

Better data for
better social programs and policies
enabled by e-Government solutions

Case Studies

Argentina, Belgium, Moldova, France, Turkey

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The World Bank

Objectives and tasks of data exchange systems in provision of social insurance

- Strengthening coordination in provision of social benefits and services
- Eliminating unnecessary legacy processes
- Facilitate compliance enforcement (contribution collection, life certification, etc)
- Reducing work load of Government agencies
- Empowering citizens to engage with the public sector
- Removing discretion from decisions on benefit eligibility
- Ensuring quality of data systems for operational and policy decisions
- Reducing number of errors, duplicates, and frauds

Interoperability

Ability of two or more systems (or components) to communicate by exchanging data, so the information is understood by the receiving agency and subsequently used for its own business purposes

- The European Commission task team on interoperability defines four levels of interoperability:
 - i. legal
 - ii. organizational (business processes, Governance, etc.)
 - iii. semantics (data definitions/metadata)
 - iv. technical (security protocols, transmission protocols, various standards).
- Systems can be interoperable on all of these levels or only on select levels
- Social Security Agency is usually both **user** and **provider** of data in the system of data exchange

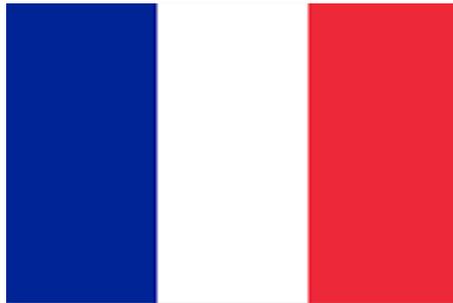
International experiences

Interconnecting databases to improve performance of social protection programs

- Argentina SINTyS
- Armenia
- Azerbaijan
- Belgium *Crossroads Bank for Social Security*
- Egypt UNR
- Estonia *X-Roads*
- France *INTEROPS*
- Jordan NUR (under development)
- Kazakhstan *MHSP-MIS*
- Kyrgyz Republic
- Korea
- Moldova SAAIS
- Turkey *SAIS* (part of ISAS)

France: INTEROPS

Standards and modes of data exchange in Social Protection Sector





France: InterOps

Background

- In 2004, the Ministry for Social Affairs launched a study of interoperability of various information systems, resulting in the following business areas:
 - information sharing between agencies
 - access to central databases pertaining to social affairs
 - access by staff working for one agency to other agencies' information systems
- ... and following objectives for the new system:
 - provide services to population as quickly as possible
 - simplify the administrative processes
 - introduce joint standards and architecture for data exchange
 - ensure security of data
- By 2008, standards of InterOps were produced and today the system is used for data exchanges by all major social protection agencies



France: InterOps

Social Protection Institutions (OPS)

- ACOSS (Central Agency of Social Security Bodies; Agence Centrale des Organismes de Sécurité Sociale)
- CNAM (National Sickness Insurance Fund ; Caisse Nationale de l'assurance maladie)
- CNAF (National Family Allowances Fund ;Caisse nationale des allocations familiales)
- CNAV (National Old-Age Insurance Fund ; Caisse nationale de l'assurance vieillesse)
- MSA (Central Fund of Social Agricultural Mutual Benefit Societies; Caisse centrale de la Mutualité sociale agricole)
- RSI (Insurance Scheme for the Self-employed; Régime Social des Indépendants)



France: InterOps

Implementation:

- Timeline:
 - 2005: defining general specifications
 - 2006: defining detailed specifications
 - 2007: testing initial standards
 - 2008: 1st set of interoperability standards launched
 - 2012: 2d set of interoperability standards launched
- Three exchange modes:
 - INTEROPS-A: *application* to application mode, or web services interchange, which enables an application of a receiving body to automatically request services from a provider body
 - INTEROPS-P: *portal* to portal mode where receiving agency's officials, subject to proper authentication, are able to consult a provider agency's web applications
 - INTEROPS-S: a *sphere* of trust composed of organizations acting as authentication providers. So, user can navigate the *eco-system* between different service operators without re-authenticating once s/he has been authenticated. (Added under the 2d set of standards)



France: InterOps

Key outcomes:

- All social protection agencies have **incorporated the InterOps standards to data architecture**. As a result, all new projects between social protection agencies are based on the InterOps standard to ensure secure interchange
- The underlying inter-agency **legal agreements** encouraged better structure of the relations between the partner agencies
- Government commissioned an **inter-body working group** to (i) take into account new functionalities, and (ii) make the mechanism available to other agencies

Argentina:
Social and Fiscal National Identification System
(Sistema de Identificación Nacional Tributario y Social)
(SINTyS)

A World Bank project





Argentina: SINTyS

Background

- In 1998, Government initiated work to provide its service providers with better, more reliable information about the social program beneficiaries and taxpayers
- In 1999, the Bank provided a loan to GoA with the objective to improve at all levels of government the efficiency, effectiveness and impact of social services and tax administration through an institutionalized information exchange that would allow better identifying the social and fiscal attributes of physical and legal persons
 - Phase I: provide “demonstrable results” with a limited number of participating institutions and in limited locations
 - Phase II: expand coverage of SINTyS to all provinces and increase its efficiency
 - Phase III: consolidation and institutionalization
- The vision was to make data gathered separately legally available to all stakeholders, when and where needed. The longer-term vision was a shared network, enabling a “one-stop” delivery of multiple services and providing additional benefits to newly identified eligible households



Argentina: SINTyS

Challenges

- Stakeholders needed to have motivation, full buy-in and trust in the new exchange mechanism
- Each stakeholder agency owned its own information and felt strongly responsible for its life-cycle management and controlling access to it, including data privacy and security
- Federal context further complicated the institutional coordination and incentives

Strategy

- (a) participating agencies continue to regulate access to their information
- (b) instead of a central database system, focus on interconnecting existing databases
- (c) SINTyS to provide a technical, legal and institutional framework by developing a system for data exchange and analysis
- (d) concentrate on bringing about institutional and cultural changes
- (e) show some early results to mobilize sufficient buy-in for system sustainability



Argentina: SINTyS

Bank's support (in three phases):

- SINTyS I project (1999-2005), \$10m
- a reallocation of funds under the State Modernization I Project (2006-2007), \$8m
- SINTyS II (2008-2013), \$20m

Some key results:

- SINTyS established as a **National Directorate level public agency**
- 70 national, 223 provincial, and 83 municipal organizations are connected to the network and regularly exchange information
- Positively identified 40 million individuals. All available information is the property and responsibility of the corresponding agencies. SINTyS does not have a proprietary database
- System allows reconciling and updating stakeholder databases, grading quality of data, checking before granting a social plan or assistance, including incompatibilities with other services, as well as informing management decisions in social and fiscal policies
- <http://www.sintys.gob.ar/>

