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Promoting excellence
in social security

4th Industrial Revolution

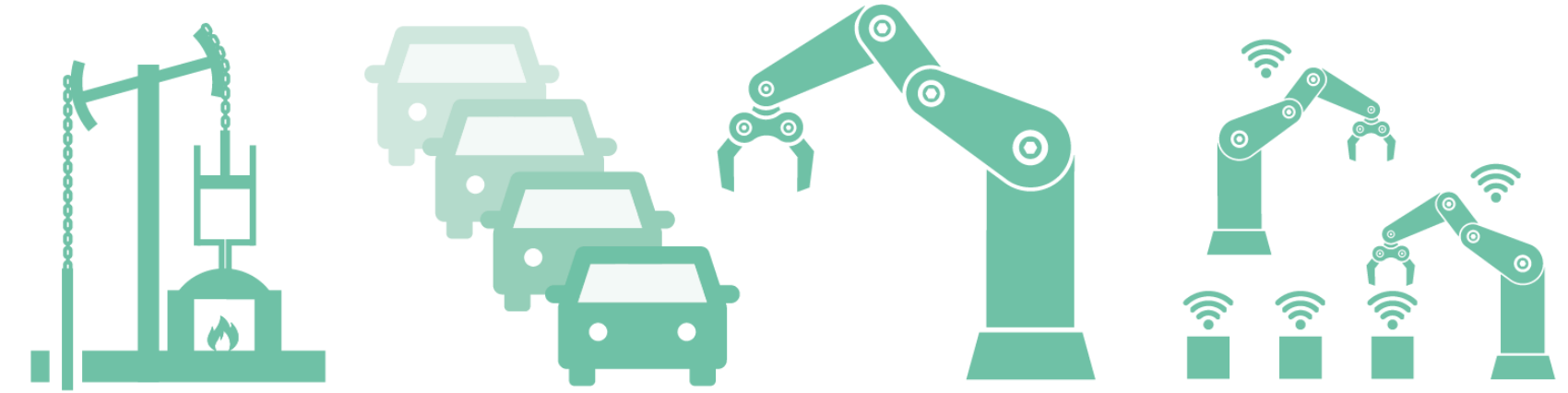
Challenges and Opportunities for social security globally

Jens Schremmer
International Social Security Association (ISSA)

Globally - a lot of questions…

- Is the 4th industrial revolution different?
- A challenge or an opportunity for social security…or both?
- And what about social security institutions…the ones that determine social security outcomes?
- Does it increase the need for international exchange?

Yet another revolution?



