

Emerging Technologies in social security: International perspective

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Outline

- Emerging technologies and social security
- Experiences applying emerging ICT
- Analysis: Barriers and risks vs. Opportunities
- Conclusions and ongoing activities



Emerging technologies and social security

- **Emerging technologies still not well known neither fully proven:**
 - Pilot applications, experiments and laboratories.
- **Technologies currently applied in social security institutions:**
 - Advanced web portals with digital identity and personalized services.
 - Inter-institutional operations through e-Government platforms.
 - Analytics and their application on Big Data
 - Artificial Intelligence (AI)
 - Blockchain
- **For what purpose ?**
 - Tackling hard problems.
 - Innovative social security measures through (innovative) ICT solutions.
- **Emerging technologies are being strategic enablers for improvements and transformations. Main business areas:**
 - Improving customer services:
 - Personalized web portals, intelligent assistants, involving other partners.
 - Understanding new phenomena and developing preventive measures.
 - Improving institutional capacity to apply technologies for transformations



Emerging ICT to improve customer services (1)

Business areas	Project	Institution
Value-added Web self-services	Website with digital identity and mobile-oriented services for medical certificates .	ZUS, Poland
	Highly secured online system to follow-up and report sickness benefits by doctors and beneficiaries.	NAV, Norway
	Disability assessment and rehabilitation.	MLSP, Azerbaijan
	Online and automated systems enabling old age pension calculation and application.	NAV, Norway
	Financial planning platform backed by algorithm and single customer view	EPF, Malaysia
Identification and Authentication	Using electronic SIMcard-based personal ID for secured online transactions.	HVW/CAPAC Belgium
	Proof of life based on facial and voice recognition	SVB, Netherlands
	Facial recognition for identity proof in pension payment.	Ministry Social Security China
	Aadhaar: Digital and biometric-based unique personal Identifier	India



Emerging ICT to improve customer services (2)

Business areas	Project	Institution
Chat Bots and Intelligent assistants	Intelligent assistance in m-Services through Conversational Agents based on Artificial Intelligence	GOSI. Saudi Arabia
	Chatbot and exploring apply AI & deep learning to assist/automatise decision making in benefits case management	HVW/CAPAC Belgium
	Chatbots to support beneficiaries' inquiries	EPF Malaysia KELA, Finland
Services through E-Government	Inter-agency services for unemployment and health/disability benefits, notification of deaths & changes in the beneficiary's life status	SSI Kazakhstan
	Application to social assistance as a single-window to multiple agencies.	MLSP. Azerbaijan
Multi-partner services	Managing occupational diseases claims involving multiple actors using Blockchain .	GOSI. Saudi Arabia
	Support using Blockchain to data exchange for the Gulf Cooperation Council multilateral agreement.	GOSI. Saudi Arabia
	Re-engineering of the health insurance paper-based information flow to a simple, online blockchain application.	Healthcare & Insurance Belgium



Emerging ICT for discovery and prevention

Business areas	Project	Institution
Discovery through advanced Analytics and Big Data	<ul style="list-style-type: none"> - Detection of complex fraud manoeuvres - Analysing beneficiaries' "itineraries" for service improvement. 	CNAF. France
	Detecting evasion and fraud in contribution collection	AFIP, Argentina BPS, Uruguay TGSS, Spain
	Detecting Fraud in Work Injury and accidents claims.	INAIL, Italy
	Detecting Fraud in registration, contribution collection, Occupational diseases and Unemployment.	GOSI. Saudi Arabia
Prevention through advanced Analytics and Big Data	Analysing Big Data to support preventive Health measures.	IMSS. Mexico
	National Big Data system covering Health and Social Security data, supporting preventive measures	NHIS. Korea



Emerging ICT for improving institutional capacity

Business areas	Project	Institution
Institutional transformation	Transformation of the ICT platform and operational models for providing proactive, comprehensive services by adopting cutting-edge technologies (e.g. artificial intelligence).	KELA Finland
	Digital Transformation for building a data-driven and highly automated organization by adopting cutting-edge technologies: AI, machine learning and Analytics .	EPF Malaysia

■ Key messages:

- Improve institutional capacity to adopt cutting-edge technologies in order to carry out strategic transformations.
- Explore the potential of cutting-edge technologies.
- Smarter use of human capital and technological innovation



Analysis: Barriers and risks vs. Opportunities

■ Difficulties, barriers, and risks.

- **Costs and complexity of understanding** the strengths and limitations of technologies applied in social security.
- **Complexity of adopting** new technologies and transforming business process.
- **Ensuring required data quality** levels for effective analysis and AI application.
- **Data protection regulations** may hinder Big Data applications.
- Economic and reputation **risks due to failures**.

■ Why there is a growing application of emerging technologies in social security institutions worldwide ?

- Generalized technology adoption by customers.
 - Internet and Mobile devices. **ICT in the new world of work !**
- Improved Data Management and data availability.
- E-Government development: inter-institutional connection, interoperability
- Increasing awareness among CEOs and Management on the crucial role of ICT in social security.
- Growing innovation culture in social security.



Conclusions and ongoing activities

- **Innovation and emerging technologies are increasingly relevant for social security institutions.**
 - For improving customer services, operations and prevention capabilities.
 - Leveraging on institutional & external data → *data-driven social security*
- **Other emerging ICT relevant for social security:**
 - Biometrics
 - Internet of Things
- **ISSA activities related to emerging ICT:**
 - Collecting innovative practices, including experimental experiences.
 - Presentation and discussion in:
 - Forum of Tech Commissions (June 2019, Geneva)
 - Potential Seminars in 2019.
 - World Social Security Forum (October 2019, Brussels).
 - Preparation of related projects for the triennium 2020-2022.



Thank you very much

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