

Guidelines on ICT

- from International Social Security Association (ISSA)

World Bank's Europe Central Asia Forum
Implementation of MIS and Modernization of Social Programs

Istanbul, 21-24.5.2014

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Outline

- The ISSA at a glance
- ISSA Centre for Excellence
- ISSA Guidelines on ICT
- Implementation: challenges and solution approaches
 - The case on integrated social protection programmes.
- Conclusions

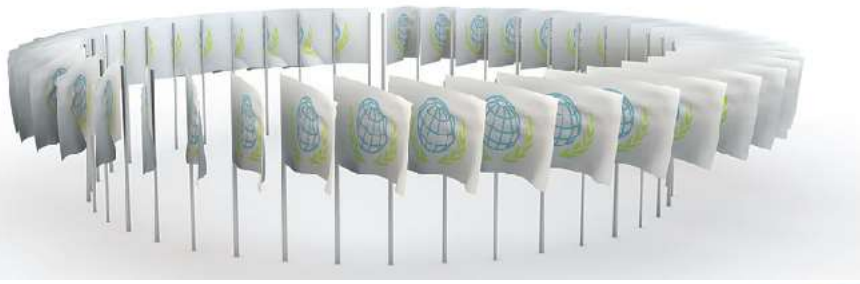


The International Social Security Association

- The leading international organization for social security institutions, departments and agencies
- Headquarters in Geneva (ILO)
- Founded in 1927, ISSA counts today 340 members in over 160 countries
- Provides information, research, expert advice and platforms for members to build and promote dynamic social security systems and policy worldwide



The ISSA at a glance



Founded in **1927**

1,500+

participants in ISSA events each year
(average)