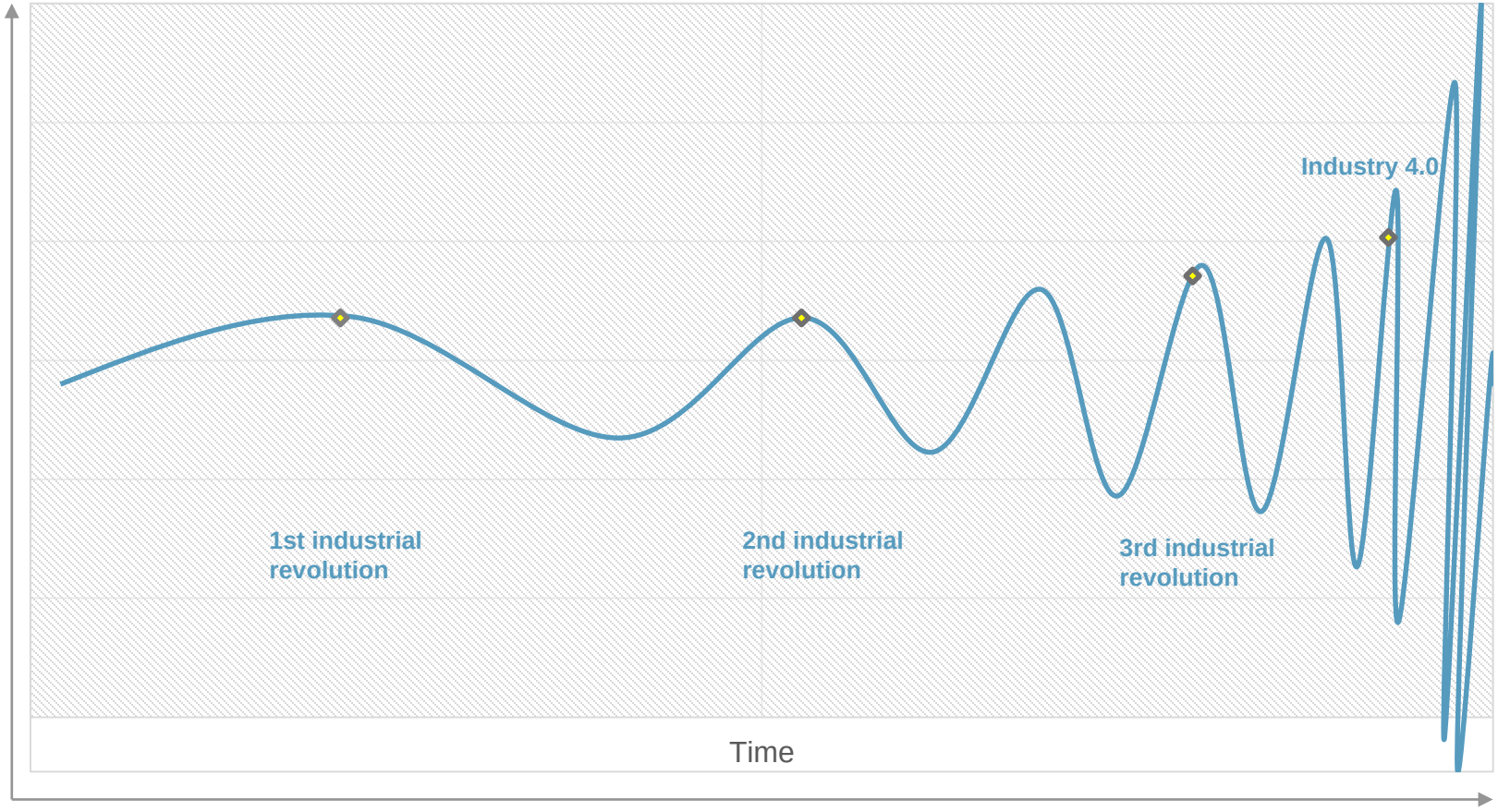
Mechanization, water power, steam power

Mass production, assembly line, electricity

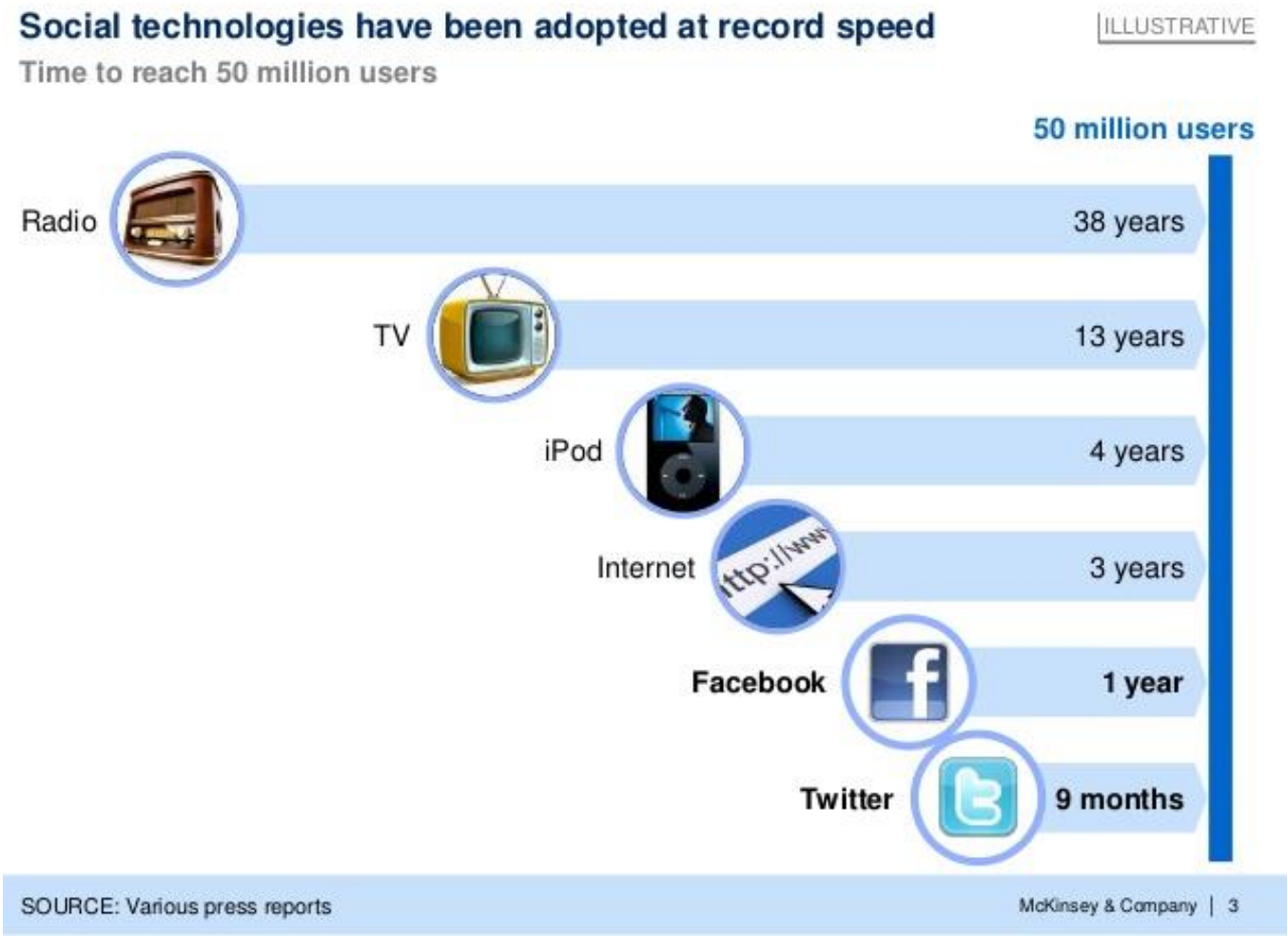
Computer and automation

Cyber Physical Systems

Time for diffusion of technology getting shorter



The speed of adaption of new technologies



What is the impact on social security?

Adapting to challenges AND Exploiting Opportunities

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IMPACTS

Labour markets

- Large scale automation
- Changing skills requirements

