NATIONAL INTEROPERABILITY FRAMEWORK

INTEROPERABILITY COMPONENTS FOR ELECTRONIC DATA GATHERING

implementation for e-Social Security

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REPUBLIC OF SLOVENIA
MINISTRY OF THE INTERIOR
E-government in Slovenia

2000: first Electronic Commerce and Electronic Signature Act, modernization of Central Population Register


2002: First G2G project ZPIZ-CVI-CRP

2003: Second generation of e-gov portal, first generic e-forms system (with e-pay, e-sign), start of life-event approach

2004: e-VEM for sole traders, electronic tax declarations

2005: modernization of Civil status register, Residence register


2007: electronic form generator, eReminder service for expiration of personal documents

2008: e-VEM for companies, Portal for Children and Youth, eDemocracy modernization of Driving Licences Register

2009: E-Gov strategy SREP, Portal for older people and seniors


2011: development of e- Social Security Interoperability Platform

2012: EUGO Business Portal (Slovenia Business Point)
Current eGov strategy

Strategy on electronic services development and electronic data exchange (July 2009):

• Efficient and effective public administration with the help of e-government

• Increasing user take-up of online e-government services

• Sharing the infrastructure among public institutions and reuse of different modules and other horizontal measures

• Support for cross-border services – Single market support

objective 1: Efficiency & effectiveness
objective 2: Increase user Take-up
objective 3: Shared Infrastructure and Modules
objective 4: Single market support
e-Social Security: the Social Challenge

- **Economic crisis outbreak** in 2009
- Government **response**:
  - exit strategy, stability programme, various structural measures;
- One of key interventions: **simplification of social security system**
  - ensure social support to those who really need it, based on the income and property of the applicant and his family;
  - enable quick, fair and transparent decisions;
  - stimulate the individuals for own personal activity;
  - lower the risks for misuse of the social support system.
e-Social Security

- Decisions on social rights, benefits, subsidies and payments:
  - child benefits, cash social assistance, income support, state scholarships, reduced kindergarten fee, snack subsidy for elementary and high school students, lunch subsidy for elementary school students, transport subsidy for high school students and students, exemption of payment of social security services, contribution to the payment for a family assistant, rent subsidy, right to covering the difference to full value of health care services, right to the payment of contribution for compulsory health insurance

- Decisions based on the INCOME and PROPERTY of the applicants and their family members

Electronic gathering of data, minimizing burden for the applicants and for the decision makers.
e-Social Security: the 2009/2010 environment

- IT system of the social affairs ministry:
  - Legacy, fragmented, inflexible
  - Limited connections to other institutions with relevant data sources

- Relevant data sources:
  - Holding data on income and property of citizens
  - Numerous (50+), complex and heterogeneous (incl. 21 banks):
    - population register, households register, tax administration, ownership of vehicles, ships and boats, ownership of land, companies, dematerialized securities, data on enrolment in education programmes, data on health insurance, pension insurance, employment/unemployment status, money on banks and investment funds...
  - Some data sources didn’t exist yet, other largely unprepared

- Personal data protection: fear of creating Big Brother
- Time frames: very tight, crisis on the rise
## Reusable application building blocks for electronic data gathering

The **complexity** of the problem had to be **lowered**
The **managebility** of the new system had to be **ensured**

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### Interoperability components: TRAY

- **The Flagship component**
- Enabling dynamic real time BPM process generation, parallel or serial
- **Reliable, powerful and intelligent transport channel**
- Collecting logically connected data from different sources
- Technical validation of responses
- Reducing technical complexity of data gathering
- Extremely flexible - adding new datasources and clients, configuration and parametrisation by GUI interface
- Built in monitoring and automatic alerts
- Modern service oriented architecture concepts (Java SOA)
- Technologically independent, currently running on jBoss Java EE application server
- Modern programming approaches (EJB 3 entities, session beans, JMS, JAAS security, OR mappings etc.)
- Various integration standards (XML, SOAP, JAX-WS)