340 member organizations

160 countries

HQ ILO Geneva

16
Liaison Offices
and focal points

50
Staff in Secretariat

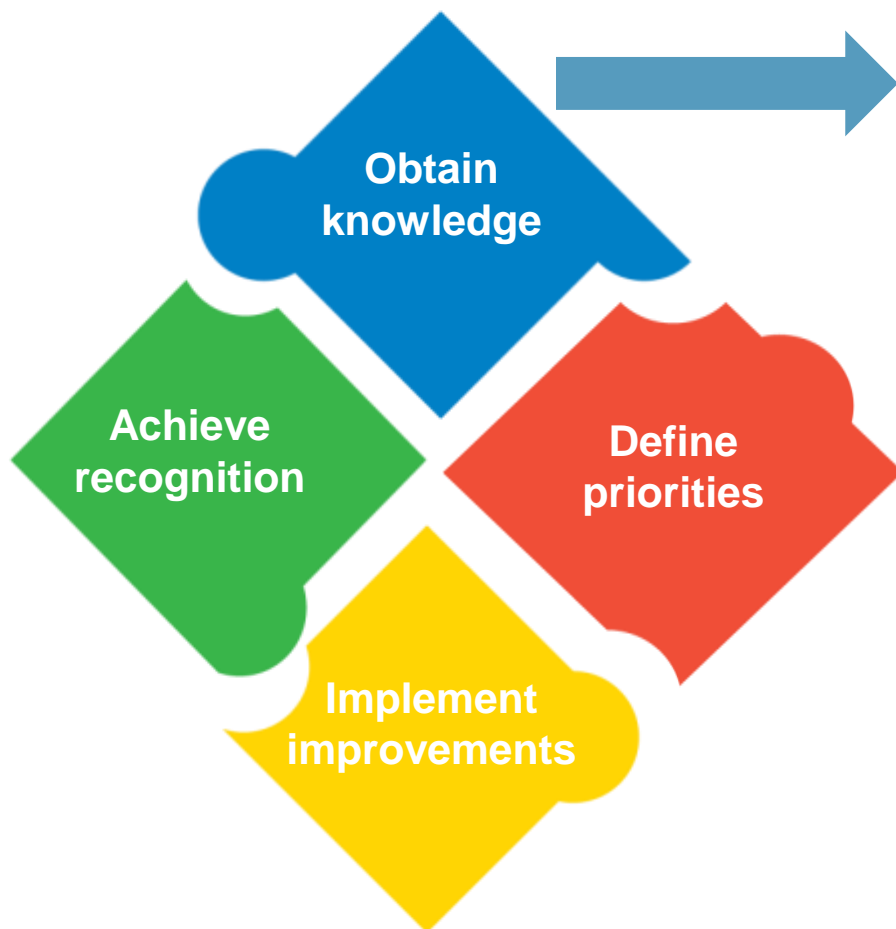
13
Technical
Commissions



The ISSA Centre for Excellence

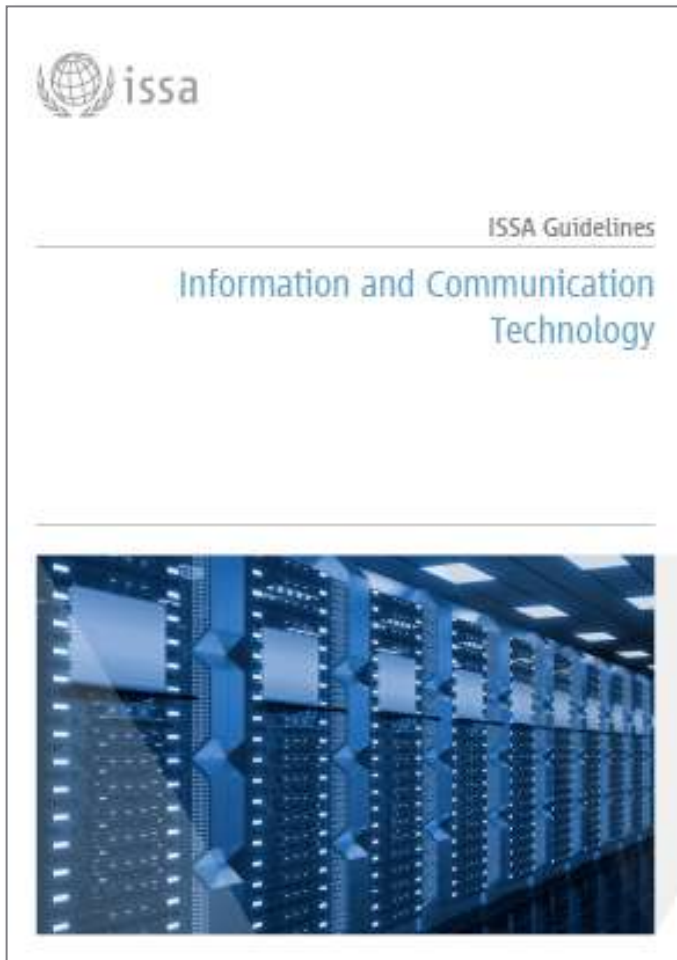
- **New set of ISSA services to encourage, facilitate and support member institutions' work towards administrative improvements.**
- **Offers a package of services to provide institutions with practical support to overcome the four typical challenges:**
 - To obtain the necessary knowledge to set the right objectives;
 - To assess gaps and needs, and define a prioritized action plan;
 - To implement improvement initiatives;
 - To evaluate progress and receive recognition for achievements.
- **The services of the Centre for Excellence are based on the ISSA Guidelines for Social Security Administration.**
- **Find out more: www.issa.int/excellence**

Steps to excellence



1. Select the set(s) of **Guidelines** important to your organization.
2. Complete the online **self-assessment**, and receive a prioritized action plan.
3. **Implement the Guidelines.** Connect with the ISSA **Support Centre** for advice and access to experts in your field
Participate in the ISSA **Academy workshops** for practical support.
4. **Evaluate** your progress and gain ISSA recognition.

ISSA professional guidelines and standards



■ The ISSA guidelines programme

- Setting internationally-accepted professional standards
- Guidelines are connected to self-assessment tool and good practices

■ Guidelines for the following areas:

- Good governance
- Quality of social security services
- **ICT in social security**
- Actuarial standards and practices
- Contribution collection and compliance
- Investments
- Prevention
- Rehabilitation activities.

ISSA Guidelines on ICT - Context

■ **ICT is an indispensable enabler in social security systems:**

- Often spells the difference between processes that can or cannot be done.
- It's a critical factor for political success, but also for failure.

■ **Growing complexity and *critical nature* of ICT in social security.**

- ICT-based social systems increasingly sophisticated and “mission critical”.
- High socio-economic impact of social programmes.

■ **Permanent evolution in social policies and programmes:**

- Articulation, Coordination and Integration of social programmes.
- Preventive approaches to deal with error, evasion and fraud.
- Empowering users and promoting self-service capabilities.