Coverage

- Coverage of digital economy workers
- Reducing transaction costs / barriers to access

Benefits & Services

- Adequacy of benefits
- Tailored benefits and services

Funding

- Is the collection model adapted to digital world?
- Innovative financing sources – taxing robots?

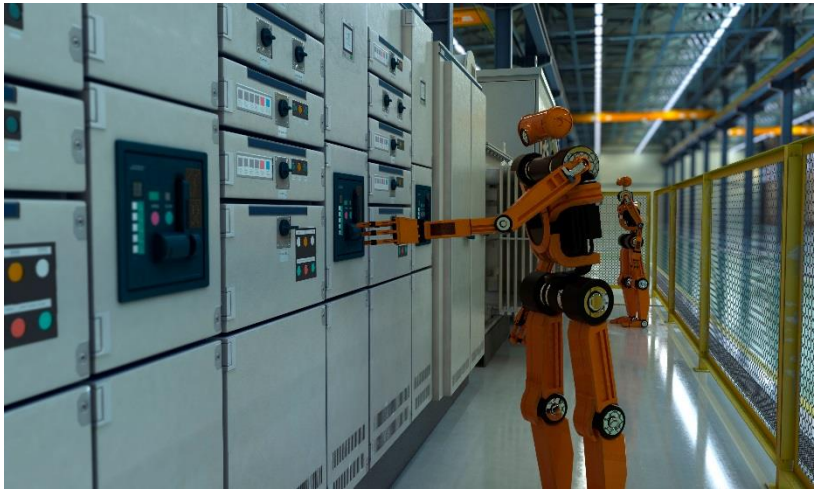
Administration

- Rapidly changing public expectations
- Rapid technological innovation
- Service delivery models

(1) Labour markets and coverage

Non-standard work is fast emerging -

How much work will there be?



