2016 update.

NIFO Factsheet – Finland

In Finland, multiple online sources provide information on interoperability and eGovernment.

The Avoindata.fi service is a portal to national open data and the tools and instructions promoting interoperability. It also provides an interoperability database for public administrations, enabling increased knowledge and information sharing regarding sharing and reuse of interoperability solutions.

The Public Administration Recommendations (JHS recommendations) provide information management guidelines for public administration and present the Enterprise Architecture approach. The National Enterprise Architecture Repository provides practical concepts and tools to implement interoperability.

- See https://www.avoindata.fi/en/about
- See https://www.avoindata.fi/data/fi/dataset?collection_type=Interoperability+Tools
- See http://docs.jhs-suositukset.fi/jhs-suositukset/JHS179/JHS179.html
- See http://www.arkkitehtuuripankki.fi/

Main interoperability highlights

The Finish Public Sector ICT Strategy[1] (adopted in 2013 and applicable for the 2012-2020 period) sets forth a strategy concerning the use of ICT in the public sector. It defines 10 specific measures to be initiated under the supervision of the Ministry of Finance. These measures address a variety of topics, including specific interoperability related issues:

- Measure 1: Innovations to accelerate development.
- Measure 2: Life-cycle funding and steering of services.
- Measure 3: Improved opening of information.
- Measure 4: Making information resources available.
- Measure 5: Interoperability for joint service points.
- Measure 6: Raising the level of expertise.
- Measure 7: Clearer structures.
- Measure 8: Interoperability in Information Management Act.
- Measure 9: Boosting central government efficiency through ICT centralisation.
- Measure 10: Public sector joint telecommunications network.

Finland has taken an Enterprise Architecture (EA) approach to interoperability, and embeds all interoperability initiatives within an overall EA for Public Administrations. The Ministry of Finance is responsible for developing and maintaining the Public Administration's EA, and is

[1] http://vm.fi/en/article/-/asset_publisher/first-common-strategy-to-address-challenges-in-public-sector-ict-utilisation

entitled to lay down regulations concerning information architecture, information systems architecture and technical architecture. In this context, **a law on information management guidance for public administrations** was created, **and a collection of EA approaches, models and tools** was specified.

The National Architecture for Digital Services Program (started mid-2014) aims at creating practical concepts and tools for interoperability which are available in the National Enterprise Architecture repository[2]. This architecture and processes modelling service is provided by the Ministry of Finance for public administrations.

Summary of the NIF

The currently available material on the Finnish NIF describes information management guidance for public administrations and EA approaches:

- **Law on the information management guidance for public administrations**

Since 1/9/2011, the law 10.6.2011/634 obliges all public administration organisations to develop their EA and to make use of the common Public Administration EA and its elements.

- **Specifications of the EA approaches, models and tools containing the following elements:**

(1) common EA developing method (including the framework) to be used in all public administration (refers to Public Administration Recommendation: JHS 179 Kokonaisarkkitehtuurin kehittäminen),

(2) common EA governance model,

(3) definition & ownership of domains, which are large functionally coherent areas such as 'Health and welfare',

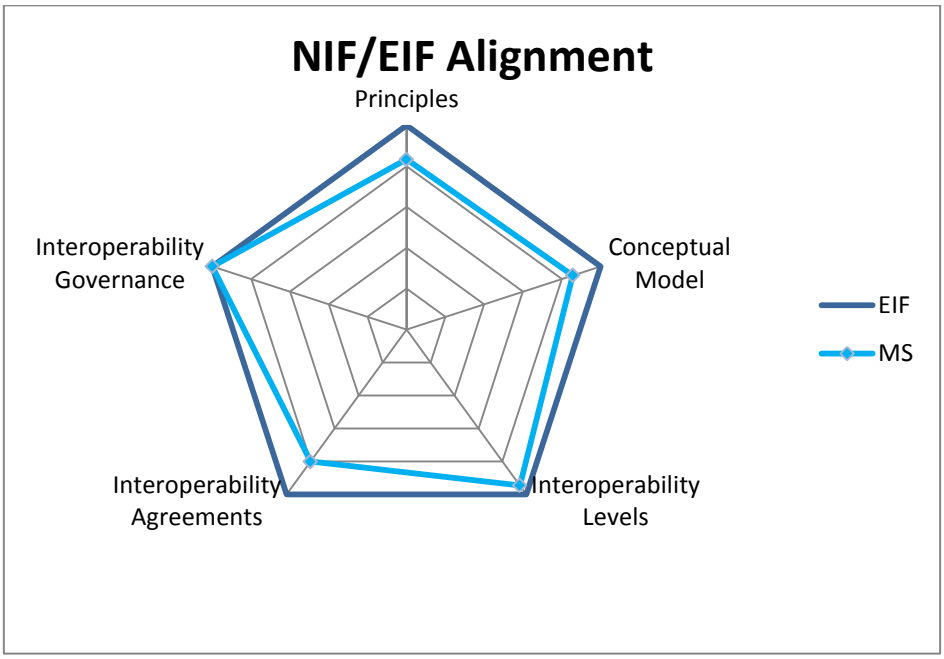
(4) common architecture definitions, such as architecture principles, common information architectures, common meta data and data services (work in progress), common ICT-services (planned 2012/2013), and common reference architectures

(5) a roadmap of further development of the common architecture.