■ **Continual austerity and budget control:**

- Increasing scrutiny on effectiveness and efficiency of ICT-related expenses.



ISSA Guidelines on ICT – Main goals

- **Provide a framework to support the corporate application of ICT in social security.**
 - Addressing not only technical aspects but also Governance and investments issues.
 - Referring to good practices and case experiences.
- **Reinforce institutional capacity on applying ICT.**
 - Provide the ICT staff with a comprehensive guide.
- **Increase awareness of Board and Management.**
 - Provide CEO, Board and Management with a high-level guidance about the main elements for effective and efficient use of ICT.
- **Long-term → contribute to building common solutions**
 - Standardized ICT-based approaches and solution for social security.

Guidelines on ICT: general structure

➤ **ICT Governance and Management**

More effective and efficient use of ICT, by aligning ICT strategy with the business.

➤ **Investments on ICT and value Management**

More appropriately investing and contracting ICT products and services.

➤ **ICT Services Delivery**

Better quality of ICT services, in order to meet the needs of the business.

➤ **Data and Information Management**

More effective and efficient planning, control and exploitation of information resources along its life-cycle.

➤ **Key technologies:**

- Interoperability.
- Data Security and Privacy
- Mobile Technologies

More effective implementation of integrated and citizen-oriented social security systems.

A.1. ICT Governance

- ▶ Guideline 1. ICT governance framework
- ▶ Guideline 2. ICT governance processes

A.2. ICT Management

- ▶ Guideline 3. ICT strategy and innovation prospective
- ▶ Guideline 4. Operationalizing social security functions through ICT
- ▶ Guideline 5. ICT management processes
- ▶ Guideline 6. Managing service continuity

A.3. ICT Investment and Value Management

- ▶ Guideline 7. Defining concept of value and approaches to optimize its realization
- ▶ Guideline 8. Managing ICT investments through a portfolio-oriented approach
- ▶ Guideline 9. Monitoring and evaluation of ICT-enabled investments

A.4. ICT Service Delivery

- ▶ Guideline 10. Software development and application management
- ▶ Guideline 11. Implementing e-services
- ▶ Guideline 12. Managing technical support
- ▶ Guideline 13. ICT operations management
- ▶ Guideline 14. Service desk and request fulfilment
- ▶ Guideline 15. Managing events, problems and incidents

A.5. Data and Information Management

- ▶ Guideline 16. Developing a data management framework
- ▶ **Guideline 17. Developing a master data model and system**
- ▶ Guideline 18. Data integration
- ▶ Guideline 19. Data quality management
- ▶ Guideline 20. Mechanisms for information retrieval and analysis

B. Key Technologies

B.1. Interoperability

- ▶ Guideline 21. Institutional interoperability framework
- ▶ Guideline 22. Workplan for the implementation of interoperability-based social security
- ▶ Guideline 23. Institutional interoperability application model
- ▶ Guideline 24. Institutional semantic interoperability
- ▶ Guideline 25. Interoperable shared data services (basic registries)
- ▶ Guideline 26. Institutional technical standards on interoperability

B.2. Data Security and Privacy

- ▶ Guideline 27. Management framework for information security
- ▶ Guideline 28. Data privacy policies and regulations
- ▶ Guideline 29. Security measures for data privacy
- ▶ Guideline 30. Comprehensive access control system
- ▶ Guideline 31. Security in database systems
- ▶ Guideline 32. Security in networks and communication systems
- ▶ Guideline 33. Security in application development
- ▶ Guideline 34. Security in ICT operations

B.3. Mobile Technologies

- ▶ Guideline 35. Institutional framework for the application of mobile technologies
- ▶ Guideline 36. Variety of mobile services to be provided
- ▶ Guideline 37. Mobile device-based user identification
- ▶ Guideline 38. The mobile device as a gateway for payments and contribution collection
- ▶ Guideline 39. Using advanced hardware components included in mobile devices

Guideline 17. Developing a master data model and system

The institution develops a unique master data model, which standardizes the definition of the core objects and relationships (e.g. persons, employers, social programmes, etc.). The master data system fosters the consistency of social security data across all social security programmes. The master data model should be of a highly structured nature, covering all social security programmes. On the other hand, objects as included in the model (e.g. benefit payment)

External references

DAMA Data Management Body of Knowledge (DAMA DMBOK)

DAMA, 2009.
English.
International.
Keyword(s):
available online <http://www.dama.org/kw/pages/?pageid=3364>

Master Data Management Book

Loxton, David, 2008.
English.
International.
Keyword(s):
available online <http://mdmbook.org/>

OWL. Web Ontology Language. W3C OWL Working Group

W3C.
English.

