# Building Effective Information Systems

18 March 2014

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# Building Effective Information Systems Session Brief

Session Lead: Veronica Silva Villalobos, Senior Social Protection Specialist, Social Protection Sector, Latin American and Caribbean Region, World Bank

Speakers:

Thanaa Al Khozendar, Director General of Combatting Poverty, Ministry of Social Affairs, West Bank and Gaza

Rodrigo Ortiz D'Avila Assumpção, President, DATAPREV, Brazil

Mariana Câmpeanu, Minister, Ministry of Labor, Family, Social Protection, and Elderly, Romania

## Background

Social protection policies and programs need information from the design to the evaluation phase. Each program requires validated and updated data to enable timely decisions in order to improve performance and achieve results. The gradual establishment of a social protection system that organizes various programs and benefits for the same beneficiaries requires an information system that promotes (i) the exchange of data between programs, (ii) the potential unification of targeting mechanisms, (iii) the tracking and monitoring of poverty and vulnerability conditions of the population covered by the social protection system, and above all (iv) an efficient and effective management process for social services delivery to the poorest. The objectives of harmonization, rationalization, improvement and modernization of social protection programs require the support of high quality information.

In different regions of the world, several countries have undertaken the task of designing and implementing a management information system (MIS) for specific programs and also for supporting important reforms aimed at the effective and efficient delivery of social services.

## Country Cases

The purpose of this session is to share the experiences of three governments which from different starting points and for various reasons see the relevance of a management information system as a central tool for the development, strengthening and improvement of social protection systemic policies.

## West Bank and Gaza

In order to better organize different social services and benefits, funded by a variety of sources, and implemented by several public and private agencies, the Ministry of Social Affairs created a MIS under the Social Protection Strategy of 2011-2013. The system was developed with modules covering all the processes of the program's implementation (from registration and eligibility, to payments, and information for internal and external audits), including cross-checking procedures, control and monitoring of all transactions carried out for each household. The MIS allows for better linkages between planning, implementation and budgeting processes, aiming to move from social protection programs to a social protection system.

## Brazil

The National Register of Social Information (CNIS) contains more than 220 million records of individuals and over 35 million legal entities (companies or institutions) documenting the development of employment contracts, payroll, and contribution amounts for each registered individual. It is the main registry that allows Brazilians to receive pensions, social insurance in cases of illness or disability, and several other types of pensions or social benefits. The CNIS is also used to verify eligibility of citizens for several other public policies. In addition, it helps to provide consistency and prevent fraud in large social care programs. An important instrument of the federal government for policies aimed at low-income populations is the Unified Registry for Social Programs (CadÚnico) with 50 million records. In 2009, the CNIS became the legal reference for the automatic recognition of social security rights. Once the information is in the system, beneficiaries are no longer required to present documents to prove previous contributions and work contracts. This comprehensive information tool allows the individuals to transit along the social protection system.

## Romania

The social assistance system in Romania focuses on cash transfers for low-income households, the disabled, and families with children. In order to improve equity and efficiency, the Government is consolidating four means-tested programs for low-income households into one flagship program to: (i) strengthen oversight and control procedures, including detection of error and fraud using risk-based investigation; (ii) provide data matching, data quality audits, and consolidated beneficiary registries; (iii) set up a performance management monitoring and evaluation system; and (iv) improve the overall administrative efficiency of the system.

# Building Effective Information Systems Session Summary

This summary focuses on a few main topics: the evolution of systems including linkages to other programs, maintenance and privacy.

## Evolution of Systems

The session revealed that participants are concerned about how to how to develop their MIS and link it to other systems. The panelists responded that what's really important is to clarify what you need to know from the MIS to make decisions and manage your program. The MIS should be tailored to your situation. Developing a new system also requires that you think at the beginning about how to scale it up as your program expands. To do so, the presenters showed that in some cases management of information is included in Social Protection Policies which is a cultural shift. Such systems and cultural evolutions require that managers factor in ongoing training costs for all users at all levels (high level decision-makers to staff working on the system day-to-day).

Where you have multiple systems it is likely that they will have been developed over different timelines. For example in Brazil the CNIS is an old database that is being constantly renewed and gets much of its information from labor relations (employers and employees information) whereas as the unified registry is a more recent system and was set-up with a different mandate. Allowing these two systems to interact has supported cross-checking of information to ensure that relevant data is exchanged, incorporated and then different qualifiers applied.  Going back to the Brazil example, whether a person or family receives a grant from Bolsa Familia is not relevant, but might be relevant if that affects the total income of the HH (calculated by registry), you can also exchange ID data between the systems to ensure each is talking about same person and their relations to others as declared, are they alive or dead, whether this income will put the declared family above the eligibility level desired by the program etc. These cross-checks enable both institutions to keep working.  The same is found in Romania were those who get benefits have their income level verified with official income information. In the West Bank and Gaza the system works with NGOs who utilize Zakat funds to provide support to the poor ensuring that those families which receive cash transfers through the official government programs are different from those who get support through Zakat.

The panelists also emphasized that these systems will always be evolving, but that these evolutions take time.  In Brazil their system is 91 years old. It started with an ID database and now is evolving to try and offer it all other institutions to improve service delivery. The next step

will be cloud computing.  Romania has had a shorter time frame but also a clear evolution that is leading to an integrated approach to social protection systems to improve targeting and service delivery.

## Privacy

Management Information Systems naturally involve the collection and sharing of personal information about program beneficiaries. Conceptions of privacy are also evolving. All the presenters agreed that public data about citizens will remain protected and in government hands, often this is outlined in law as it is in Romania which institutes national laws that are aligned with the European privacy laws. Security concerns have shifted overtime and now systems need to also be concerned with fraud prevention protecting systems from unlawful alteration preventing people from reading and changing the data in the system, but IT security is always evolving as attacks on systems are always changing so IT security upgrades are necessary and always changing.
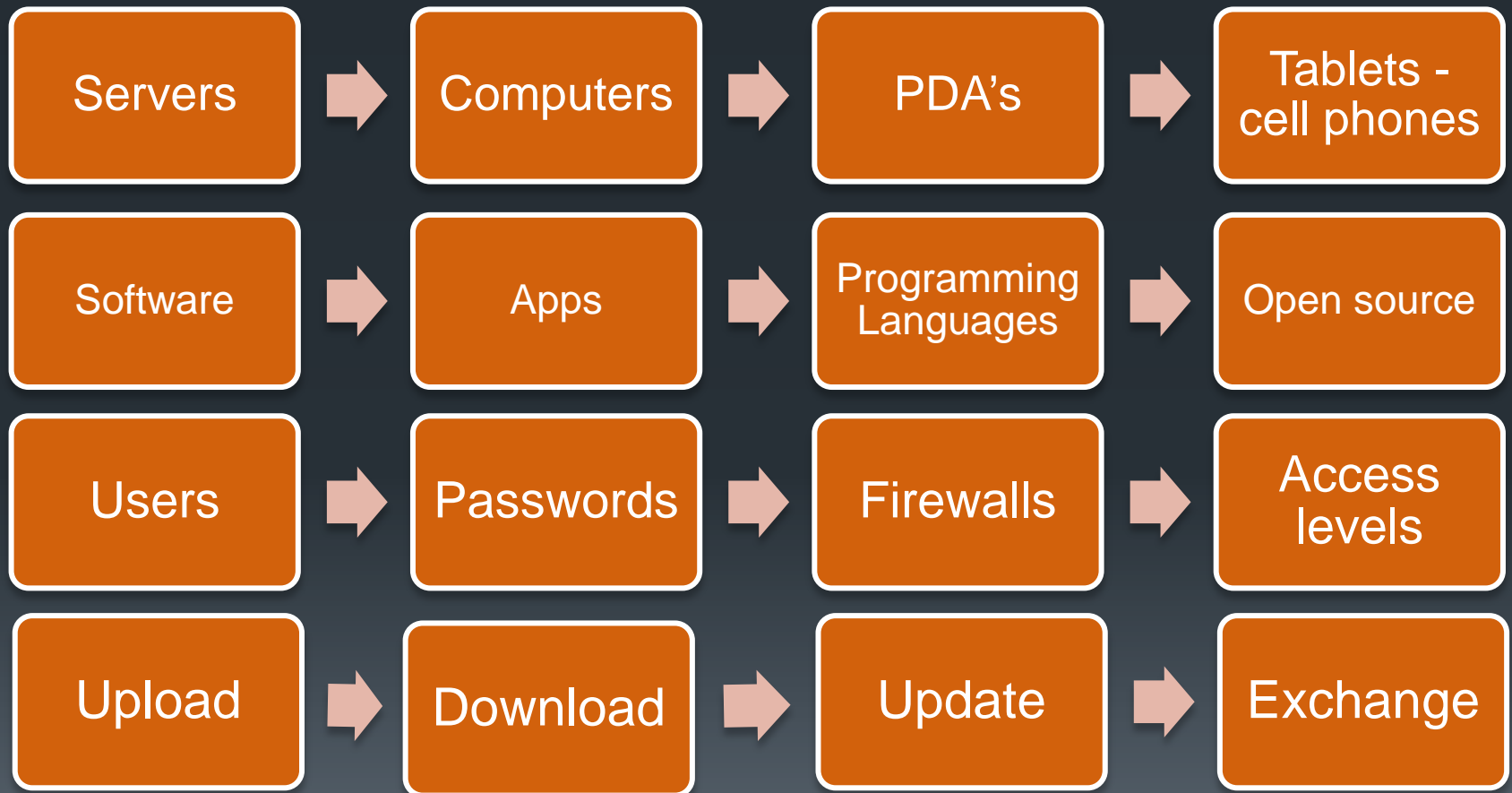
## Maintenance

