Category	EIF	MS
Principles	100%	87,5%
Conceptual Model	100%	85,7%
Interoperability Levels	100%	88,9%
Interoperability Agreements	100%	80,0%
Interoperability Governance	100%	100,0%

Category	EIF Element	Scoring		
		Max	MS	
Principles	Subsidiarity and proportionality	2	2	
	User-centricity	2	2	
	Inclusion and accessibility	2	2	
	Security and privacy	2	2	
	Multilingualism	2	1	
	Administrative simplification	2	2	
	Transparency	2	1	
	Preservation of information	2	1	
	Openness	2	2	
	Reusability	2	2	
	Technological neutrality and adaptability	2	2	
	Effectiveness and efficiency	2	2	
	<b>Total</b>		<b>24</b>	<b>21</b>
	Conceptual Model	Does the NIF contain a conceptual model?	2	1
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	1	
<b>Total</b>			<b>14</b>	<b>12</b>
Interoperability Levels		Does the NIF describe the four levels of interoperability?	2	2
		Does the NIF impose to consider all relevant legislation related to data exchange?	2	1
	Does the NIF describe that the business processes are documented in an agreed way in order for other administrations to understand the overall business process?	2	2	
	Does the NIF encourage to agree on how these processes will interact among the different levels of public administrations?	2	2	
	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	2	
	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	
	<b>Total</b>		<b>18</b>	<b>16</b>
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	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	
<b>Total</b>		<b>10</b>	<b>8</b>	
Interoperability Governance	A governance framework exists to control the interoperability activities across administrative levels.	2	2	
	<b>Total</b>		<b>2</b>	<b>2</b>



Category	EIF	MS
Principles	100%	54,2%
Conceptual Model	100%	57,1%
Interoperability Levels	100%	50,0%
Interoperability Agreements	100%	90,0%
Interoperability Governance	100%	100,0%

Category	EIF Element	Scoring	
		Max	MS
<b>Principles</b>	Subsidiarity and proportionality	2	1
	User-centricity	2	1
	Inclusion and accessibility	2	2
	Security and privacy	2	1
	Multilingualism	2	0
	Administrative simplification	2	1
	Transparency	2	1
	Preservation of information	2	1
	Openness	2	1
	Reusability	2	1
	Technological neutrality and adaptability	2	1
	Effectiveness and efficiency	2	2
	<b>Total</b>		<b>24</b>
<b>Conceptual Model</b>	Does the NIF contain a conceptual model?	2	1
	Is the conceptual model a component-based service model? (e.g. SOA)	2	1
	Does the NIF encourage the use of common schemes to interconnect loosely coupled service components.	2	1
	Does the NIF encourage to put in place the infrastructure to interconnect loosely coupled service components?	2	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
	<b>Total</b>		<b>14</b>
<b>Interoperability Levels</b>	Does the NIF describe the four levels of interoperability?	2	1
	Does the NIF impose to consider all relevant legislation related to data exchange?	2	0
	Does the NIF describe that the business processes are documented in an agreed way in order for other administrations to understand the overall business process?	2	1
	Does the NIF encourage to agree on how these processes will interact among the different levels of public administrations?	2	1
	Does the NIF encourage public administrations to clarify their organisational relationships as part of the establishment of a (European) public service?	2	1
	Does the NIF encourage public administrations to agree on change management processes to ensure continuous service delivery.	2	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	2
	<b>Total</b>		<b>18</b>
<b>Interoperability Agreements</b>	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
<b>Total</b>		<b>10</b>	<b>9</b>
<b>Interoperability Governance</b>	A governance framework exists to control the interoperability activities across administrative levels.	2	2
	<b>Total</b>	<b>2</b>	<b>2</b>