Structure

- The management should commission a study to identify the core objects covering the core objects for social security, taking into account the characteristics of the social security system.
 - Persons' data, including family ties
 - Employers' data;
 - Social programmes;
 - Relationships between persons and employers, working periods, etc.;
 - Relationships between persons and social programmes (affiliation relationship), registration periods and characteristics of the affiliation.
- A specialized organizational information system. To establish such a system, the following have to be well defined and implemented:
 - The master data model and its institutional data governance
 - The application model, inter-institutional technical standards

Mechanism

- The ICT unit should define the master data system. The project should be implemented in a structured manner.
- The project should identify the metadata that should be developed.
- To ensure the accuracy of the data, a semi-formal language (e.g. XML) should be used.
- The implementation of a master data management system requires the development of master databases, specialized technologies have been developed for them.
- ICT staff (in the main) should administer the master data system, and business staff should carry out data stewardship and data specification tasks.

Good practices

Social Security Institution Data Bank
Sosyal Güvenlik Kurumu | Turkey | 2010

Modernization and establishment of the SI Information system for better performance and fight against corruption
Social Insurance Institute | Albania | 2013
www.ssi.gov.al/

Individual accounts project

Caisse nationale de retraite et de prévoyance sociale | Tunisia | 2011
Implementation year: 2011
Topics: Administration / Management, Compliance and contribution collection, Information and communication technology
PDF: [EN](#) / [FR](#) / [DE](#) / [ES](#)

Electronic records management

Caisse nationale de retraite et de prévoyance sociale | Tunisia | 2011
Implementation year: 2009
Topics: Old age / Pensions, Administration / Management, Information and communication technology
PDF: [EN](#) / [FR](#) / [DE](#) / [ES](#)

The New Business Process in contribution collection

Social Security and National Insurance Trust | Ghana | 2011
Implementation year: 2010
Topics: Administration / Management, Compliance and contribution collection, Information and communication technology
PDF: [EN](#) / [FR](#) / [DE](#) / [ES](#)

Implementation: challenges and solutions

■ Specific challenges in social protection / social security:

- **Integrated social programmes** → Large-scale nation-wide projects :
 - Multiple instruments and actors.
 - For example: “Bolsa Familia” in Brazil, Argentina, Chile (SP+Health), Mexico, Uruguay (SP+Health), Thailand (Health).
- May take several years and/or involve several industry providers.
 - Modularized design and standards-based ICT strategy.

■ Input to the project’s Conceptual Design:

- Medium & long-term perspective of social policy needs.
- Institution’s ICT roadmap aligned to social strategies.
- Increase involvement of Gov. CEOs → “IT literacy” !

ICT Governance
& Management
[Guidelines]

■ Improving effectiveness Industry/Gov. interaction:

- Joint discussions on strategic aspects of ICT application.

ISSA ICT Industry
Forum.

■ Procurement:

- Define the **value** of the project in terms of social and political outcomes.

ICT Invests. and
Value Managm.
[Guidelines]

Implementation of integrated SP programmes

■ Integrating social programmes → improve social policy application:

- Increase focus on beneficiaries combining required instruments.
- Improve coordination between different social protection components and involved actors. Reduce fragmentation.
- Improve monitoring and control (especially in CCT).