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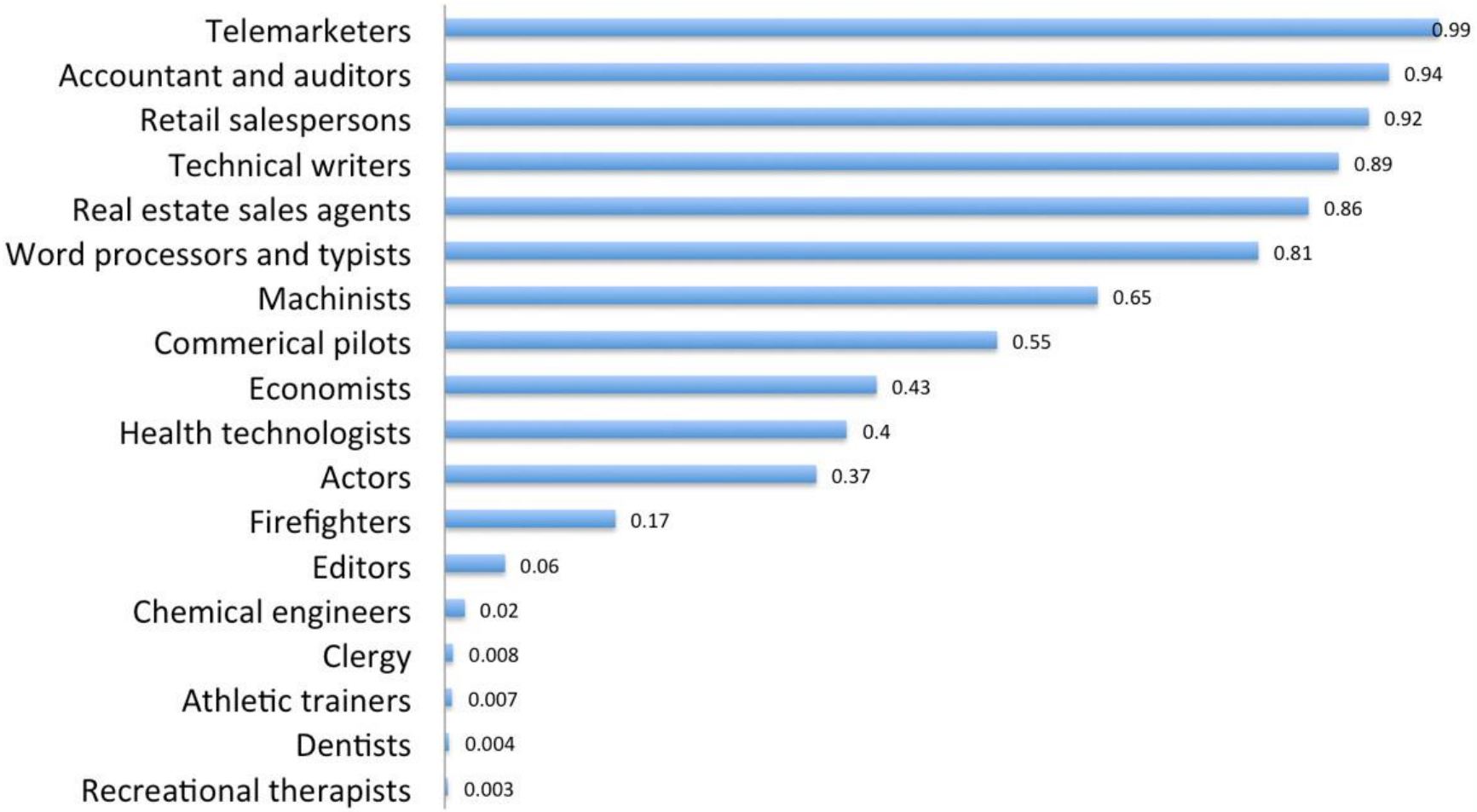
Large-scale automation

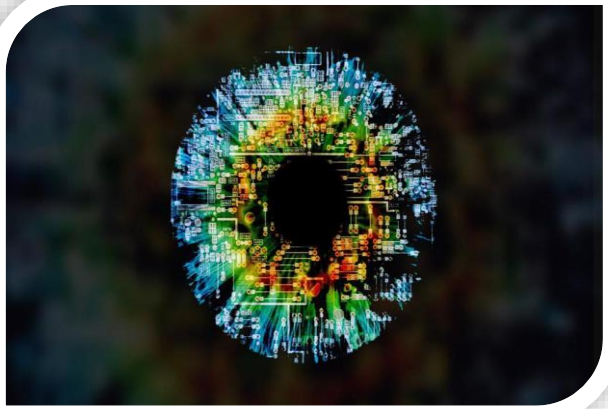
Tech Chart of the Day

Probability Robots Will Take Your Job In Next 20 Years, 1=Certain



BUSINESS INSIDER

Source: The Economist,
The Future of Employment: How susceptible are jobs to computerisation?