Many participants were concerned with the ongoing cost and logistics of maintaining their MIS' and questions around what are the costs and how to take those costs into account were asked to the panel. As the chair closed and summarized the session it was emphasized that it is critical when designing a project form MIS development to include the first years of maintenance in the development cost as without first step of maintenance you will not have a system after development – maintenance is a necessary cost. As the Brazilian panelist discussed the funds spent on IT is well spent because it saves you more money. The panelists raised that point that the difficulty is that often we compare IT costs to the previous year's IT costs, which may not be the best metric since IT costs will rise as systems become more complex. Where IT costs save money is in comparison so not spending funds on IT. The panelists felt that IT is needed as it allows you to manage programs and take decisions. In Romania systems maintenance has been established by the legal framework for the programs as it's the backbone of a national strategic program addressing those who are in difficulty. The panelist iterated that they view the MIS as not just a tool but a step for a country in addressing the problems of the vulnerable and keeping track of them while respecting their rights.
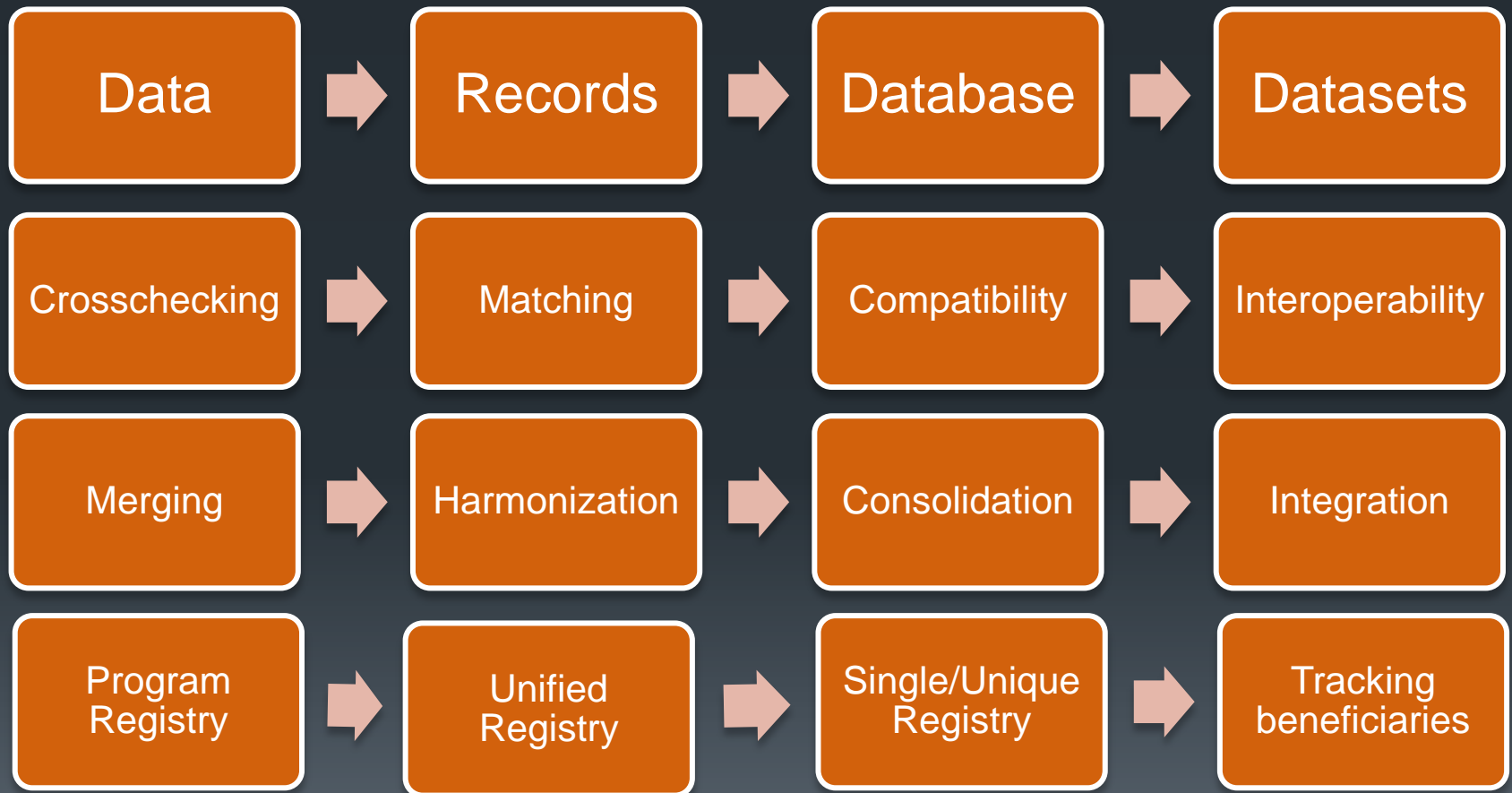
# Building Effective Information Systems

Brazil – Romania – West Bank/Gaza

# Many words related to Information Systems

| Servers | → | Computers | → | PDA's | → | Tablets - cell phones |
| Software | → | Apps | → | Programming Languages | → | Open source |
| Users | → | Passwords | → | Firewalls | → | Access levels |
| Upload | → | Download | → | Update | → | Exchange |

# More words …

| Data | → | Records | → | Database | → | Datasets |
|------|---|---------|---|----------|---|----------|
| Crosschecking | → | Matching | → | Compatibility | → | Interoperability |
| Merging | → | Harmonization | → | Consolidation | → | Integration |
| Program Registry | → | Unified Registry | → | Single/Unique Registry | → | Tracking beneficiaries |

# Which are the really important words?

- Decision – making (informed,evidence-based)
- Service Delivery (timely – effective)
- Accountability (comprehensive but differentiated)
- Efficiency and effectiveness

# Information System is …

- The main **tool** for development, strenghtening and improvement of a Social Protection and Labor System.
- Manager's **best friend**

# National Cash Transfers Program Palestine

## Dr. Thanaa Al Khozendar

# background

- The Palestinian National Authority has received financing  from the World Bank toward the cost of the **Social Safety Net Reform Project in 2004**

- the budget  was(10 million $) with three conditions (education, health, awareness). Stopped because no need in Palestine .

-  The massive enrollment was 160,000 family . based on the proxy means test (PMT) formula  depending on the poverty line from Palestinian Central Bureau of Statistics (PCBS)

- At  the  beginning  SSNRP cash transfer program make bi-monthly cash transfers to  5,000 very poor households.

- Now the benefactress abut 110,000 household by estimated budget  coast 120,000,000$ yearly at West bank & Gaza Strip funded by Palestine national authority , world bank, European  union.
-  the payment  every  three months the average between (70$ -170$) monthly for the family.

