ACCRÉDITATION

CONFIANCE NUMÉRIQUE

SURVEILLANCE DU MARCHÉ

MÉTROLOGIE

NORMALISATION

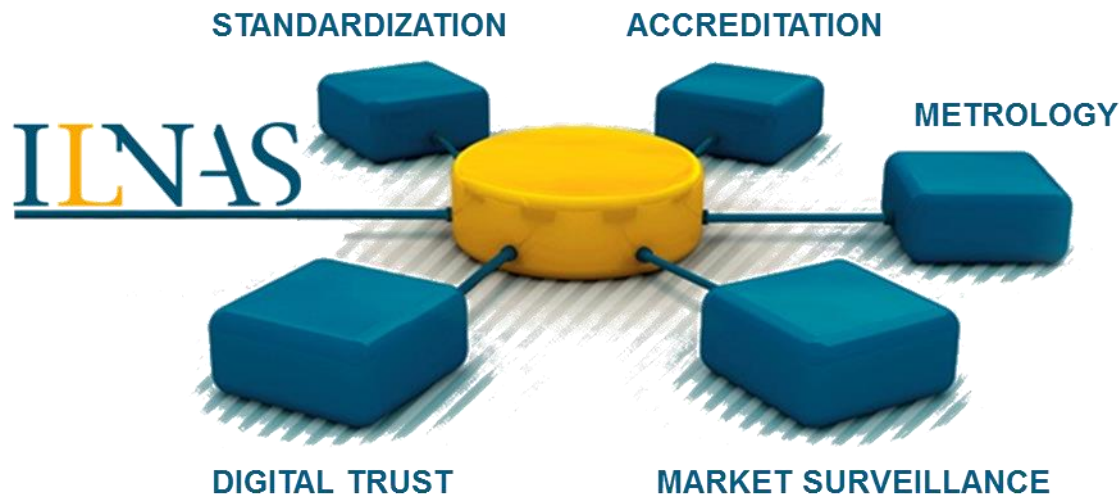*Welcome*
Bienvenue
Willkommen

ILNAS

ICT Technical Standardization in Luxembourg

Dr. Jean-Philippe Humbert
Adjoint à la Direction - ILNAS

12.10.2018

ILNAS

- **Creation:** Law dated July 14, 2014 (repealing the amended Law of May 20, 2008) and law dated February 17, 2017

- **Status:** Public administration under the authority of the Minister of the Economy

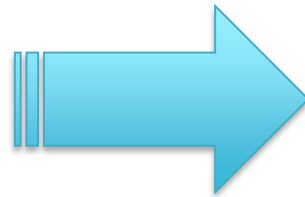- **Total staff:** 45 civil servants (October 2018)

- **Web site:**

PORTAIL-QUALITE.LU
QUALITE·SECURITE·CONFORMITE

STANDARDIZATION   ACCREDITATION

METROLOGY

ILNAS

DIGITAL TRUST   MARKET SURVEILLANCE

- **Ensure availability of standards**

  o   Maintain the national database of more than 170.000 normative documents
  o   Selling standards (e-shop - https://ilnas.services-publics.lu)
  o   Free consultation of standards

- **Participation in standardization**

  o   Coordination and supervision of the creation of national normative documents
  o   Participation in standardization committees (European and international level)
  o   Manage the National Mirror Committees
  o   Publish and implement European, international and national standards
  o   Organize education and training courses about standardization
  o   Develop partnerships with academia and research
  o   Foster and promote voluntary, consensus-based standards

C. A strong policy framework to support the development of the ICT sector

LUXEMBOURG STANDARDIZATION STRATEGY
2014-2020

"Technical standardization as a service"

Pillar 1: Information and communication technologies (ICT)

Policy on ICT technical standardization (2015-2020)

1 Developing the interest and the involvement of the market

2 Promoting and reinforcing market participation

3 Supporting and strengthening the EaS and related research activities

- https://portail-qualite.public.lu/fr/publications/normes-normalisation/avis-officiels/strategie-normative-2014-2020.html
- https://portail-qualite.public.lu/fr/publications/normes-normalisation/avis-officiels/politique-luxembourgeoise-pour-la-normalisation-technique-des-TIC-2015-2020.html