Innovation vs Automation

Automation causes employment in old sectors to decline

Innovation causes new sectors & tasks to emerge

Large scale automation and labour demand

- Robotics & artificial intelligence
- New inequalities and coverage gaps
- New benefits – skills development?
- Innovative financing for social security

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Digital Platforms enable new services…

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…but the status of platform workers is often unclear

What are they?

Employees?
Self-employed?
or
New categories?

Why does it matter?

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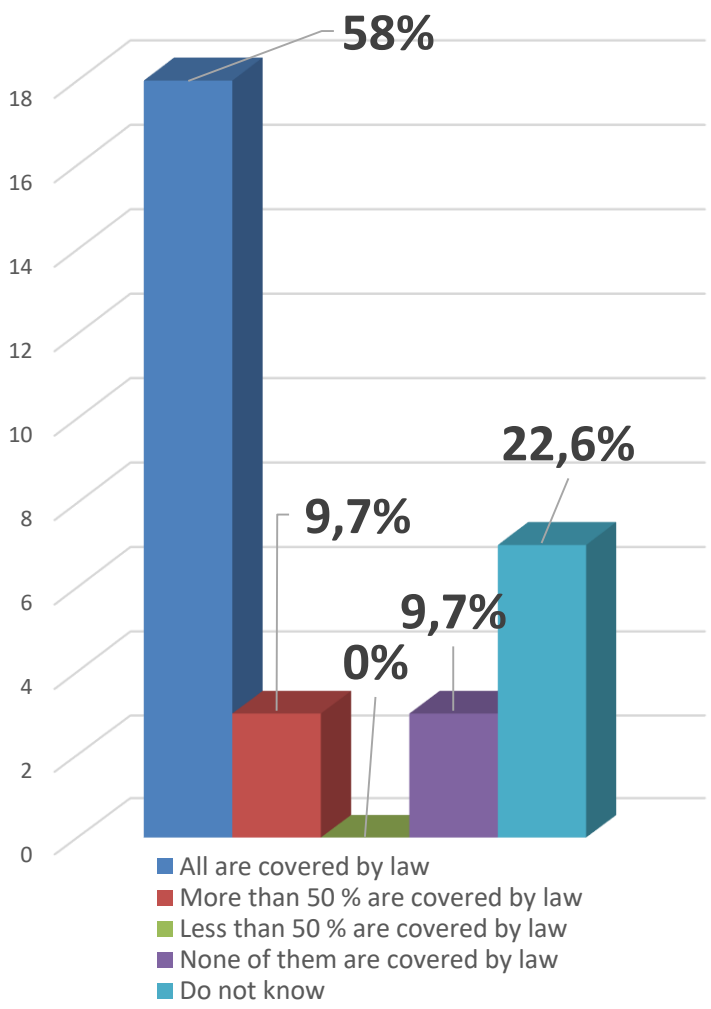
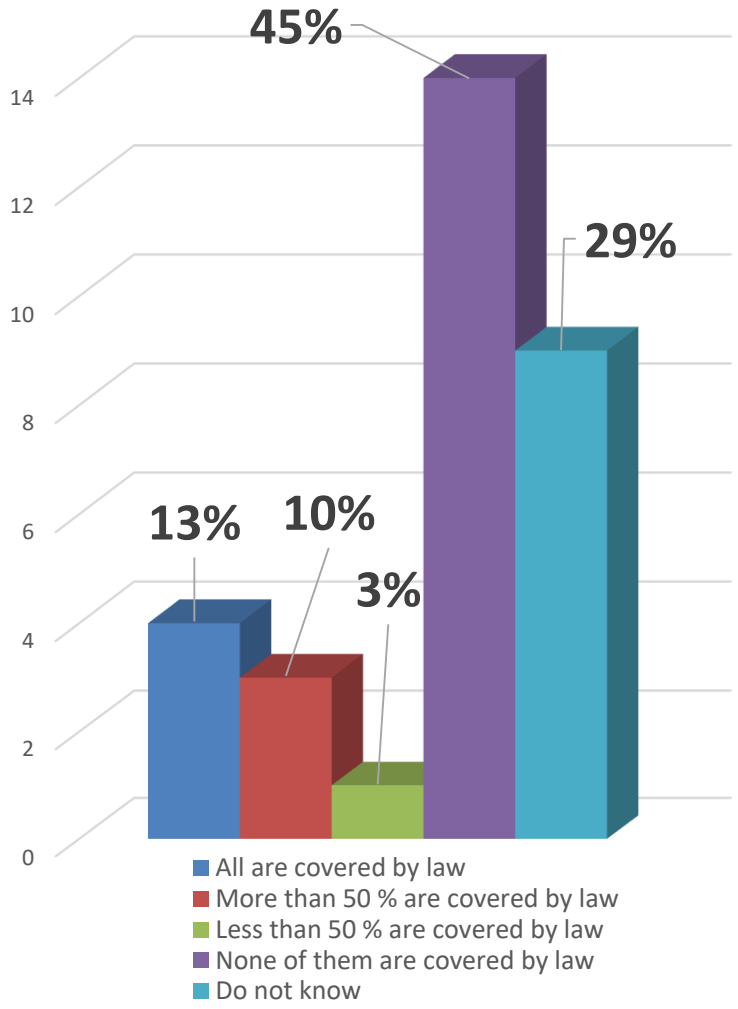
Global ISSA survey (TC Employment)
Legal coverage of platform workers (in %)