Alignment NIF/EIF

The Finnish NIF is well aligned with the EIF in terms of interoperability governance and levels, and reasonably aligned in the categories of the conceptual model, interoperability agreements and principles.

[2] http://www.arkkitehtuuripankki.fi/



Several observations can be made from the figure above:

- The interoperability governance is clearly defined in the context of law 10.6.2011/634.
- The fundaments of Finnish interoperability framework are defined by means of EA approaches, models and tools, leading to intensive usage of conceptual models.
- All interoperability levels are discussed in the Public Administration's EA, and details are specified.
- All the EIF principles are considered in the Finnish NIF, most of which are fully aligned. Only "subsidiarity and proportionality", 'inclusion and accessibility" and "multilingualism" are just partially aligned.
- Finally, formal interoperability agreements are being specified in the scope of the Enterprise Architecture and the reference architectures.

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

Example of alignment – Conceptual Model

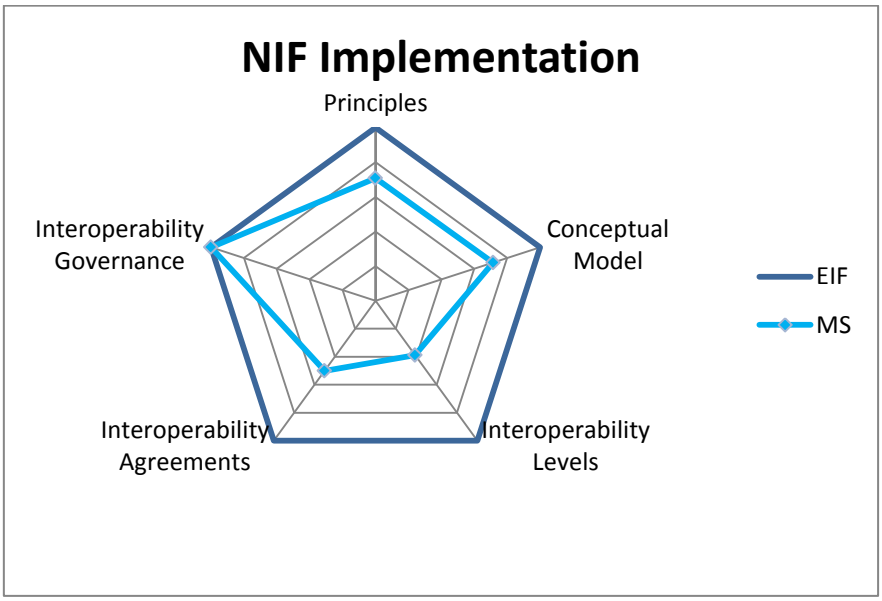
In Finland, the conceptual model is structured in an Enterprise Architecture (EA):

- The entire Enterprise Architecture approach is based on conceptual models which include commonalities and differences across different domains as stated in the "Enterprise Architecture Planning Process"

See Chapter 5, JHS179, http://docs.jhs-suositukset.fi/jhs-suositukset/JHS179/JHS179.html

Implementation of the NIF

Concerning the implementation of the NIF, several examples of practical implementations are in place in Finland regarding the principles, conceptual model and governance dimensions. Some examples are found as well for interoperability levels and monitoring of minimal service requirements for secure data exchange (interoperability agreements).



For the principles dimension almost all the principles are implemented, most of which with concrete and interesting examples. The only principle without implementation is subsidiarity and proportionality.

For the conceptual model, 5 out of 7 elements are supported by examples of large-scale practical implementations. These are implemented through the reference architectures for service bus and base registers and the planned implementation of a publicly accessible service bus[3], based on Xroad from Estonia.

For interoperability levels, 6 out of 9 elements are supported by a practical example.

For interoperability agreements, 2 out of 5 elements are supported by a large-scale implementation. Preferring open specifications is achieved by developing software in the National Architecture for Digital Services only with open source.

Governance is implemented with an architecture group on the national level consisting of key architects from different sectors and local administrations. The minutes of meetings are available on a public wiki.[4]