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1 Developing the interest and the involvement of the market

A. Standards Analysis of the ICT sector & Implementation plan for ICT technical standardization

– **Drawing up a yearly national standards analysis for the ICT sector**

  o Standards watch of the related sector

  o Identification of relevant technical committees and Fora/Consortia

  o Preparation of the final report of analysis and opportunities

  o **FOCUS ON SMART ICT AND DIGITAL TRUST**

    ▪ Cloud Computing, Internet of Things, Big Data, Artificial Intelligence, Blockchain, Digital Trust related developments

    ▪ **New version under development (ILNAS breakfast 13.11.2018)**

– **Defining a national implementation plan for ICT technical standardization**

  o To involve targeted stakeholders of the Grand Duchy of Luxembourg in a global approach to standardization

  o Enhancing the international recognition of the Grand Duchy of Luxembourg

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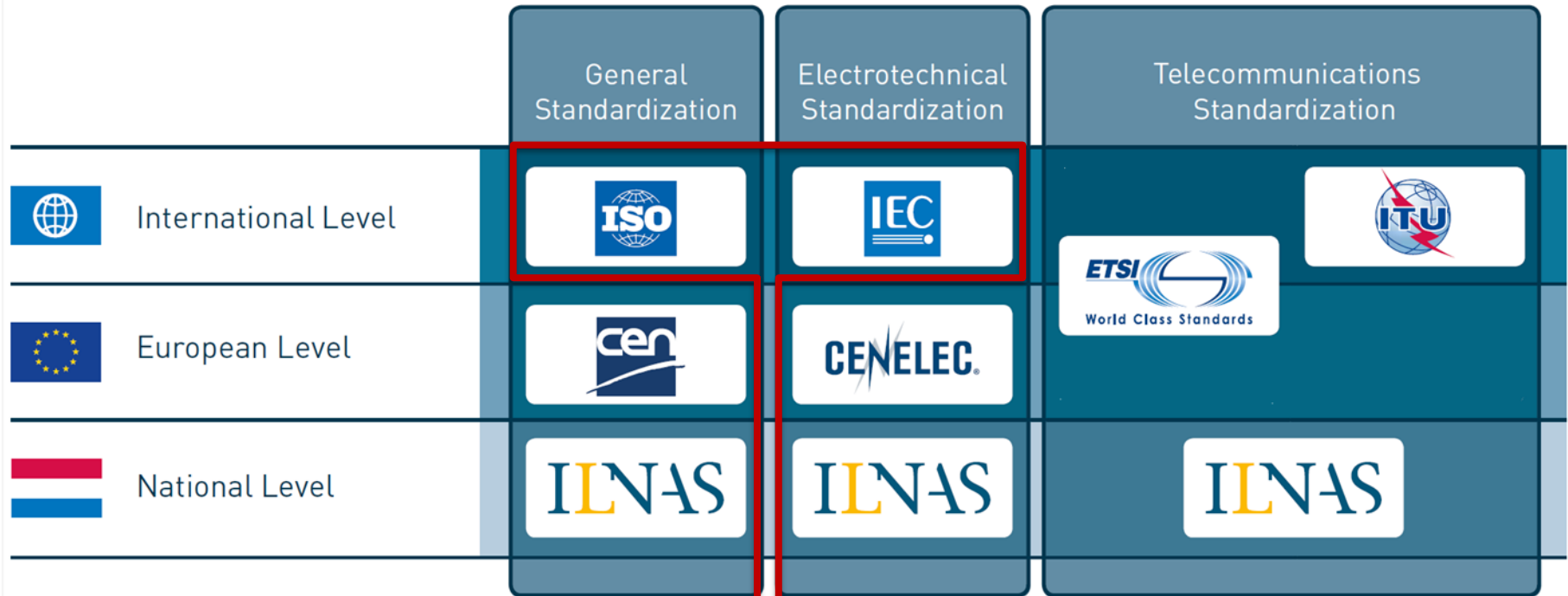
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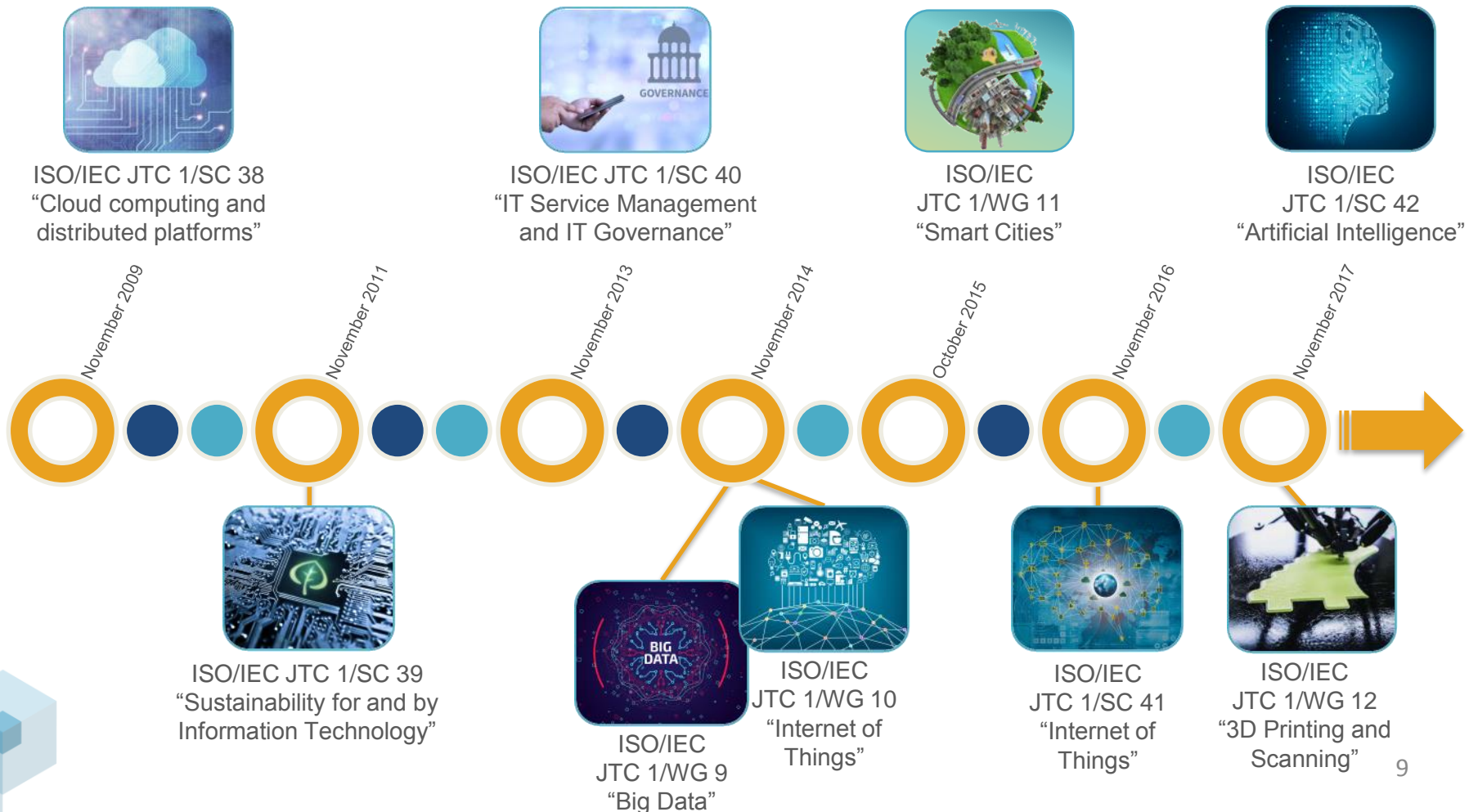
MÉTROLOGIE