Employed platform workers



Self-employed platform workers



Digital technologies and the digital economy – Opportunities for enhancing social security

- **Extending the coverage barriers – closing the coverage gap**
  - Reduce transaction costs for administrations and beneficiaries
  - Greater flexibility and better adaptation to the needs of different groups
  - Facilitate identification and registration (electronic/biometric technologies)
  - Integrated mobile data systems, mobile registration and payment applications
- **Digital economies help formalize digital workers**
  - Digital economy platform work allow tracking of activity
  - Collaboration with platform companies to access data
- **Protection of a mobile workforce**
  - International data exchange
  - Inter-institutional integration facilitating portability

Digital technologies – Enhancing social security protection

- **Strengthening pro-active and preventive social security**
  - Reduced disease and accident incidence through tailored prevention services and campaigns
  - Enhanced targeting of investment in training and rehabilitation
  - Improve health education in the context of an increasing prevalence of chronic conditions
- **Enhancing health care outcomes**
  - Remote access to diagnostic services
  - Reducing medical error and improving treatment decisions
- **Evidence-based policy**
  - Analytics and big data applications support assessment and better policies

The Future is already here – Good Practices (ISSA database)

Opportunities	Project	Country / Institution
Extending coverage	Mobile technologies for registration and contribution payment, 90% of informal sector members use mobile platform (M-Pesa)	National Hospital Insurance Fund, Kenya
	Electronic identification facilitating access to coverage, collaboration with leading internet providers	Social Insurance Administration, People's Republic of China
Formalizing digital economy workers	Specific regulations, inter-institutional regulation, flexible and non-bureaucratic registration, collaboration with platform companies (Uber etc.)	Social Insurance Bank, Uruguay (ISSA Good Practice Winner Americas)
Protection of a mobile workforce	Automatic data exchange in the implementation of social security agreements	Mercosur countries in the Americas
Strengthening preventive social security	Big data analytics for health alerts combining data from different institutions/sources	National Health Insurance Service, Korea
Enhancing health care outcomes	Remote medical diagnostics linking doctors and patients covering 50 million people	Employees' State Insurance Corp. and other government services, India
Evidence-based policy making	Priority investment approach based on various data analytics to strengthen efficiency and effectiveness of social security	Department of Human Services, Australia

Digital economy and social security

- Labour market transformations and social impact create challenges for social security

- Technological innovation enables more individualized services to non-standard workers, more inclusive social security systems and better benefits and services

→ Social security institutions will make the difference

(2) Digitalisation and innovation – impact on social security institutions

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Embracing emerging technologies

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Member institutions that consider managing innovation and technological developments to be a high priority challenge (ISSA survey, 280 social security institutions responded):

World **76%**
Africa **80%**
Americas **79%**
Europe **75%**
Asia and Pacific **68%**

2003

45 countries had a one-stop-platform, and only **33** countries provided online transactions

2016

90 countries offer one or more single entry portal(s) on public information or online services, or both, and 148 countries provide at least one type of online transactional service

Innovation is an obligation

- **Value-added for protected populations - better social security outcomes**

- **Meeting public expectations**
  - User-centred services expected
  - Service for me…to me...at the right time…at the right place… – expectation for individualized services instead of one-size fits all approach

- **Meeting political expectations**
  - Extending coverage
  - Reducing fraud
  - Improving effectiveness

- **Meeting institutional objectives**
  - Enhancing efficiency
  - Achieving operational goals

Emerging technologies -
Used by social security institutions around the world

For what and how?