# Overview: Social Protection in Palestine

**Palestinian National Authority, Ministry of Social Affairs: Social Protection Sector Strategy 2014-2016 and Business Strategy.**

**Main program interventions and their objectives:**

Seeking to serve the overall national policy of **reducing poverty and unemployment and promoting social justice**. It is also empathized that these objectives together and the associated policies should be pro-poor and particularly sensitive to gender, youth, children, the elderly and persons with disabilities

# Overview: Social Protection in Palestine

. **The five objectives are as follows:**

- **Strategic objective one**: Develop systems for social assistance and empowerment of the poor and marginalized

- - **Strategic objective two**: Develop social services for vulnerable and marginalized groups

- **Strategic objective three**: Develop a national social security system

- **Strategic objective four**: Provide support, care, protection, rehabilitation and empowerment to detainees, ex-detainees, and families of martyrs and wounded individuals

- **Strategic objective five**: Reinforce governance and institutional arrangements for the social protection sector

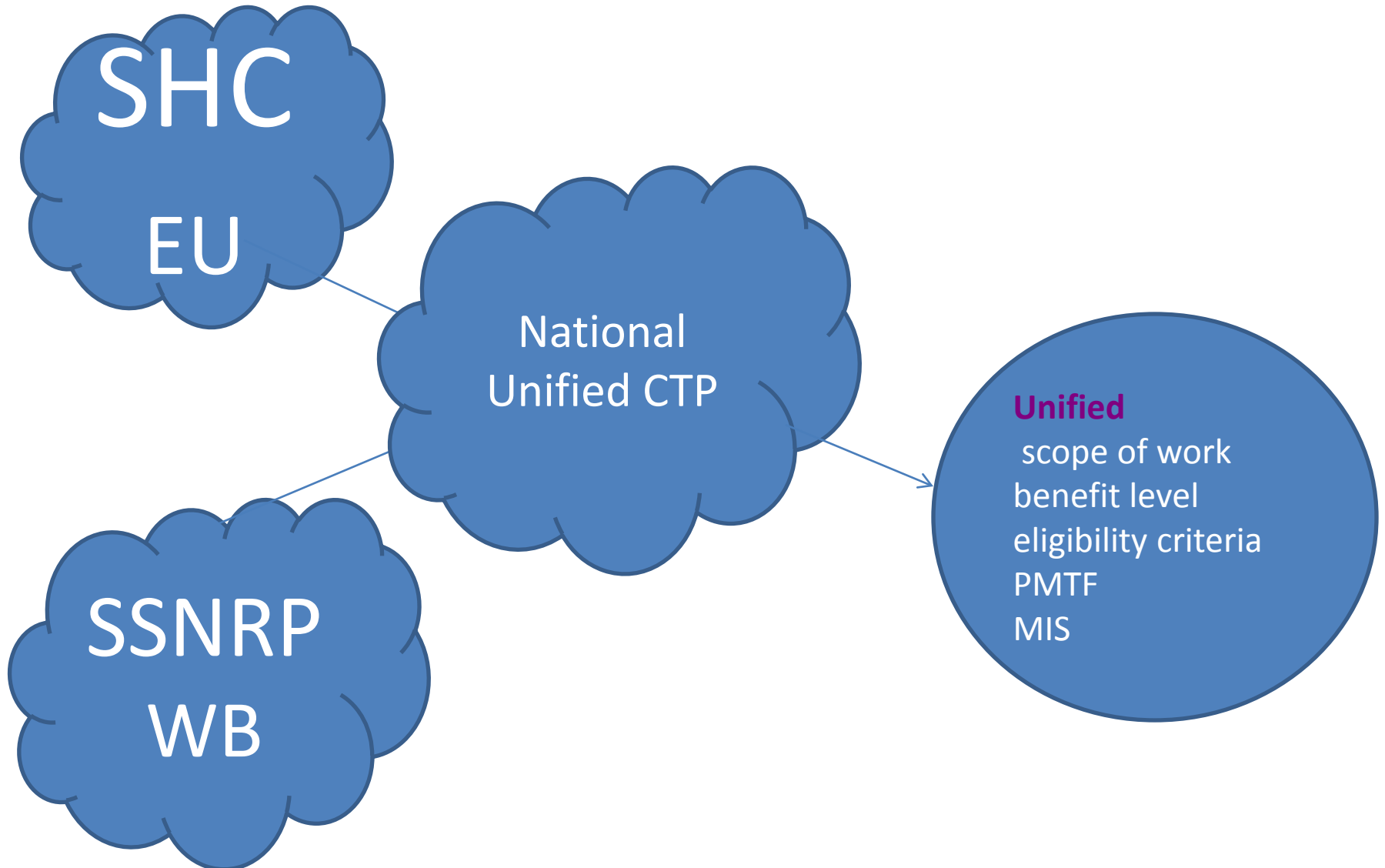# Overview: Social Protection in Palestine

**Key benefits**:

Transfers (regular cash paymets, emergency assistance, orphans sponsorship allowances, education subsidies, health insurance, economic empowerment)
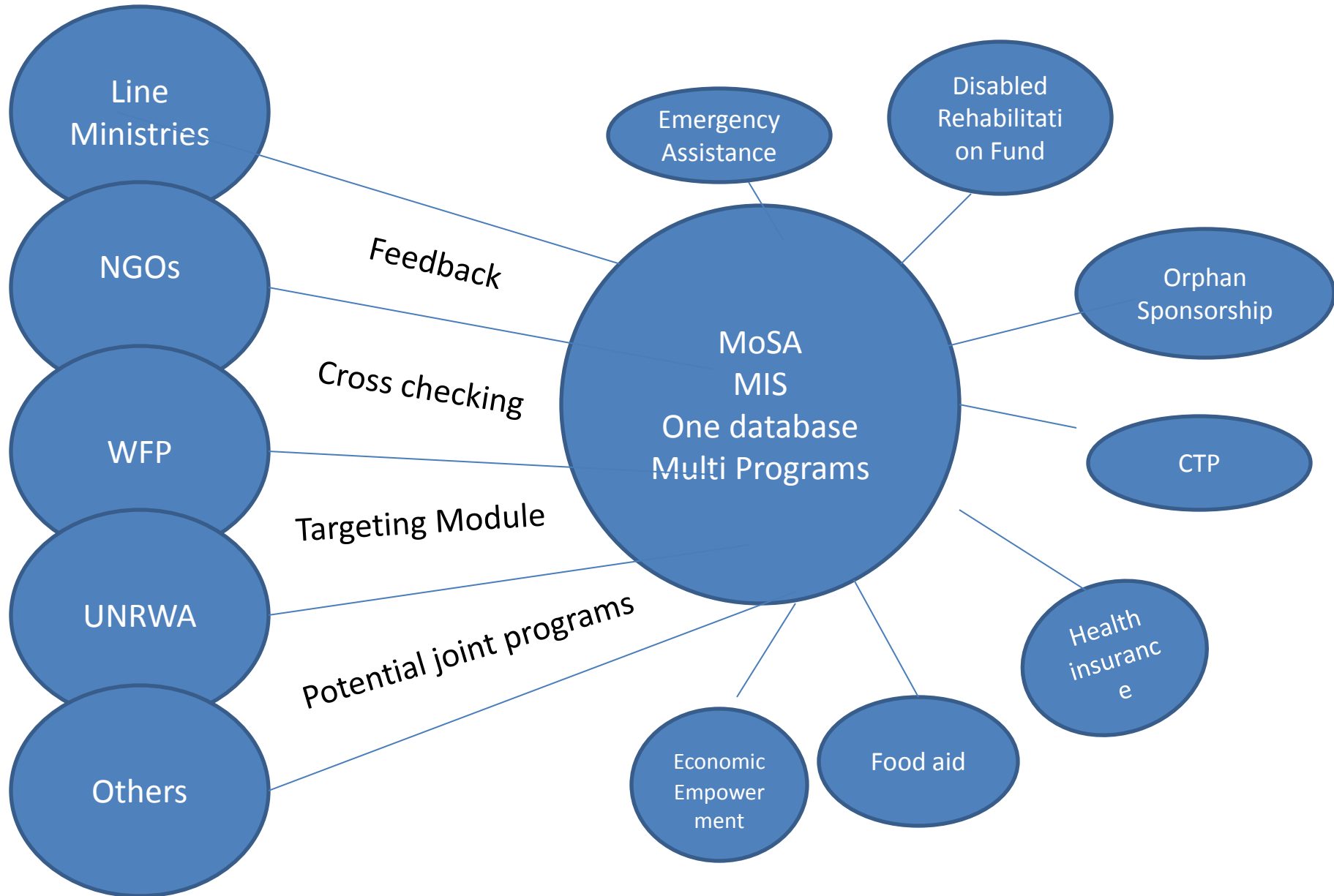
- **Mix sources of financing** (PNA,WB,EU,UAE,IDB,UNICEF,Italian cooperation, Spanish cooperation, UNFPA,...UNDP,....)