Moldova: SAAIS – Social Assistance Automated Information System

A project on a low budget





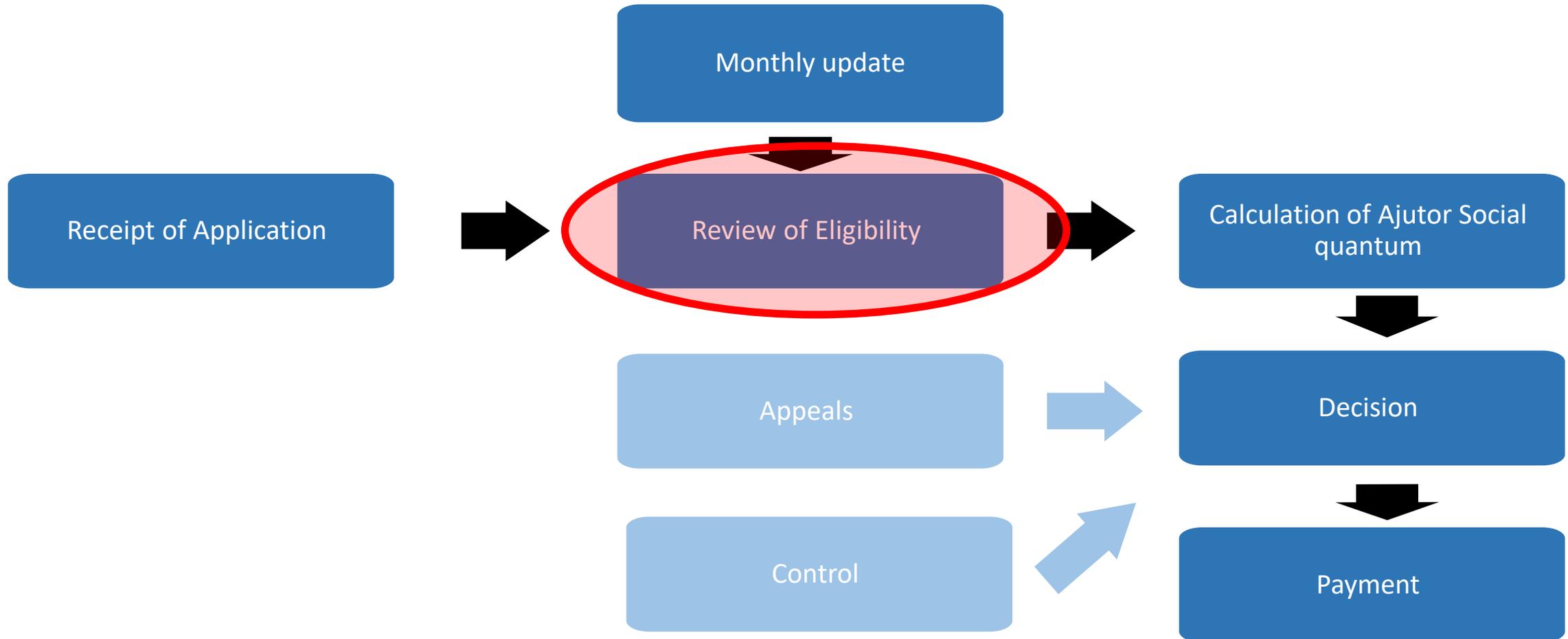
Moldova: SAAIS

System background

- The SAAIS was designed to increase the efficiency of social workers (local level), district managers (district level) and staff of the Ministry and of the Social Inspectorate (central level). It is used by 1300 users in over 950 offices.
- Development of MIS began in early 2011, with the initial phase completed within 18 months at **total software costs of \$1.3 million**
- A key feature of the system is automated verification of information provided by the applicants for social assistance against data contained in other administrative databases
- **Development of web services for data exchanges was quick (weeks), costing less than \$10,000 each, but process of finalizing Service Agreements between agencies took months!**
- The MIS is fully compliant with the requirements of national E-Government systems



Moldova: SAAIS business processes





Moldova: SAAIS

Data validation tools

- When a social worker inputs data from a citizen's application to the MIS, the following data is automatically pulled from other agencies using system of web-services:
 - Population Registry – data on the applicant and on members of his/her family
 - National Transport Registry – vehicles registered in the names of the applicant or family members
 - The Employment Agency – employment status of the applicant and family members, information on unemployment benefits and on registered rejections of proposed jobs
 - The National Office of Social Insurance (NOSI) – pensions and benefits provided to the applicant and family members. Data on monthly salaries is expected to be included starting in 2015
 - National Cadastre Registry – land plots and immovable property registered in the name of the applicants and their family members
 - Border Guard Service – to establish whether the beneficiary is currently in the country
- The system also provides for automatic monthly reconciliation with all agencies before the payment lists are prepared. As a result of reconciliation all statuses are automatically adjusted based on actual data received.

Turkey: SAIS

*Data corroboration as part of the national platform of
social assistance provision*





Turkey: SAIS

TIME FOR SOCIAL ASSISTANCE APPLICATION VALIDATION

BEFORE

APROX.
15-20 DAY



AFTER

APROX.
1 MINUTE

INSTITUTIONS REACHED
ONLINE





Turkey: SAIS

Achievements

- A system that enables online access to 15 different government institutions' 28 data types, enabling more accurate assessment of applicant's personal situation
- Social assistance application process time shortened
- Number of supporting documents required from an applicant is 1 (only identity card with ID number)
- Misuses blocked and duplicates decreased
- Workload of other Government institutions decreased and public resources saved
- The General Directorate of Social Assistance made its own contribution to e-transformation of Turkey

Belgium: Crossroads Bank for Social Security (CBSS)

A system well tested by time





Belgium: CBSS

Institutional context

About 3,000 public and private institutions at several levels (federal, regional, local) dealing with

- collection of social security contributions
- delivery of social security benefits (child, unemployment, disability, old age, assistance, etc)
- delivery of supplementary social benefits
- delivery of supplementary benefits based on the social security status of a person