NORMALISATION

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2 Promoting and reinforcing market participation
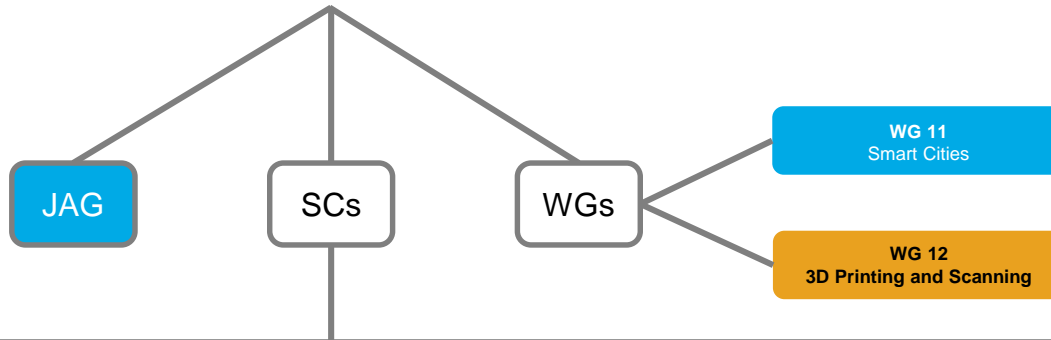
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A. Standards Developing Organizations - Reminder

B. ISO/IEC JTC 1

ISO/IEC JTC 1 - A technical committee in constant evolution to follow the technological progress and answer market needs
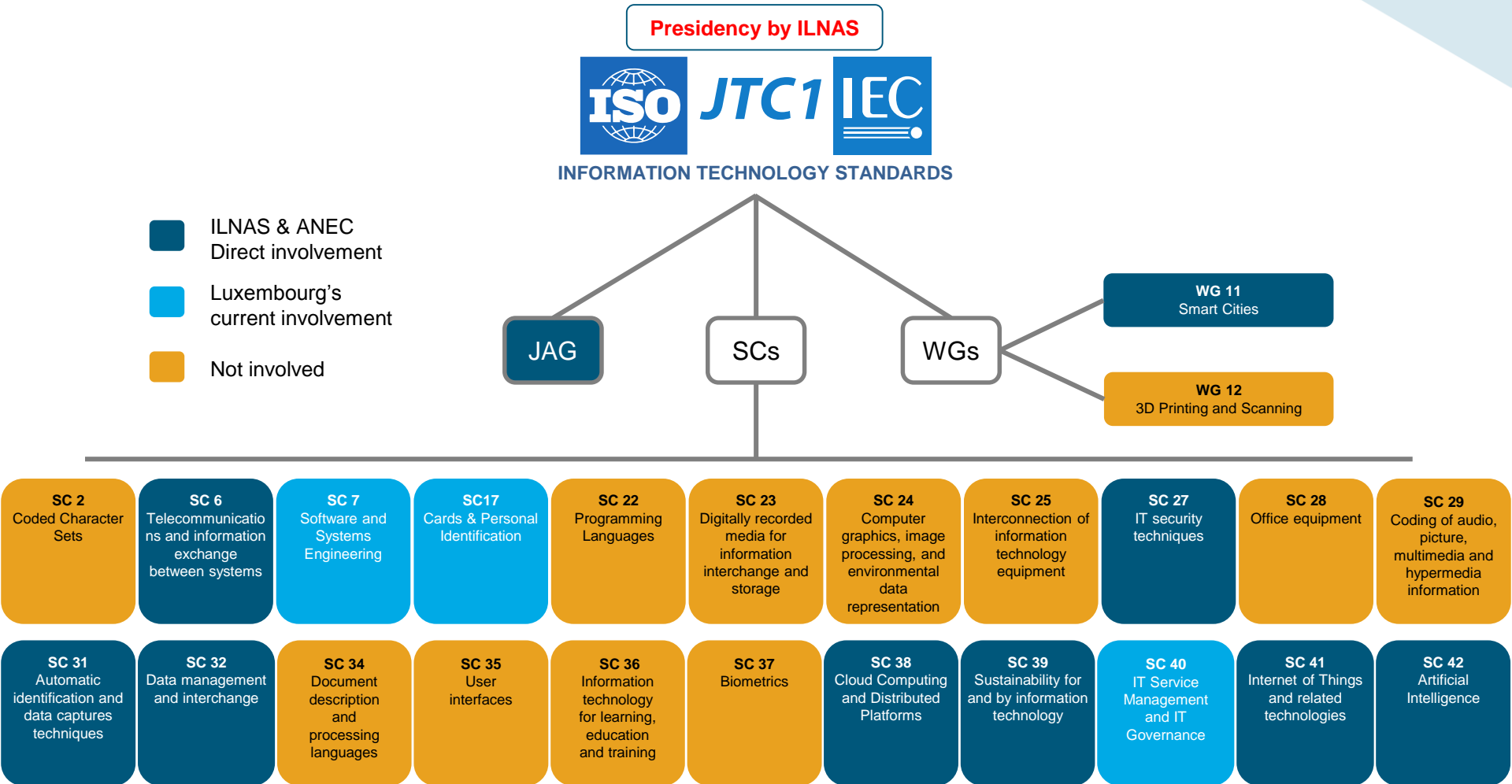