# Reforming Cash Transfers

SHC

EU

National
Unified CTP

SSNRP

WB

**Unified**
 scope of work
benefit level
eligibility criteria
PMTF
MIS

# MIS facilitates M&E

# MIS-Main characteristics

**IT Main Characteristics**

- Mosa has a web based system- SQL server data base.
- One database with malty programs
- **efficacy**: More than 1100 users from MOSA headquarter and district offices are working on the system on line even they can fill their vacations, personal hours, in addition to other programs "as mentioned in the last slide".
- **Efficiency**:
- After building the IT staff capacity's, currently, MOSA has will train progmmers, and they continuo with programming for other programs and update the current running programs.
- Mosa built portal which Meets all the needs of the ministry staff, and MOSA had a plan to be E-ministry on 2016.
- Build M&E and GIS system.
- Cost Saving
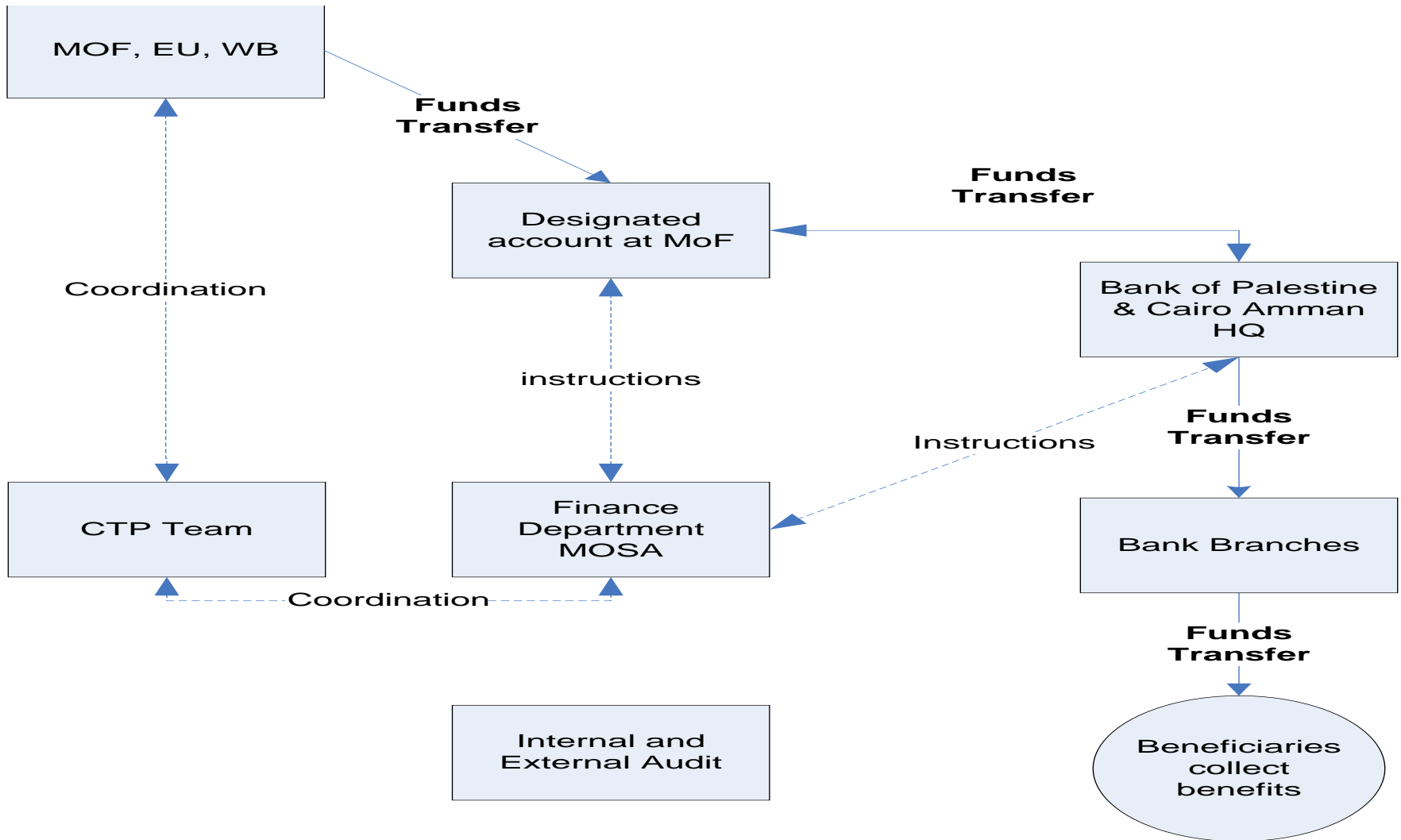- Using one national Mis system helps mosa to rationalize their budget, minimize the # of staff, ..

# CTP Institutional Structure

# Selection process

- Families are screened by local Social Workers
- Families are visited by Social Worker to fill up the enrolment form
- MoSA applies the PMTF that is a Proxy for the adult equivalent household consumption
- Families with scores
  - below NIS 596.36 are classified as extreme poor,
  - between NIS 596.36 and NIS 717.15 are classified as poor
  - above NIS 717.15 are classified as non poor.

# payment Cycle

MOF, EU, WB

Funds Transfer

Designated account at MoF

Funds Transfer

Bank of Palestine & Cairo Amman HQ

Coordination

instructions

Funds Transfer

Instructions

CTP Team

Finance Department MOSA

Bank Branches

Coordination

Funds Transfer

Internal and External Audit

Beneficiaries collect benefits

# *The Program Accomplishments and Strengths*

- *An MIS system has been developed to administer the program by controlling and monitoring all transactions carried out for each household.*

- *local area networks has been installed in all 17 ministry offices (muderia offices).*

# The Program Accomplishments and Strengths

- Over 160,000 HHs applicants information were entered into a database.

- All requested material and project manuals were developed.

- The mechanism for beneficiary payments has been established and agreed with the Ministry of finance and the commercial banks

# Obstacles

- The continues changes in the Governments has added a lot of complexity to the implementation policies of the program.

- Social workers Continuous training  to avoid reverting back to the older cash assistance programs procedures.

# Obstacles

- Lack of funding.
- The old fragmented mentality is still prevailing among stakeholders & donors.
- Donors alignment with national policy agenda is crucial.

# Obstacles

- Social Protection programs requires solid partnerships.

- National ownership is a cornerstone in any institutional arrangements.

# Lessons Learned

- Move from donor driven to national policy agenda.
- Alignment with national strategies.
- Move toward sectoral planning and budgeting.
- Linkage of planning with budgeting.
- Focus on results.
- Move from social protection program to SP system (rights based and protected by law)
- Develop the capacity of national financial systems towards nationally administered donations.

# Next Step

- Improve implementation:
  - Improve Grievance & Appeal mechanism
  - Improve Monitoring: Ongoing process based on MIS; Process evaluation
  - Enhance citizen engagement through establishing beneficiarie's council, using GIS as amonitoiring tools.

# Next Step

- Social Protection requires solid partnerships.

- Sectoral Planning strengthens tools for partnership, facilitates budgeting, distribution of roles.

- National ownership is a cornerstone in any institutional arrangements.

# Dataprev – Profile

## Dataprev
**Government Owned ITC company**

## Main clients

| |
|---|
| INSS |
| Ministry of Social Security |
| Brazilian Federal Revenue Office |
| Ministry of Labor and Employment |
| Ministry of Planning, Budget and Management |
| Ministry of Social Development and Combat against Hunger |
| and financial institutions |

# Infrastructure

- Data centers in Rio de Janeiro, São Paulo and Brasília;
- Five Units of Software Development;
- 3,800 employees.