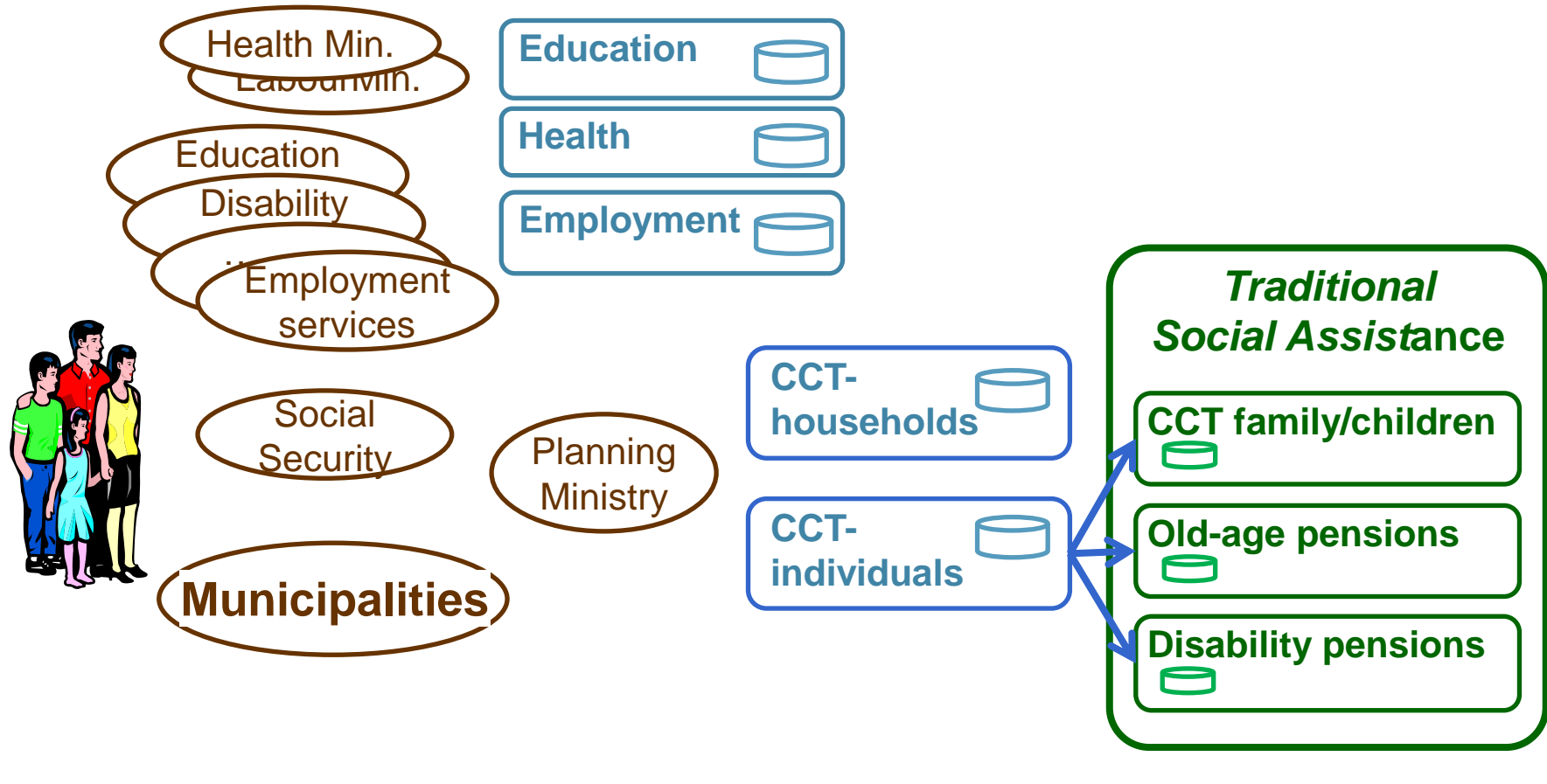
■ Implications and challenges:

- Connect processes/systems of different programmes/institutions.
- Relate heterogeneous data formats and concepts (e.g. household, head of family, unemployment status, etc.)
- Ensure Data Quality amidst diverse criteria and rules and data quality .
- Enforce security rules and privacy regulations.