**TRAY**
Central tool for standardised execution of smart electronic data enquiries

**IO-MODULE**
Data distribution system for flexible synchronous data retrieval

**ASYNCHRONOUS MODULE**
System for electronic enquiries for special datasources

**SECURITY PLATFORM**
System for managing users and their rights
**Interoperability components: TRAY**

**Key features:**

- Sophisticated Auto-resume function based either on datasource unavailability or answer’s technical invalidity or soap error
- Covering situations of Client unavailability (results delivery)
- Scheduler: managing situations of periodic unavailability of datasource (e.g. nights, weekends)
- Notifying Client about temporary results, possibilities for early process termination
- Dynamic call modelling, scripts and built-in variables
- Forced slow-down of enquiries through different queues with different parallelism
- Possibility for enquiries grouping for lowering pressure to datasource, asynchronous processing of results
- Decisions can be based on the contents of answers, exceptions handling
- Possibilities for automatic transformation of received data, fully parameterized and managed by using GUI interface

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**IO-MODULE**

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**SECURITY PLATFORM**

System for managing users and their rights
Interoperability components:
**IO-MODULE**

- Standardized **platform for data distribution**
- Offering full set of functionalities for heavy-duty synchronous data access
- Institutions without their own distribution system can use this system to safely and reliably distribute their data to all the legitimate users
- Enabling/disabling access to the users
- Institutions retain full control of the actual data distribution
- Dynamic, limiting the scope of data for different users and different purposes
- Preserving reliable electronic trail, with full details of the actual data sent together with the traffic data
- Institutions using this system can use test- and production environment

**TRAY**
Central tool for standardised execution of smart electronic data enquiries

**IO-MODULE**
Data distribution system for flexible synchronous data retrieval

**ASYNCHRONOUS MODULE**
System for electronic enquiries for special datasources

**SECURITY PLATFORM**
System for managing users and their rights
Enabling electronic enquiries to those datasources where synchronous access is not possible (high security standards or without electronic database and requiring manual answers etc.)

Electronic “questions” are stored in secured “waiting room” where the datasource can collect them and prepare the answers.

Answered are delivered back to the “waiting room” and the system ensures that they are returned to the right address.

Built-in system for multi-level alerts by different channels.

Possibility for manual or automatic processing, single or bulk.

Datasources can be grouped (e.g. Banks) and the system waits for all the answers from that group.
Interoperability components: SECURITY PLATFORM

- Providing access control for applications and their functionalities
- Support for multiple modules within an application and for different functionalities within a module
- Users can use any valid slovenian qualified digital certificate
- Possibility of special limiting supported certificate set for a specific application
- The user applies for his rights, his managing supervisor confirms or rejects the applied rights
- Support for physical users (persons) and system users (applications, systems)
- Built-in SSO functionality: all applications using this module can use the login-sharing between applications
- Multi-purpose, reusable

TRAY
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SECURITY PLATFORM
System for managing users and their rights
Supply of data
data owners
(different institutions and datasources)

Interoperability components
for electronic data gathering

TRAY, IO-MODULE,
ASYNCHRONOUS MODULE, SECURITY PLATFORM

Demand for data
decisions on social rights
(client system)
Cost Savings

• e-Social Security: enabling fair decisions
  - efficient distribution of social support budget

• Reduced costs for data gathering
  - IT-supported gathering is cost-efficient
    (automated, minimizing human effort)
  - Classic way is expensive
    (official paper documents with questions, receiving official paper answers, printing, packaging, processing, scanning, postal costs...)

• Reuse of existing components in other systems
  - More reuse - higher savings in development and operating costs
Questions for discussion

• Approaches of other countries to ensure fruitful collaboration with other institutions
  – *Cross-domain projects, whole-of-the-government projects*
  – *Creating common goals and targets*
  – *Sacrificing their own short-term interests for higher common goals*

• Reusability of application building blocks – Myth or Reality?
  – *To what extent is this approach really used in practice*
  – *What kind of reuse: idea, code, existing product*
  – *In-house reuse, reuse by other institutions, cross-border re-use?*
THANK YOU FOR YOUR ATTENTION!

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