## Mission

To provide information and communication technology solutions for the execution and improvement of Brazilian social policies.

## Vision

To be the leading provider of technology solutions for the management of social security, labor, social and civil records of the Brazilian population.

# Brazil in numbers

Total area: 8,514,876.599 km² (3,287,597 sq mi)

Population: 195.2 million (2011)

Employers*: 3.7 million (jan/2013)

Economically Active Population: 100.2 million or 60.2% (2011)

**Social Security benefits/pop.:**
30 milion or 16%

*Enterprises and others legal entities.

# Challenges for managing information necessary for Social Policies

Multiple sources and registries of personal data

Multiple sources and registries on employment contracts and wages

Connectivity and technology gap in several regions of the country

# CNIS
# National Database of Social Information

Multiple and heterogeneous information sources were integrated to create CNIS. IT allows Government to identify and match citizens and records of labor relations as well as other information necessary to manage social policies.

Companies

Personal data, revenues, tax payments and jobs information

Social Security

CNIS ▶ Database
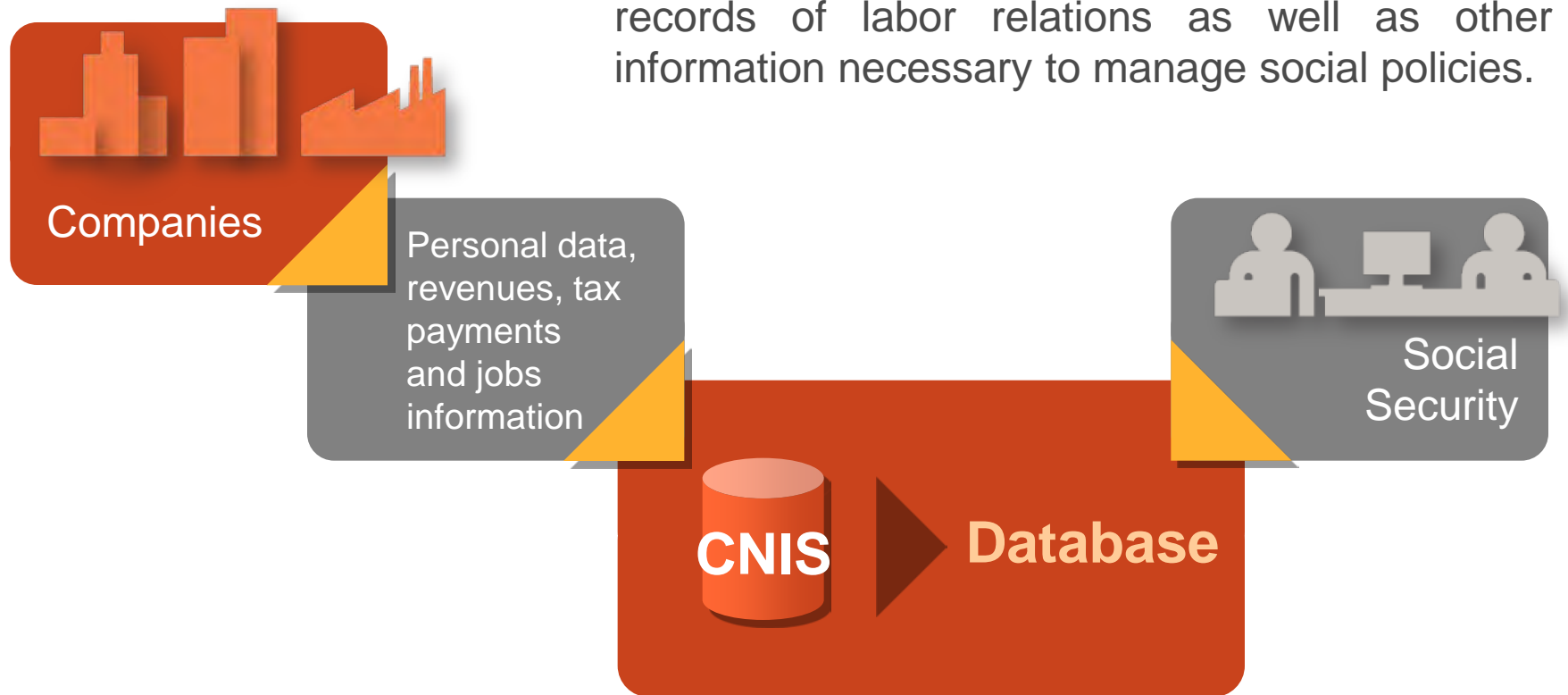
# Data quality

CNIS also acts as a "clearing house", continually improving its data quality: many methods and tools are applied including cross-reference between many different sources of data.

## Content – CNIS

| | |
|---:|:---|
| Citizens: | 230 million |
| Deaths: | 5.5 million |
| Legal entities: | 35 million |
| Employment relationships: | 700 million |
| Payments: | 20.2 billion |
| Individual contributions: | 2.3 billion |

FUNAI

CadÚnico

CNIS

INCRA

Ministry of Fishing
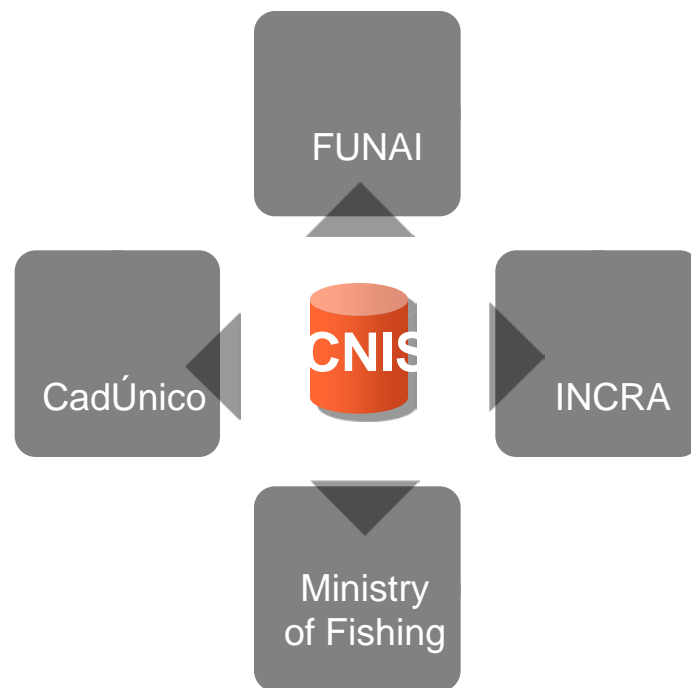
# Management and Governance

CNIS is managed by a consortium of public entities:
- Ministry of Social Security;
- Ministry of Labor and Employment;
- Ministry of Finance
- Bank of Brazil;
- Caixa Econômica Federal;
- Brazilian Federal Revenue.