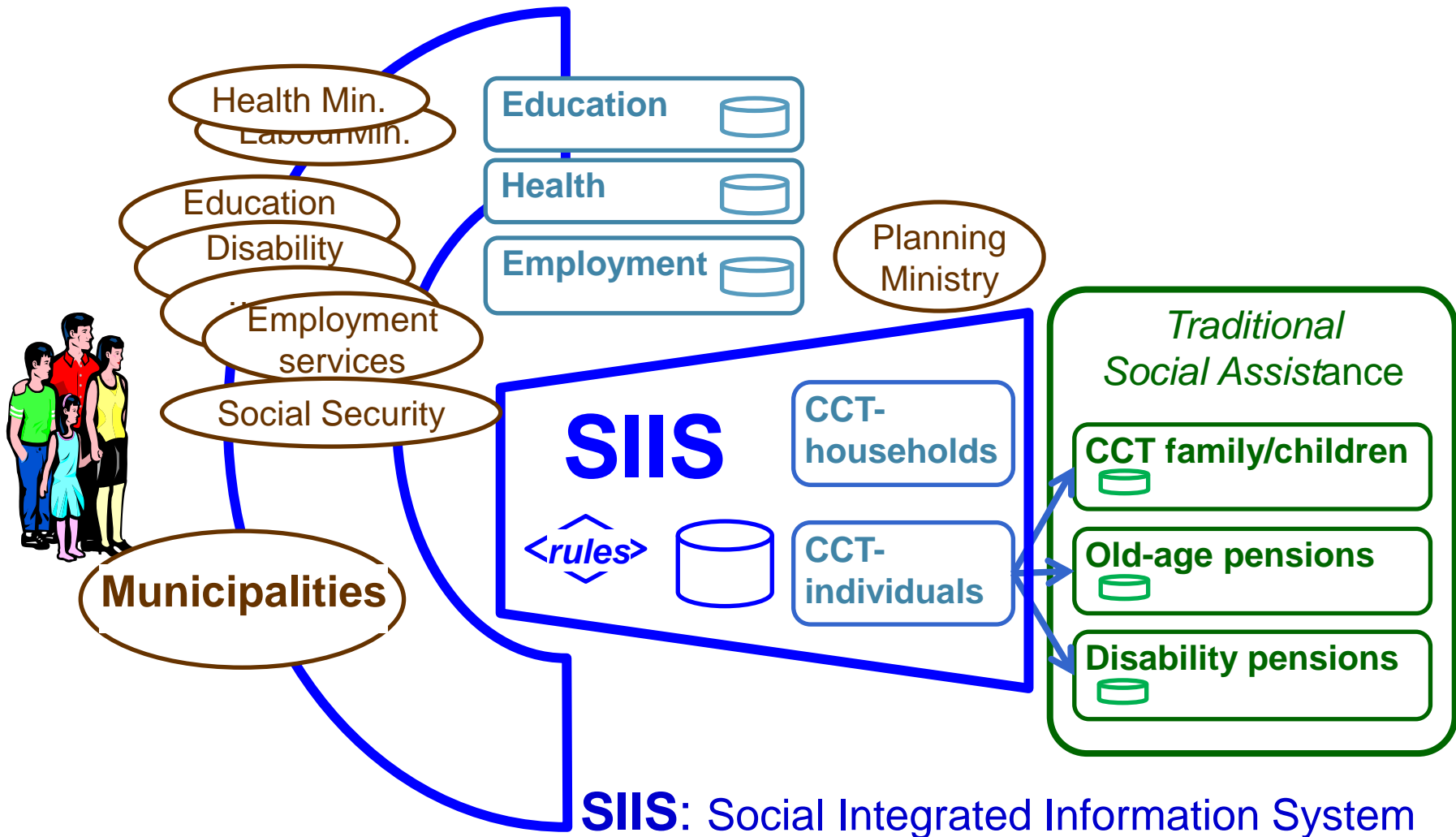
■ Solutions (→ Guidelines):

- **Interoperability.**
 - Technical (systems)
 - Semantic (business concepts)
 - Shared data resources.
- **Data Management:**
 - Data Quality.
 - Data Governance.
- **Data Security:**
 - Data access control..