ISO/IEC JTC 1/SC 38
"Cloud computing and distributed platforms"

ISO/IEC JTC 1/SC 40
"IT Service Management and IT Governance"

ISO/IEC
JTC 1/WG 11
"Smart Cities"

ISO/IEC
JTC 1/SC 42
"Artificial Intelligence"

November 2009

November 2011

November 2013

November 2014

October 2015

November 2016

November 2017

ISO/IEC JTC 1/SC 39
"Sustainability for and by Information Technology"

ISO/IEC
JTC 1/WG 9
"Big Data"

ISO/IEC
JTC 1/WG 10
"Internet of Things"

ISO/IEC
JTC 1/SC 41
"Internet of Things"

ISO/IEC
JTC 1/WG 12
"3D Printing and Scanning"

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B. ISO/IEC JTC 1 national situation

INFORMATION TECHNOLOGY STANDARDS

Luxembourg's current involvement

Not involved

JAG

SCs

WGs

WG 11
Smart Cities

WG 12
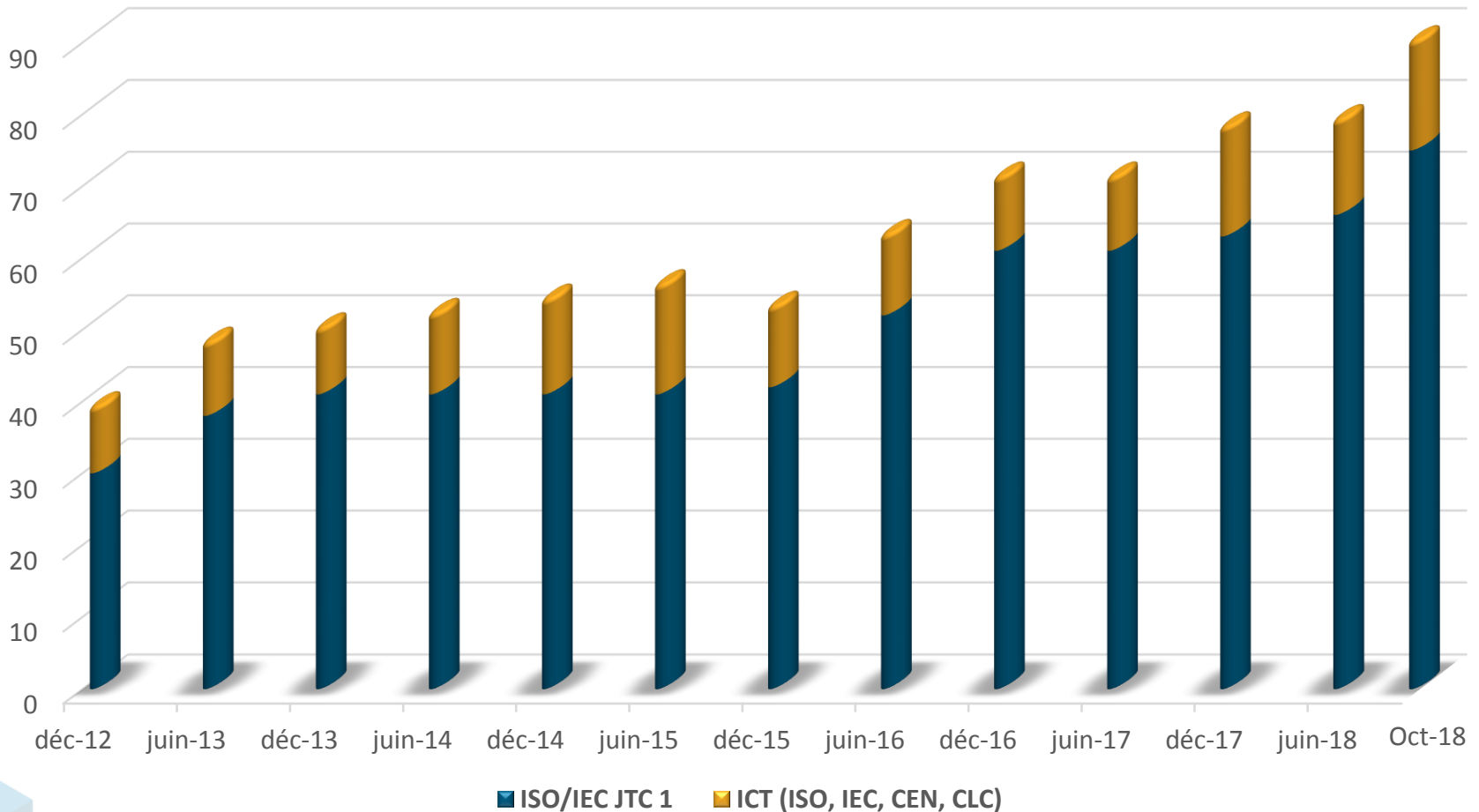3D Printing and Scanning

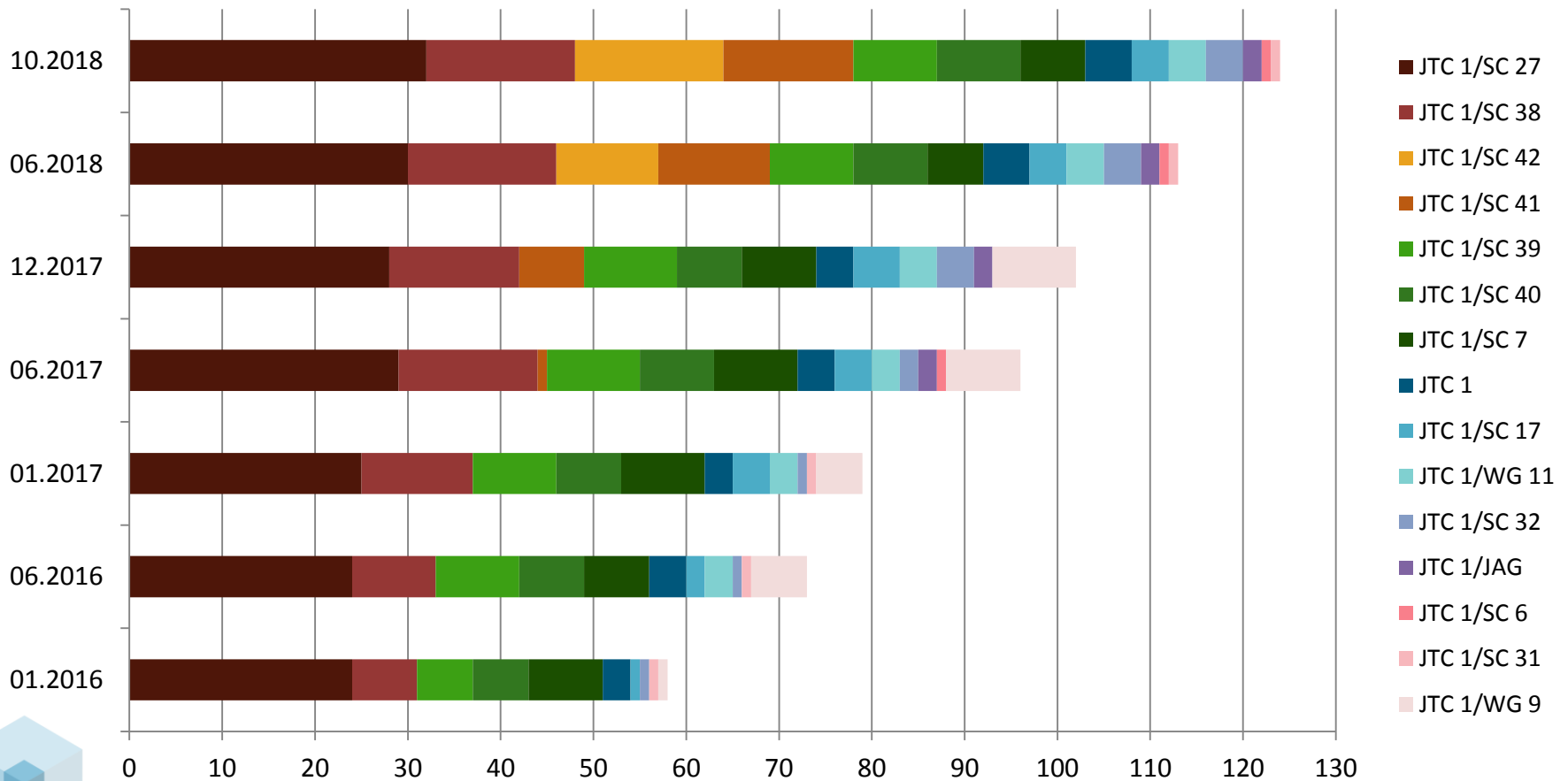| **SC 2** Coded Character Sets	**SC 6** Telecommunications and information exchange between systems	**SC 7** Software and Systems Engineering	**SC17** Cards & Personal Identification	**SC 22** Programming Languages	**SC 23** Digitally recorded media for information interchange and storage	**SC 24** Computer graphics, image processing, and environmental data representation	**SC 25** Interconnection of information technology equipment	**SC 27** IT security techniques	**SC 28** Office equipment	**SC 29** Coding of audio, picture, multimedia and hypermedia information
SC 31 Automatic identification and data captures techniques	**SC 32** Data management and interchange	**SC 34** Document description and processing languages	**SC 35** User interfaces	**SC 36** Information technology for learning, education and training	**SC 37** Biometrics	**SC 38** Cloud Computing and Distributed Platforms	**SC 39** Sustainability for and by information technology	**SC 40** IT Service Management and IT Governance	**SC 41** Internet of Things and related technologies	**SC 42** Artificial Intelligence