**Hosted and Maintained by**

Dataprev

# Social Security
# Automatic recognition of social rights

In 2009, data stored in CNIS was considered legally sufficient as proof of entitlement to social security benefits.
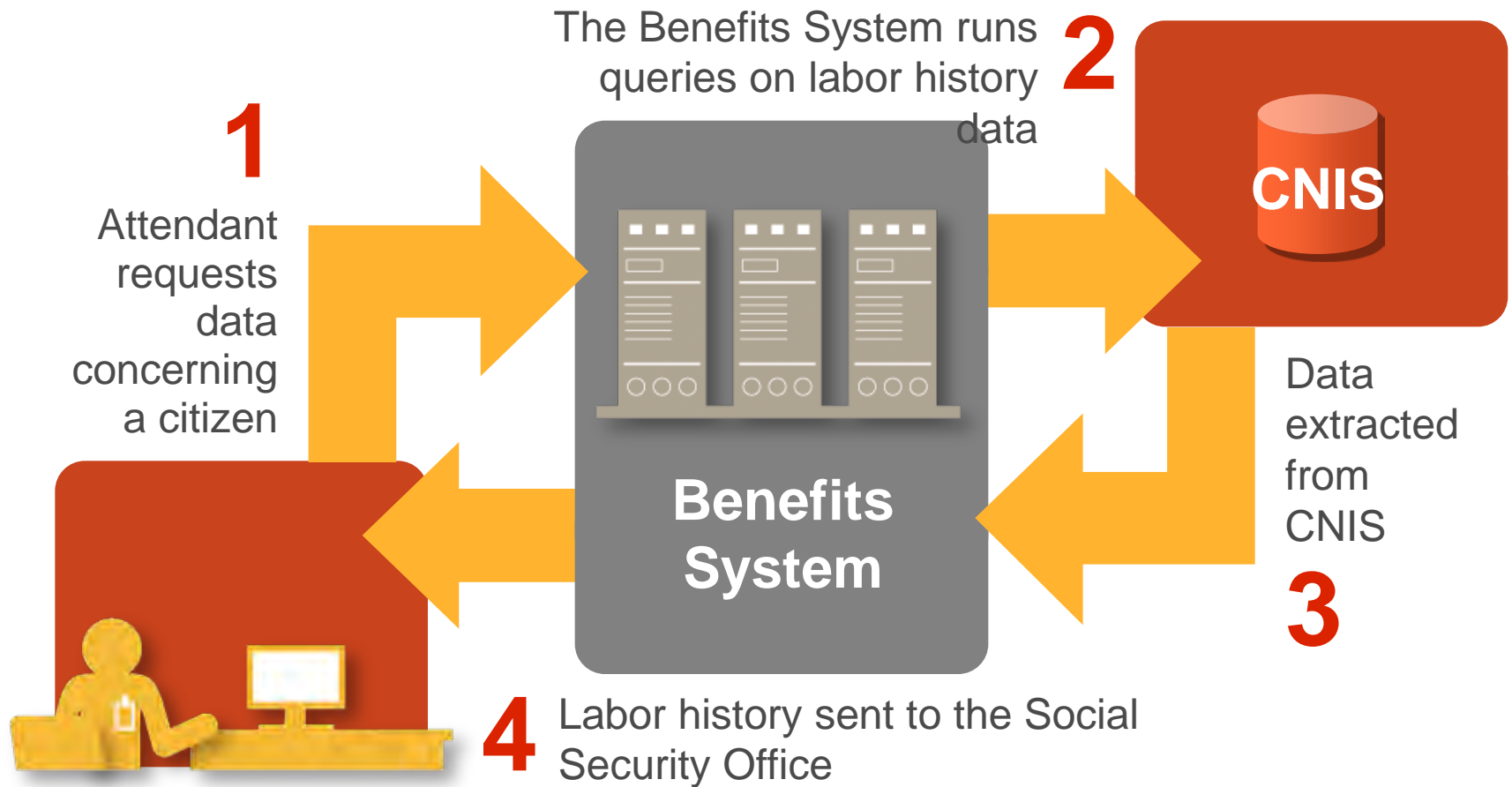
So if the beneficiary's records are complete there is no need to present further documentation of contributions or worked periods.

- Since 2009, retirement within 30 minutes;
  - ‣ 34 different types of benefits, the top five are:

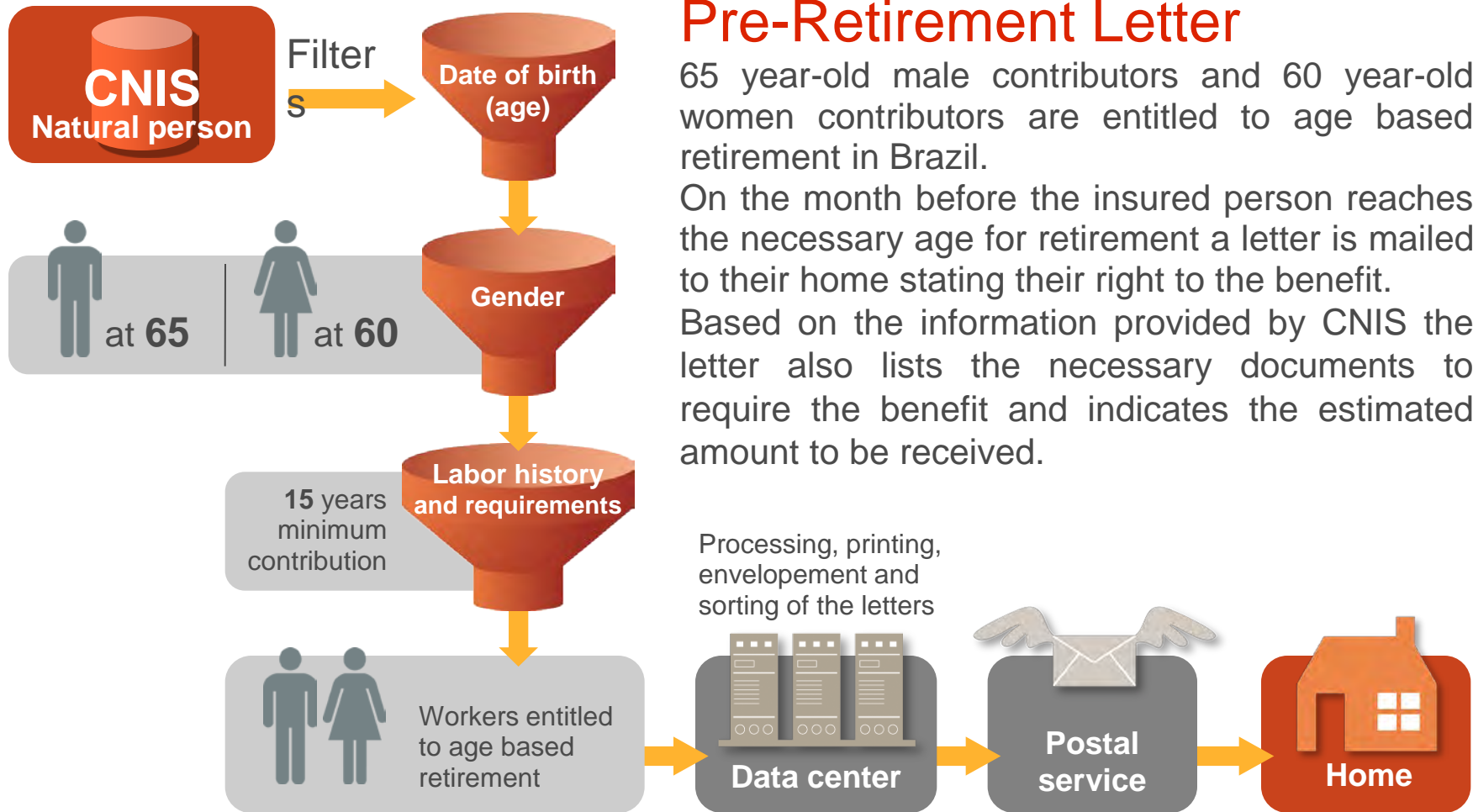|  | Total of benefits paid in 2013 |
|---|---|
| temporary incapacity benefit | 2,276,443 |
| age based retirement | 656,150 |
| maternity benefit | 628,409 |
| pension payment due to death | 442,058 |
| contribution based retirement | 297,593 |

# Social Security
# Automatic recognition of social rights



**1** Attendant requests data concerning a citizen

**2** The Benefits System runs queries on labor history data

**CNIS**

**3** Data extracted from CNIS

**Benefits System**

**4** Labor history sent to the Social Security Office

# Social Security
# Automatic recognition of social rights

CNIS
**Natural person**

Filters →

**Date of birth (age)**

**Gender**

**Labor history and requirements**

at **65** | at **60**

**15** years minimum contribution

Workers entitled to age based retirement

Processing, printing, envelopement and sorting of the letters

**Data center** → **Postal service** → **Home**

## Pre-Retirement Letter

65 year-old male contributors and 60 year-old women contributors are entitled to age based retirement in Brazil.

On the month before the insured person reaches the necessary age for retirement a letter is mailed to their home stating their right to the benefit.

Based on the information provided by CNIS the letter also lists the necessary documents to require the benefit and indicates the estimated amount to be received.

# Ministry of Labor and Employment
## Unemployment Insurance and Labor Intermediation Systems

The Unemployment Insurance Program provides financial assistance to unemployed workers and assists in seeking new jobs, including offers of professional qualification.