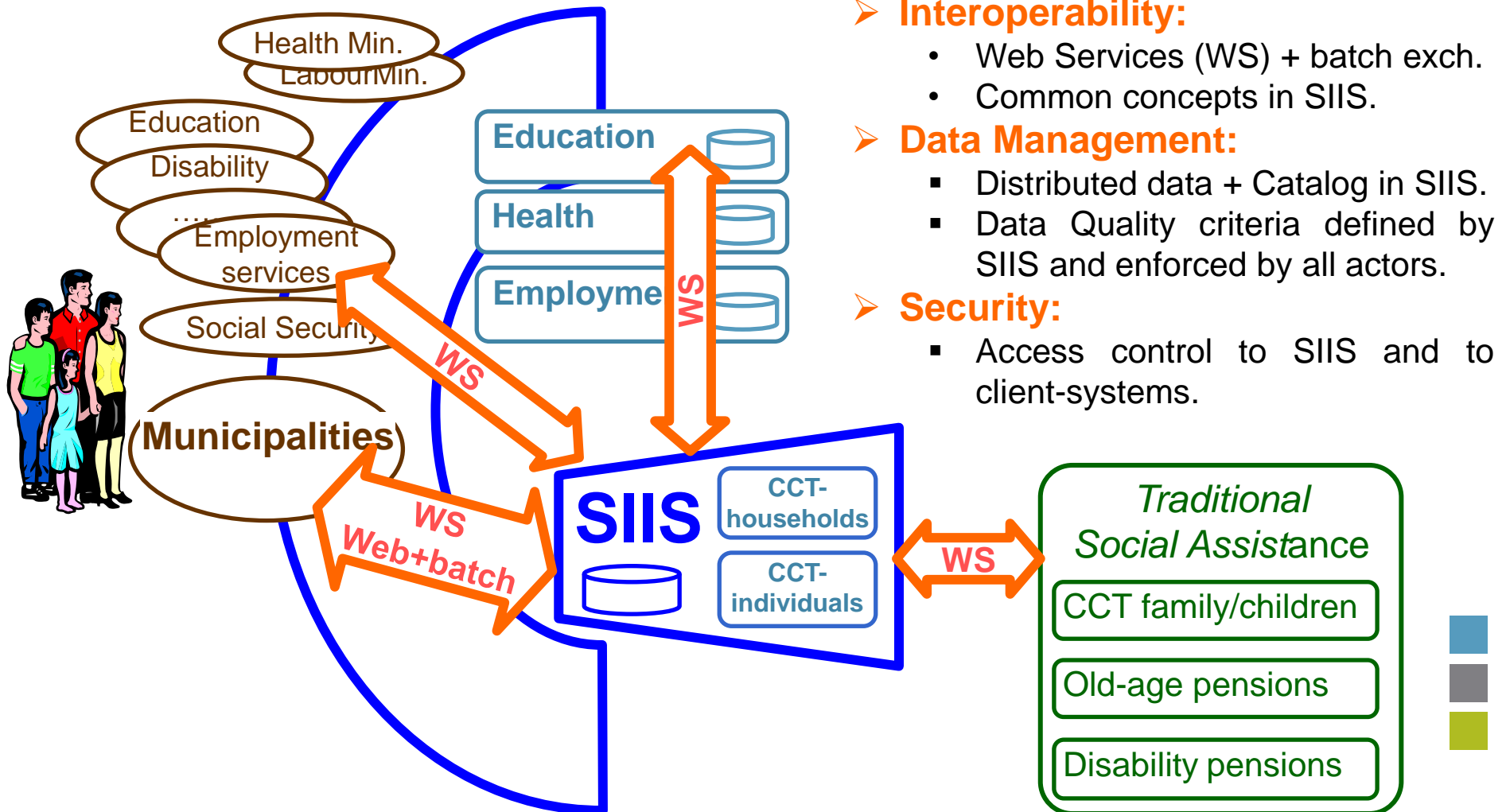
Example: Chilean integrated social programme



Example: Chilean integrated social programme



Example: Chilean integrated social programme



➤ Interoperability:

- Web Services (WS) + batch exch.
- Common concepts in SIIS.

➤ Data Management:

- Distributed data + Catalog in SIIS.
- Data Quality criteria defined by SIIS and enforced by all actors.

➤ Security:

- Access control to SIIS and to client-systems.

Conclusions

■ Complexity and impact of social programme implementation:

- Require effective and efficient responses → Understand *the essentials*
- Manage evolution, twofold: social functions and technologies.
- Success factors:
 - Strategic plans: ICT strategy aligned with institution's social policy goals.
 - Industry/Government collaboration.

■ “Structural” issues and challenges in social arena:

- High costs, due to risks of large projects and low reuse of solutions.
- Few sectorial solutions and lack of standards supporting modularization.

■ Towards common solutions and sectorial standards (SP/SS):

- Including relevant technical, methodological and experience knowledge.
- Provide a common framework and support to the SP/SS community.
- Goals of ISSA Centre for Excellence and Guidelines on ICT :
 - *Current developments:* Master Data models and international agreements.

Thank you very much

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