

NIFO - Implementation Examples

Conceptual Model

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Example: Lithuania

'In Lithuania there is approved methodological recommendations for developing of electronic services.

In practice for data exchange between systems, registers and application, is used Oracle OSB is used. For user (legal and business entities) authentication to use e-services SIRIP authentication component is used. It offers authentication via e-banking and e-signature solutions (ID-card, civil-servant card, mobile-ID, etc.). In the design BPEL process with Oracle JDeveloper, each process relating with specific webservice from OSB for data receiving, validation, or sending, and of course all the process workflow is being sent to OSB. For monitoring workflows, errors (if there is), statistics and for other configuration of instances (like process instance recovery) Oracle Enterprise Manager is used.

And, of course, there's an own Form designer, each form is being related to specific BPEL process. If at the end e-service needs to create word document which can be signed or printed, ASPOSE library is used. So if template of the document have changed there's a simple correction in word document template and upload to the system (it takes only few minutes), after that each new e-service instance will create documents according to the new template, no need to stop any e-service delivery. If there is a need in e-service process to sign formed document electronically it can be done with integrated e-documents creation tool (for a moment a tool of another institution is used, but having plans next year to have an owned one regarding to the new specification of e-document). One more tool is used for message templates: [FreeMarker](#).

[Jetkins](#) is used for Building/testing SIRIP continuously.

In SIRIP everything is offered in one package – environment for e-service users (front-office), administrators, back-office people, monitoring tools, etc.

See Oracle OSB description, SOA, <http://www.oracle.com/us/products/middleware/soa/service-bus/overview/index.html>

See Oracle JDeveloper description, SOA, <http://www.oracle.com/technetwork/developer-tools/jdev/overview/index.html>

See Zabbix description, <http://www.zabbix.com/solutions.php>

EIF element: Conceptual Model

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.

Example: Poland

Poland adopted a model of architecture in which the user-defined functions constitute a distinct whole communication system (network services), and describes how to use these functions differently as an oriented system Service (Service Oriented Architecture - SOA);

See §2.8 (<http://www.dziennikustaw.gov.pl/du/2012/526/D2012000052601.pdf>)

The projects, which are to form this ecosystem include:

1. RP Portal – primary gateway for accessing digital services in Poland
2. Digital ID – national and pan-European standard for electronic identification and trust services
3. National Registers System – enabling the archiving of heterogeneous assets in the digital form for easy access to the public
4. Electronic Documentation Management – referential system for the exchange of electronic documents within the public administration
5. Data and service Integration platform – central bus for the management of data flows in the IT ecosystem
6. Integrated Analytical Platform – enabling central access to data-driven analytics based on information stored in distributed systems
7. Common national IT infrastructure – centralisation of infrastructure, integration of resources and systems, and their appropriate maintenance
8. Open Data – enabling the re-use of public data in the private sector

mDocuments Project, now in development;

- Phase one: mobile ID pilot to be launched in May 2017, fully operational at the end of July.
- Phase two: Mobile Driver's licence in October 2017.
- Phase three mobile Registration Document and Insurance document - end of 2017

EIF element: Conceptual Model

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.

Example: Spain

The Interoperability Agreement, as stated in the Resolution of the Secretary of State for Public Administration of 28 June 2012, covers access to and use of data and document exchange services between Public Administration agencies and the Catalogue of data exchange services as well as service-level agreements (SLAs) (see:

http://administracionelectronica.gob.es/pae_Home/dms/pae_Home/documentos/Estrategias/pae_Interoperabilidad_Inicio/Data_Mediation_Protocols_Interoperability_Standard-NIF_Spain/Data_Mediation_Protocols_Interoperability_Standard_NIF_Spain.pdf)

- See the 2014 UN award

http://administracionelectronica.gob.es/pae_Home/pae_Actualidad/pae_Noticias/Anio2014/Mayo/Noticia-CTT-2014-05-28-SVD-UNPSA-2014.html#.U4dIF3bwDL8

- <http://www.unpan.org/dpadm/unpsdayawards/unpublicserviceawards/tabid/1522/language/en-us/default.aspx>

The Data Intermediation Platform of the Ministry of Finance and Public Administrations serves as a central point for the publication of electronic administration services. The platform is defined as a results-oriented architecture services (SOA) based on the following elements:

- a) Functionalities and web-services through external representation of the same expressed in WSDL.
- b) XML documents exchanged between web services (SOAP) and signed electronically through XMLDsig
- c) Establishment of channels insurance participants by protocol SSL.
- d) Use of electronic certificates issued by suppliers of certification services.
- e) Sealed in time (ADT) of the registers of petitions and answers.