Belgium: CBSS

Origins

- lack of well coordinated service delivery processes and lack of well coordinated information management led to
 - huge administrative burden and related costs
 - service delivery that didn't meet the expectations of the citizens
 - insufficient social inclusion
 - high possibilities of fraud
 - suboptimal support of social policy
- at the same time there were
 - a clear political will to solve those problems
 - a scientifically well-founded solution



Belgium: CBSS

Mission

CBSS was established 25 years ago with the following mission

- to stimulate and to support the actors in the Belgian social sector to grant more effective and efficient services with a minimum of administrative formalities and costs for all the involved
- to promote the information security and the privacy protection by the actors in the Belgian social sector so that all the involved institutions and people can have justified confidence in the system
- to deliver integrated statistical information to the politicians and the researchers in order to support the social policy



Belgium: CBSS

Solution and concrete results

- a network between all 3,000 social sector actors with a secure connection
- a unique identification key for every citizen and company
- an agreed division of tasks between the actors within and outside the social sector with regard to collection, validation and management of information and with regard to storage of information
- 220 electronic services for mutual information exchange amongst **actors in the social sector**
 - nearly all direct or indirect paper-based exchanges between agencies in the sector have been abolished
 - in 2015, > 1 billion electronic messages were exchanged, which saved many paper exchanges
- electronic services for **citizens**
 - maximal automatic granting of benefits based on electronic information exchange between agencies
 - 19 electronic services via an integrated portal; about 30 new electronic services are foreseen
- more than 50 electronic services for **employers**, either based on the electronic exchange of structured messages or via an integrated portal site



Belgium: CBSS

Stages of implementation

- common vision on information management and information security
- demonstration of feasibility
- political and public support, support of the social partners, support of the social security institutions
- basic legislation
 - creating an institution (CBSS) as a driving force and a control committee
 - translating the common vision on information management and information security
- integration of unique identification key in all information systems
- implementation of the ICT architecture and the basic ICT services
- controlled access to databases with authentic data
- re-engineering of processes between actors in the social sector at all government levels
- re-engineering of processes between actors in the social sector and companies
- re-engineering of processes between actors in the social sector and citizens
- always combined with the necessary legislative changes



Belgium: CBSS

“Thin” database of CBSS (reference directory)

- CBSS does not store any original and authentic data about individuals, rather it directs the traffic of data between the participating institutions
- directory of available services/information
 - which information/services are available at any actor depending on the capacity in which a person/company is registered at each actor
- directory of authorized users and applications
 - list of users and applications
 - definition of authentication means and rules
 - definition of authorization profiles: which kind of information/service can be accessed, in what situation and for what period of time depending on in which capacity the person/company is registered with the actor that accesses the information/service
- directory of data subjects
 - which persons/companies have personal files at which actors for which periods of time, and in which capacity they are registered
- subscription table
 - which users/applications want to automatically receive what information/services in which situations for which persons/companies in which capacity



Belgium: CBSS

Institutional setup

- internal
 - 90 staff
 - General Management
 - 6 divisions
 - R&D, Legal and External Communication
 - Client, Program, Project and Services Management
 - Application Development and Management
 - ICT Management
 - Information Security and Internal Audit
 - Resources Management (HR, finance, logistics, ...)
- co-sourced with association owned by the public social security institutions
 - physical network
 - some basic services (e.g. portal, contact centre, ...)

Conclusions

- Systems vary in objectives, scope, scale, mechanisms – and costs
- Often multiple mechanisms of data access/exchange coexist and respond to different business needs
- Countries start with simpler systems – and with long term vision – gradually expand them in functionality and coverage
- Strong collaboration between agencies involved in exchange of information is critical from the start of the project
- Reaching clear agreements on terms of service provision between institutions is as important as choosing right technological solutions

Implementation planning

- Set up an inter-agency working group. Start with a smaller circle of most interested, capable, and committed agencies – and expand eventually
- Do a rapid assessment of data needs and data availability
 - which most critical business processes need what external data
 - compile a table for each agency: user / provider
 - map available data across agencies, including potential duplicates
- Engage with e-government team/agency in your country
- Prepare service agreements to formalize data exchange
- Assess state of technological readiness to participate in data exchange and scope the needs of investments
- Revise business processes affected by the new mechanism
- Launch a pilot – and roll out eventually