▸ 3.5 million of queries/month for Unemployment Insurance

People go to Ministry of Labour and Employment offices, where attendants browse data from CNIS, to check online if the citizen does not have another job nor receives any benefits. The Database also provides the wages of the last three months worked, basis for calculating the amount to be paid as benefit.

Benefits can last for up to 5 months. Each month an automatic check will be conducted prior to payment authorization to insure conditions for entitlement still apply.

▸ In 2013 approximately R$ 900 million (US$ 385 million) in payments were blocked as result of cross checking

# The Labor Intermediation System (IMO)

This system announces job offerings in companies and forwards them to registered workers. To do this it automatically collects data from CNIS on the skills and experience of job applicants.

‣ 4.4 million of queries/month for IMO.

‣ There are from over 33 million records of workers in the system.

‣ About 1 million companies were offering jobs in january 2014.

# Ministry of Social Development (MDS) Data Qualification

The Single Register for Social Programs (CadÚnico), maintained by MDS, is the basis for Brazilian social welfare programs aimed at families that are in a situation of poverty or extreme poverty*. Periodically, this register is cross checked with CNIS in order to insure the reach and veracity of the information.

▸ Registers 27.2 million poor families in the country, around 85.1 million Brazilians.

* These are families with incomes of up to half the minimum wage p/ person
  or total income of up to three minimum wages.

Civil Registry Information System, under implementation will gather records of birth, marriage, divorce and death, collected from 8,000 notaries nationwide. This will greatly enhance the identification aspects of CNIS.
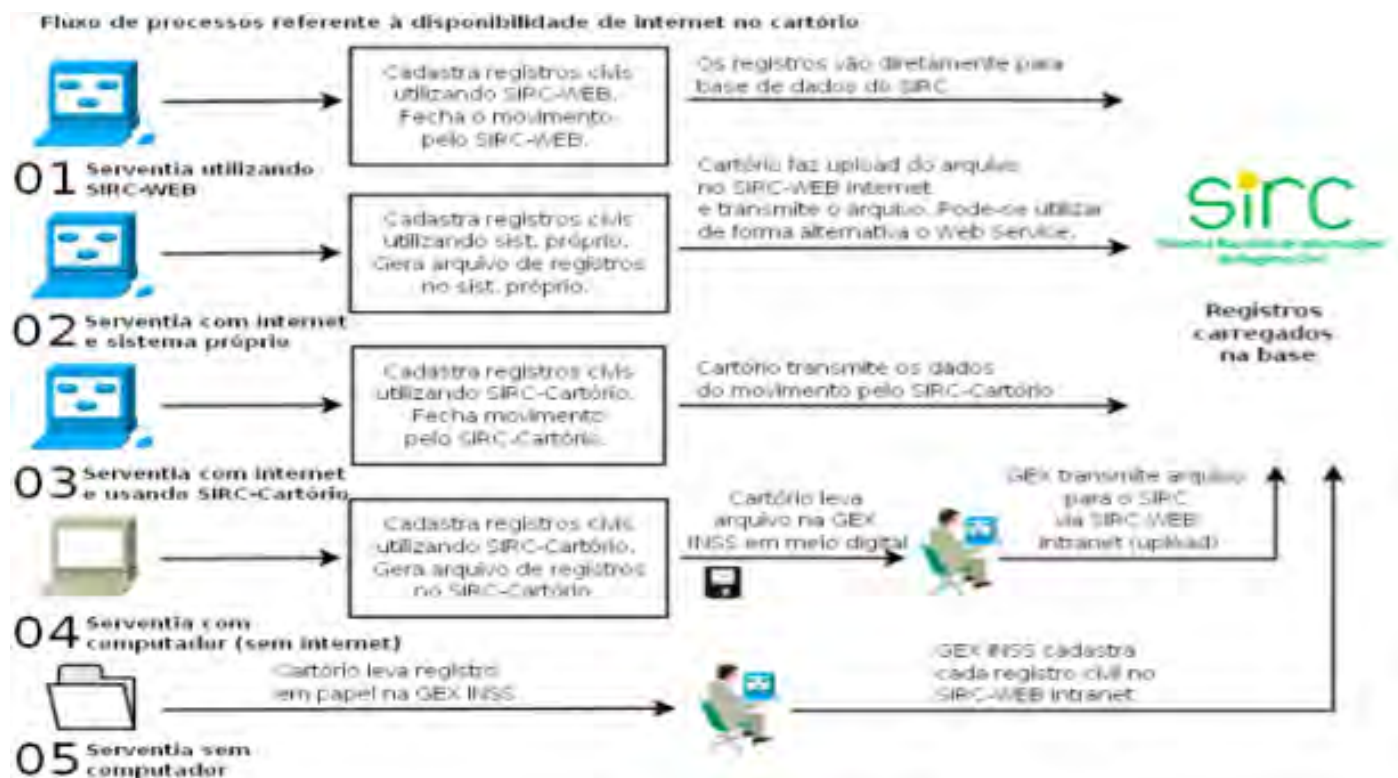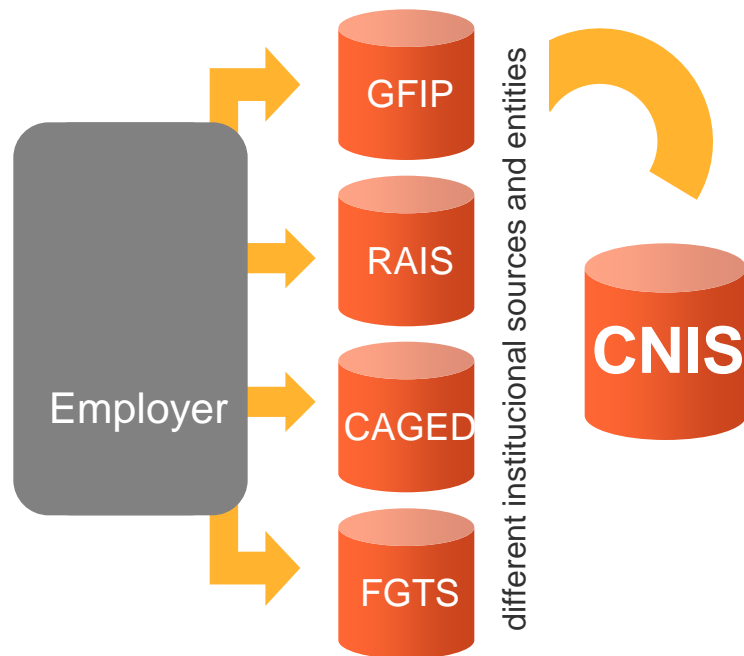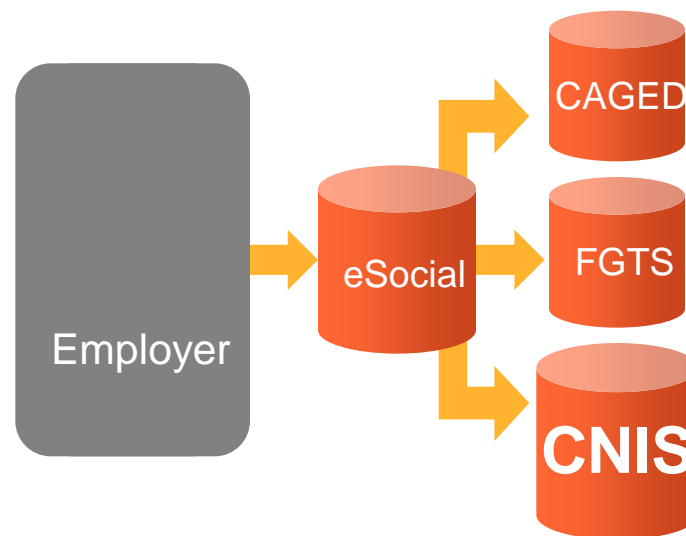
# Perspectives – eSocial

This is a project involving many federal agencies, which will unify the transmission of information concerning labor relations by employers or by individual contributors.