B. ISO/IEC JTC 1 national situation

Presidency by ILNAS

ISO JTC1 IEC

INFORMATION TECHNOLOGY STANDARDS

ILNAS & ANEC
Direct involvement

Luxembourg's
current involvement

Not involved

JAG   SCs   WGs

WG 11
Smart Cities

WG 12
3D Printing and Scanning

SC 2 Coded Character Sets	**SC 6** Telecommunications and information exchange between systems	**SC 7** Software and Systems Engineering	**SC17** Cards & Personal Identification	**SC 22** Programming Languages	**SC 23** Digitally recorded media for information interchange and storage	**SC 24** Computer graphics, image processing, and environmental data representation	**SC 25** Interconnection of information technology equipment	**SC 27** IT security techniques	**SC 28** Office equipment	**SC 29** Coding of audio, picture, multimedia and hypermedia information
SC 31 Automatic identification and data captures techniques	**SC 32** Data management and interchange	**SC 34** Document description and processing languages	**SC 35** User interfaces	**SC 36** Information technology for learning, education and training	**SC 37** Biometrics	**SC 38** Cloud Computing and Distributed Platforms	**SC 39** Sustainability for and by information technology	**SC 40** IT Service Management and IT Governance	**SC 41** Internet of Things and related technologies	**SC 42** Artificial Intelligence

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B. ISO/IEC JTC 1 national situation

Evolution of the number of standardization delegates in the ICT sector

ISO/IEC JTC 1   ICT (ISO, IEC, CEN, CLC)

III. Promoting and reinforcing market participation

- **Top representation in JTC 1:**
  - o 32 delegates in the Digital Trust domain
  - o 16 delegates in the Cloud Computing domain
  - o 14 delegates in the IoT domain
  - o 16 delegates in the Big Data domain

Legend:
- JTC 1/SC 27
- JTC 1/SC 38
- JTC 1/SC 42
- JTC 1/SC 41
- JTC 1/SC 39
- JTC 1/SC 40
- JTC 1/SC 7
- JTC 1
- JTC 1/SC 17
- JTC 1/WG 11
- JTC 1/SC 32
- JTC 1/JAG
- JTC 1/SC 6
- JTC 1/SC 31
- JTC 1/WG 9