[3] http://esuomi.fi/palveluvayla/

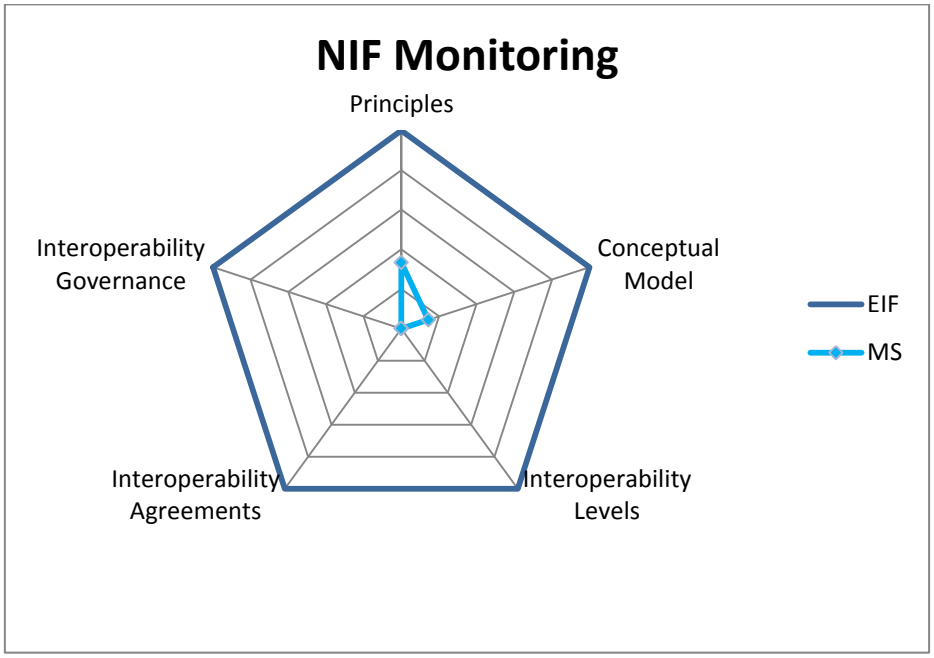
[4] https://wiki.julkict.fi/julkict/juhta/juhta-n-jaostot/jhka-jaosto

Example of Implementation – Organisational interoperability - Business process alignment:

In the line of business process alignment and interaction, Finland has defined and documented its main common shared services and the related operational processes.

Monitoring of the NIF

Concerning the monitoring of the NIF, some examples of monitoring are in place in Finland regarding the principles and conceptual model dimensions.



For the principles dimension, 5 principles are monitored: security and privacy, administrative simplification and user centricity are fully monitored, while effectiveness and efficiency is partially monitored, as well as openness.

For the conceptual model, the element regarding the reuse of service components is monitored by checking the number of organizations and solutions linked to the national service bus.

More information on the implementation and monitoring examples is provided on the NIFO Community on JoinUp on the Compare NIFs page.

Example of Implementation/Monitoring – Principle 6: Administrative Simplification

In Finland, the principle of Administrative Simplification is applied and monitored as follows:

- My Enterprise Finland is a service structured along a company's profile; it encompasses the tools, services and electronic communication services that are best suited for the company's situation. It is a central hub for the management of issues related to the establishment of a company and to employers' obligations. It reduces companies' administrative burden.
- The Ministry of Employment and Economy monitors the reduction in administrative burden.

See:

- https://oma.yrityssuomi.fi/
- https://www.yrityssuomi.fi/en/asioi-verkossa?query=avi*#minisearchBox

Other initiatives on interoperability

Finland has been recently awarded as one of Europe's eGovernment leaders, according to the United Nations Public Administration Network (UNPAN) 2016 UN eGovernment Survey[5].

Finland has finalized its data model for Public Sector Service Repository (eSuomi.fi). This one-stop-shop portal is a concentrated data repository that organisations that either have the **obligation** or **right** to use it can access. It provides information on the services and service channels they offer as well as information on the organisation connected to the service.

The national open data portal - Avoindata.fi / opendata.fi/en – (launched back in 2014), provides open data and the tools and instructions promoting interoperability. The component library, formerly on Yhteentoimivuus.fi (the interoperability portal) has been moved to Avoindata.fi. Opendata.fi provides access to datasets from the Finish administration. The portal is currently making more than 1500 datasets available (https://www.opendata.fi/data/en/dataset), which are also accessible via ODIP (https://data.europa.eu/euodp/en/data), the pan-European single point of access to European datasets.

The development of the Service Bus, part of the national service architecture, is opened to developers since March 2014, using a development environment (palveluvayla.fi). The service bus was finalised in 2015. The National Service architecture aims at creating an interoperable digital service infrastructure, which allows data transfer between the organizations and services.

Finland published a technical architecture solution and specification for service interfaces to base registries (PERA; ready and published at the interoperability portal).

The Aalto University (http://www.seco.tkk.fi/) has led a research project for some years now concerning ontology. The result of this work includes the national ontology service ONKI (http://www.seco.tkk.fi/services/onki/). The Finnish Ontology Library Service ONKI is a pilot

[5] https://joinup.ec.europa.eu/community/epractice/news/uk-and-finland-europe%E2%80%99s-egovernment-leaders-unpan

version of a national, centralized ontology library and related ontology services. The system was created as a part of the National Semantic Web Ontology Project in Finland (FinnONTO 2003-2012)[6] project. It constitutes an important component of the Finnish semantic web infrastructure[7] developed in the FinnONTO project. The results are part of the public administration's common Metadata services.

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[6] See: http://www.seco.tkk.fi/projects/finnonto/
[7] See: http://www.seco.tkk.fi/publications/2008/hyvonen-et-al-building-2008.pdf