The future is already here…business objectives

- **Improve interaction with citizens and customer services:**
  - Personalized systems and intelligent assistants
  - New generation of web portals and mobile technologies
  - Integration of multi-institutional services and inter-institutional coordination
- **Increase institutional capacities:**
  - Enhance system integrity - take correct decisions and reduce error and fraud
  - Detect and understand new phenomena as well as to develop preventive measures
  - Carry out strategic transformations to meet evolving objectives

The future is already here – ISSA innovation project

Technological areas	Project	Institution
Advanced Web/Mobile portals and multichannel customer services	Mobile-based systems for benefit application and for receiving the institution's response.	SSI Kazakhstan
	ASSIST Project to transform PERKESO's core ICT system to cater online registration, contribution, collection and claims transactions	PERKESO Malaysia
	Website with digital identity and mobile-oriented services for medical certificates. Evolving to include contributions payment.	ZUS Poland
	Web portal with online management of benefit application covering wide set of tasks and uploading required evidences. Voice-enabled services as a complement to the Web portal.	CMR Morocco
	Online and automated systems enabling old age pension calculation and application. Highly secured online system enabling follow-up and reporting of sickness benefits by doctors and beneficiaries nationwide.	NAV Norway
	Using electronic SIM card-based personal ID for secured online transactions.	HVW/CAPAC Belgium

The future is already here

Technological areas	Project	Institution
Artificial Intelligence Deep Learning Intelligent assistants	Exploration on how AI & deep learning systems could assist decision making by caseworkers by analysing thousands of previous decisions - predict outcome for a certain new case	CAPAC Belgium
	Provide intelligent assistance in mobile services through conversational agents	GOSI Saudi Arabia
Blockchain	Re-engineering of the health insurance paper-based information flow patient–doctor –patient – pharmacy – patient –to a secure, simple, online blockchain application	Healthcare & Insurance Belgium
	Managing occupational diseases claims involving multiple actors	GOSI Saudi-Arabia
ICT institutional capacity	Strategic transformation of the ICT platform and operational models shifting towards providing proactive, comprehensive services by adopting cutting-edge technologies (e.g. artificial intelligence).	KELA Finland

The future is already here

Technological areas	Innovation	Institution
Institutional integration and e-government	Interconnection between agencies to improve quality and efficiency and notify changes in the beneficiary's life situation	SSI Kazakhstan
	Application to social assistance as a single-window to multiple agencies.	MLSP Azerbaijan
Advanced Analytics and Big Data	Fraud detection in registration, collection of contributions, Occupational diseases, and Unemployment.	GOSI Saudi Arabia
	Fraud detection in Work Injury and accidents claims.	INAIL Italy
	National Big Data system covering Health and Social Security data, supporting preventive measures	NHIS Korea
	Analysing Big Data to support preventive Health measures.	IMSS Mexico
	Analysing beneficiaries' "itineraries" for service improvement Detection of complex fraud manoeuvres	CNAF France

Challenges are significant

- Data privacy versus Big Data applications
- Cybersecurity
- Ensuring required data quality levels for effective analysis and AI usage
- Complexity of new technologies and their integration into business processes
- Experimental nature of emerging technologies
- Management challenges - increasing complexity of ICT systems, short-term nature of technologies, filtering what is effective
- The importance of the human touch

- How will social security administration look tomorrow?
- Shaping social security for «tomorrow's society»

→ A key role for international exchanges and learning

ISSA @ 91: Preparing the future of social security

91

1927-2018

ISSA Innovation Program and the Digital Economy Observatory

Promoting excellence
in social security

ISSA Observatory:
Digital Economy and Social Security

ISSA Regional Social Security Forum for Asia and the Pacific

- Hosted by a member of ASSA, Social Security Organisation of Malaysia
- Kuala Lumpur, 2-4 October
- More than 300 participants from 35 countries
- 50 speakers and panellists including from ILO, UNESCAP, ADB
- Challenges, innovation, good practices
- ISSA Good Practice Award competition – results and celebration

Excellence in social security:
Enhancing protection for tomorrow's society

Regional Social Security Forum
ASIA AND PACIFIC
Kuala Lumpur 2018

Globally – some answers…

- The 4th industrial revolution is indeed different
- A challenge AND an opportunity for social security
- Social security institutions will make the difference
- International exchange is fundamental in a world of transformation

→ The ISSA is your partner and supports social security institutions in the region and globally

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