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

In 2013, Finland adopted the Public Sector ICT Strategy[1] which sets forth a new strategy for the period 2012-2020 concerning the use of ICT in the public sector and 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 en-

[1] See: http://www.vm.fi/vm/fi/04_julkaisut_ja_asiakirjat/03_muut_asiakirjat/julkict-strategia-2012-2020.pdf

titled 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. It 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',

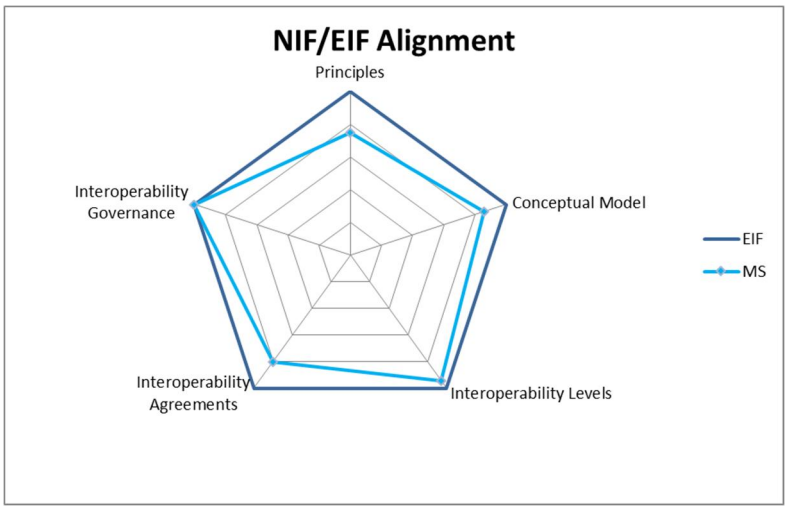
(4) common architecture definitions, such as architecture principles, common information architectures, common meta data and data services (work in progress), common ICT-services (planned 2012/2013), and common reference architectures

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

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

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.



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. Half of them show a full alignment with the EIF. These are: security and privacy, transparency, preservation of information, reusability, technological neutrality and adaptability and effectiveness and efficiency.
- 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):

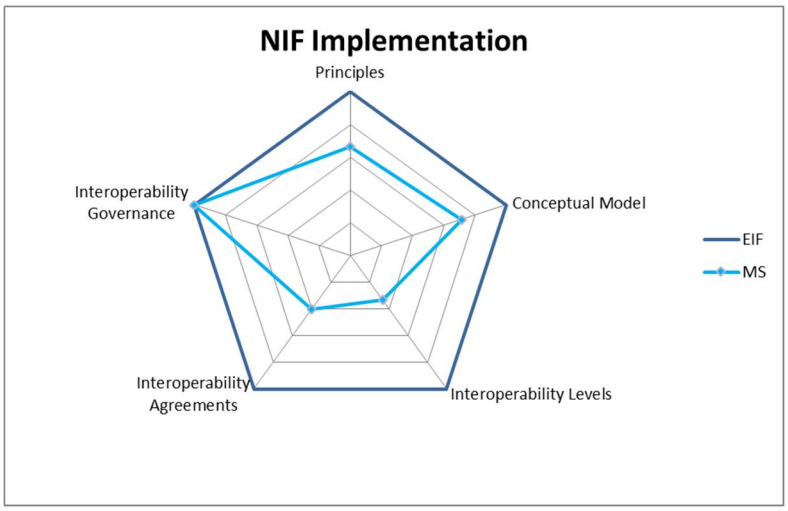
- The entire Enterprise Architecture approach is based on conceptual models which include commonalities and differences across different domains as stated in the "Enterprise Architecture Planning Process"

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 all dimensions.

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, 5 out of the 11 principles accompanied by examples of practical implementations are large-scale implementations. The only principle without an implementation example 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.

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

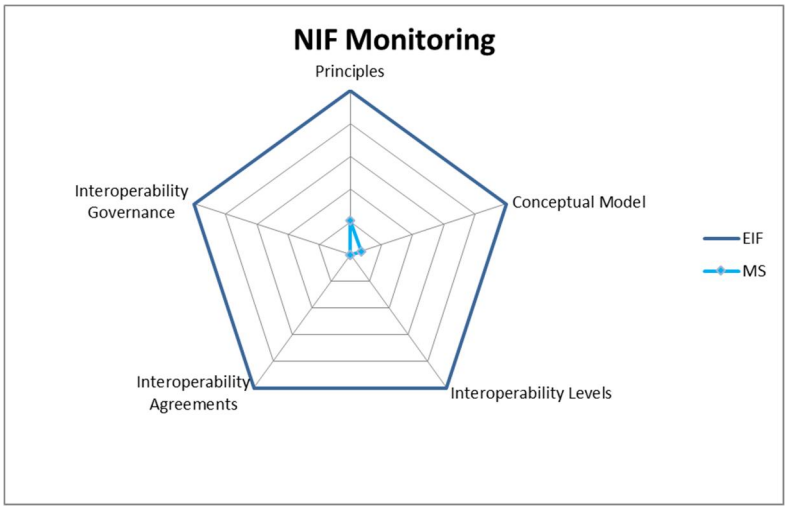
For interoperability levels, 5 out of 9 elements are supported by a practical example, with less focus on organisational interoperability.

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]

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, 3 principles are monitored: security and privacy, administrative simplification, and effectiveness and efficiency.

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.

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

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:

- http://www.tem.fi/en/enterprises/reduction_of_the_administrative_burden_on_businesses/measures_to_reduce_companies_administrative_burden_5521
- http://www.tem.fi/en/enterprises/reduction_of_the_administrative_burden_on_businesses/monitoring_reduction_in_administrative_burden_5522

Other initiatives on interoperability

Finland has finalized its data model for Public Sector Service Repository, which is currently under development. The beta version of the repository will be available by the end of 2015.

Launched in September 2014, the open data portal - Avoindata.fi / opendata.fi/en - 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 1400 datasets available (https://www.opendata.fi/data/en/dataset), which are also accessible via ODIP (http://data.opendatasupport.eu), the pan-European single point of access to European datasets.

The development of the Service Bus, part of the national service architecture, was opened to developers in March 2014, using a development environment (palveluvayla.fi). A first pilot with the City of Espo Sitra aimed at transferring data across various nursing care support systems, was completed successfully in Spring 2014. The service bus will be 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).

In December 2013, the Ministry of Finance and Ministry of Public Administration and Local Government setup a working group to prepare the graduate development of public administration towards a common customer service.[5]

The customer service points of joint action can be initiated in 2015 and will be prepared by the working group. The e Customer Service 2014 project (Asiakaspalvelu 2014 project) ended in

[5] See: http://www.vm.fi/vm/fi/05_hankkeet/0111_julkisen_hallinnon_asiakaspalvelu/index.jsp

June 2013 and put forward proposals in this regard. The working group shall hold office until the end of June 2014.

The Aalto University (http://www.seco.tkk.fi/) has led a research project for some years now concerning ontology. The results 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 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 will be part of the public administration's common meta data services.

NIF responsible contact person for Finland

Jari Kallela (jari.kallela@vm.fi)

Olli-Pekka Rissane (Olli-Pekka.Rissanen@vm.fi)

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