## Before



## After

# Rodrigo Assumpção
CEO
**Dataprev**
Social Security Information Technology Company

March, 2014

# Romania:
# The Management Information System (MIS) of the Social Assistance System

**Mrs. Mariana CAMPEANU**
Former minister of Ministry of Labor & Social Protection Member of Romanian Parliament

**Mr. Codrin SCUTARU**
Deputy Minister Social Assistance Policies – Ministry of Labor & Social Protection

# OUTLINE

1. Context

2. Development of the MIS

3. Features of the MIS: strengths & limitations

4. Plan to expand the MIS

# Context – Romania's Social Assistance system

➢ **Romania's Social Assistance System includes 20 programs administered by MoLFSP, and others administered by local governments;**

➢ **These programs fall into 4 categories:**

- family policy programs ;

- programs for people with disabilities;

- other programs (notably the social pension);

- means-tested programs for low-income households ;

# SAFIR today (2014) - Main facts

➢ **The MIS is known as SAFIR**

➢ **Covers 14 social assistance programs**

➢ **Processes around 5 million monthly payments**

➢ **Administered by 500 internal users**

➢ **Large programs managed through SAFIR** (beneficiaries/month)

○ *State Child Allowance : ~ 4.000.000 beneficiaries (children)*

○ *Child Raising Allowance:  ~ 200.000 beneficiaries (persons)*

○ *Family Allowances: ~ 350.000 beneficiaries (families)*

○ *Guaranteed Minimum Income: ~ 200.000 beneficiaries(families)*

*… out of a population of around 20 milions*

# Development of SAFIR

➢ **2007 – 2008:** Development (SAFIR, version1)

➢ **2009:** Pilot (2 counties)

➢ **2009:** Country-wide rollout

➢ **2010-2014:** Improvements of SAFIR mainly due to reforms to existing programs (Guaranteed Minimum Income, Family Support Allowance)

➢ **2013-2014:** cross-checking beneficiaries' data from SAFIR with information from other institutions (Civil Registry, tax authority, pension data, unemployment benefit)

  o First bulk data cross-check

  o 11 million beneficiaries' records checked

  o Data mismatches ➔ suspicious files ➔ ranked by risk level ➔ high risks suspicions were inspected and corrected
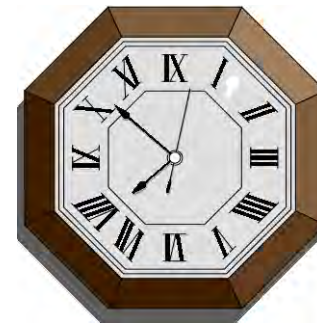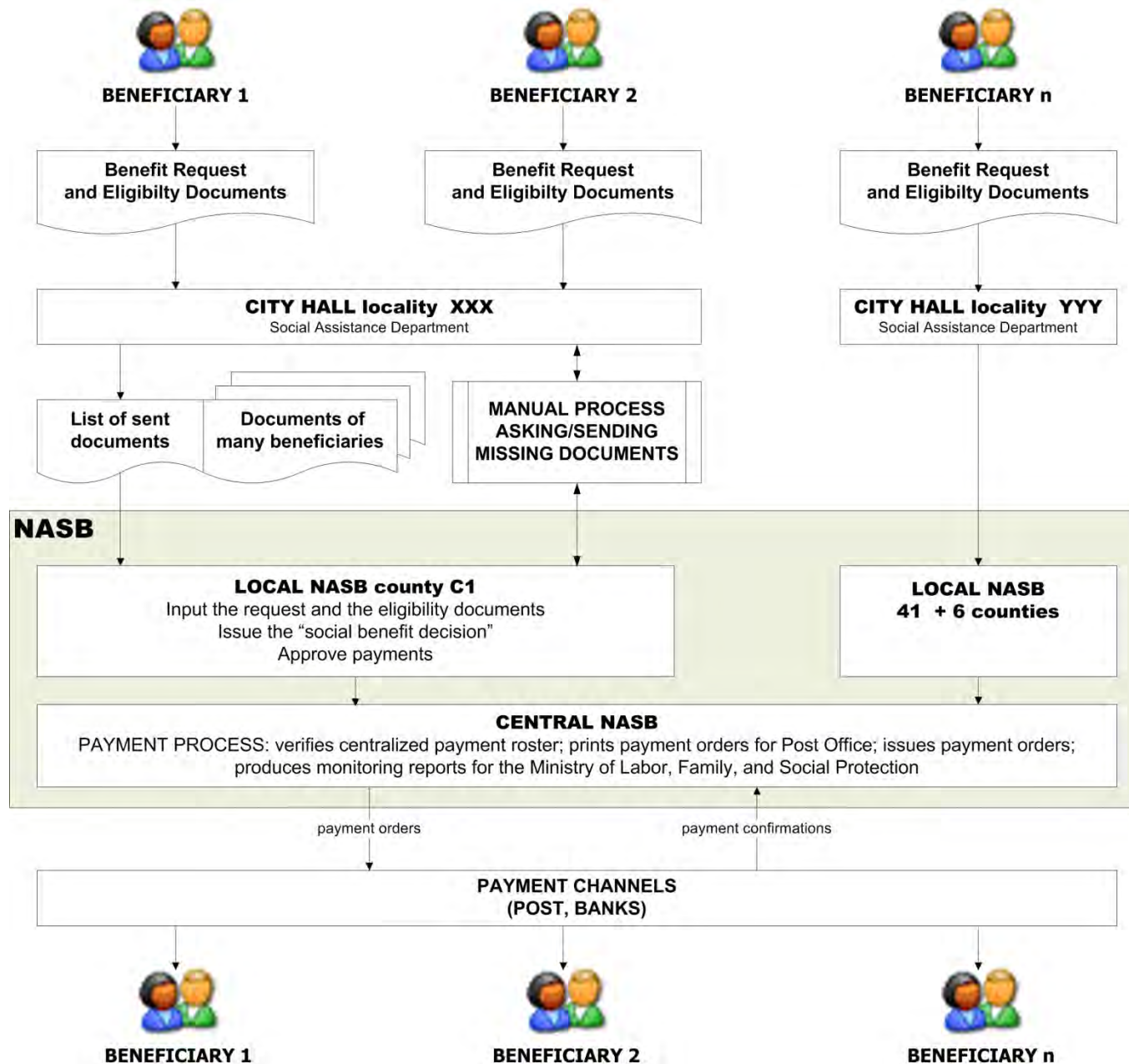
**SAFIR includes two business systems :**

➢ ***Operational system*** – management of the beneficiary data and payments for the social benefits
- o Data input modules
- o Data view module
- o Benefits rules management module
- o Payment module
- o Administration module

➢ ***Decision system*** -- business intelligence reporting and analysis
- ➢ Support system for decision making at central and county level
- ➢ Collects information from other government bodies
- ➢ Bulk data cross-check to identify suspicions

# SAFIR: Current Version Strenghts

- Centralized payment system for the largest social assistance programs

-  Centralized system and web base architecture

- Registry of beneficiaries with unique beneficiary file, including all receipts of social assistance

- Eligibility calculator; routine verification of eligibility status when the circumstances of the beneficiary have changed

- Monitoring the stock and flow of beneficiaries

- Easy data integration with other public databases using  an unique ID: Personal Numeric Code

# SAFIR: Current Version Limitations

- ➢ Does not cover all social assistance programs (e.g. heating and disability benefits)

- ➢ Lacks open access from other organizations (e.g. Social Inspection, City Halls)

- ➢ Not integrated with the accounting system

- ➢ Some modules still under-developed:

  - o Business Intelligence

  - o Monitoring & Evaluation

  - o Error and Fraud control

# Road ahead:
# Plans to expand the functionalities of the MIS

➢ Increase coverage of the MIS to new programs:

  o Minimum Social Insertion Program (MSIP), that consolidate all means-tested programs into a flagship anti-poverty program

  o Disability allowance programs

➢ New data entry modules:

  o direct data entry of eligibility and recertification at city hall level

  o data input using recognition software

➢ New and dedicated business module for the Social Inspection (planning inspections; recording results; analytics)

➢ Improved integration with Financial/Accounting System:

➢ Improved Decision-Maker Module

# The new version of SAFIR

Expected to have a range of benefits, including:

➢ Faster processing of applications;

➢ Better informed decision-making process;

➢ Reduced error and fraud;