IF element: Conceptual Model

Interconnection of service components

Example: Belgium

The Belgian NIF encourages to put in place the infrastructure to interconnect loosely coupled service components.

This infrastructure is implemented via the Federal Service Bus and Federal Authentication Service,

FSB, the Belgian Federal Service Bus, is the successor of the Universal Messaging Engine (UME). Besides the services that are offered by UME (XML based message exchange, routing, authentication, authorization), the FSB offers additional services (Validation, Enrichment, Transformation, Monitoring, Logging, Policy management, Error handling and Exception management).

The FSB supports international standards (SOAP, WSSecurity, UDDI) and contains - besides an enterprise service bus - a registry in which available services are published, a repository with service documentation and a service test environment.

See <http://www.fedict.belgium.be/en/gegevensuitwisseling/>

See [http://www.fedict.belgium.be/en/identificatie beveiliging/](http://www.fedict.belgium.be/en/identificatie_beveiliging/)

EIF element: Conceptual Model

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.

Example: Portugal

The Interoperability Platform is a central part of the access to authentic sources of information. It allows Public and private entities to access the information. The iAP (www.iap.gov.pt) Interoperability in Public Administration is a central platform, service-oriented, with the primary aim to provide the public administration tools shared for interconnection systems, identity federation, authentication provider, messaging, payments, among others, that allow an agile and economies of scale form, content and availability of closer multichannel electronic services of citizen needs and companies. The document INTEROPERABILITY IN PUBLIC ADMINISTRATION describes all necessary procedures for accessing the various services available iAP in and which technology required for the integration Information Systems. http://www.iap.gov.pt/Guia_Adesao_iAP_v3_0_2.pdf

Reduce energy fares: The energy vendors access information from social security to verify a client's right to have reduced energy fares

http://www4.seg-social.pt/noticias/-/asset_publisher/9N8j/content/id/11986582

<http://www.iap.gov.pt/services/InteroperabilityPlatform/ServiceCatalog.aspx>

EIF element: Conceptual Model

Access control

Example: Estonia

The data exchange layer X-Road is a technical and organisational environment, which enables secure Internet-based data exchange between the state's information systems.

PKI or the public key infrastructure enables secure digital authentication and signing. The infrastructure also allows forwarding data by using an encrypting key pair: a public encryption key and a private decryption key. In Estonia, this technology is used in relation with electronic identity (ID card, mobile ID, digital ID).

Monitoring is done by Estonian Information System's Authority. Measuring indicators include the use of a secure electronic identity card (ID card, mobile ID, digital ID, etc.) with the proportion of the population owning eID. (target: 65% by 2020). Another indicator is the proportion of persons who rate their computer skills sufficient for their own use and protection of personal data on the Internet (target: a 10 percentage points higher than the EU average by 2020).

See: https://www.mkm.ee/sites/default/files/elfinder/article_files/eesti_infouhiskonna_arengukava.pdf

EIF element: Conceptual Model

Public administrations, when working to establish (European) public services, should develop interfaces to authentic sources and align them at semantic and technical level.

Example: Denmark

The NIF mentions as principle: "Data exchange should use common data standards". This is a core recommendation since the initiation of the OIOXML initiative and Whitepaper on It-architecture from 2003. As specific implementation example, the Basic data programme has aligned the major Danish basic registries. They provide through a common infrastructure services with aligned interfaces both on a technical and semantic level. These services are to be used and integrated in public services included in both the citizen and enterprise portals borger.dk and virk.dk. See <http://arkitekturguiden.digitaliser.dk/node/108>

Many of the central authentic sources such as The Central Person Registry (www.cpr.dk) and The Central Business Registry (www.cvr.dk) are open and aligned by design by law. This is considered as a core business requirement for registries as the basic-data initiative aims to define, align and make available core authentic sources.