B. ISO/IEC JTC 1 national situation

- **November 2018 – ISO/IEC JTC 1 Plenary Meeting in Stockholm (Sweden)**
  - o Luxembourg is Participating Member since April 2018
  - o ILNAS presidency to represent national interests

- **Coming trends – Potential new areas of work**
  - o New subcommittee on **Smart Cities** to strengthen the related developments under JTC 1?
  - o New Study Group on **Quantum Computing**?
  - o New Special Working Group on **Autonomous Data Rich Vehicle**?
  - o New AdHoc Group on **Virtual Reality / Augmented Reality**?
  - o …

C. Cloud Computing standardization developments in Luxembourg

- **ISO/IEC JTC 1/SC 38 "Cloud Computing and Distributed Platforms"**

  o Creation: November 2009

  o National Chairman: Dr. Johnatan Pecero (ANEC GIE)

  o **16 national delegates registered**

  o Program of work:
    - 13 standards published
    - 9 standards under development

NMC meeting ISO/IEC JTC 1/SC 38 (05.10.17)

Plenary meeting ISO/IEC JTC 1/SC 38 (27.08.18 – 31.08.18)

D. Internet of Things standardization developments in Luxembourg

- **ISO/IEC JTC 1/SC 41 "Internet of Things and related technologies"**

  o Creation: November 2016

  o National Chairman: Dr. Shyam Wagle (ANEC GIE)

  o **14 national delegates registered**

  o Program of work:
    ▪ 19 standards published
    ▪ 15 standards under development

NMC Meeting ISO/IEC JTC 1/SC 41 (12/12/2017)

Plenary Meeting ISO/IEC JTC 1/SC 41 (28/05/17 – 02/06/17)

Plenary Meeting ISO/IEC JTC 1/SC 41 (13/11/17 – 17/11/17)

E. Artificial Intelligence / Big Data standardization developments in Luxembourg

- **ISO/IEC JTC 1/SC 42 "Artificial Intelligence"**

  o <u>Creation</u>: November 2017

  o <u>National Chairwoman</u>: Mrs. Natalia Cassagnes (ANEC GIE)

  o **16 national delegates registered**

  o <u>Program of work</u>:
    - 2 standards published (Big Data)
    - 5 standards under development (including projects on Big Data)

NMC meeting ISO/IEC JTC 1/SC 42 (20.09.2018)

NMC meeting ISO/IEC JTC 1/SC 42 (29.05.2018)

Plenary meeting ISO/IEC JTC 1/SC 42 (18.04.18 – 20.04.18)

Plenary meeting ISO/IEC JTC 1/WG 9 (15.08.17 – 18.08.17)

F. Blockchain and DLT standardization developments in Luxembourg

- **ISO/TC 307 "Blockchain and distributed ledger technologies"**

  o <u>Creation</u>: September 2016

  o <u>National Chairman</u>: Dr. Ravi Jhawar (ANEC GIE)

  o **16 national delegates registered**

  o <u>Program of work</u>:
    ▪ 10 standards under development

NMC meeting ISO/TC 307 (15.12.2018)

NMC meeting ISO/TC 307 (03.11.2017)

Plenary meeting ISO/TC 307 (14.11.17 – 17.11.17)

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3 Supporting and strengthening the EaS and related research activities

ILNAS

A. Main developments

- **Managing the university certificate "Smart ICT for Business Innovation"**
  - o New promotion started in February 2018
  - o 12 students involved

- **Developing research activities**
  - o White Papers on " Digital Trust & Smart ICT " (regularly updated)
    - ➢ White Paper "Blockchain and Distributed Ledgers"
    - ➢ White Paper "Internet of Things – IoT"
    - ➢ White Paper "Data Protection & Privacy in Smart ICT"
  - o Research program dedicated to the domains of "Smart ICT" and Technical Standardization
    - ➢ 3 PhDs on "Smart ICT" topics

- **Prospective of new diplomas**
  - o A dedicated ICT standardization Master's Degree under development in collaboration with the University of Luxembourg

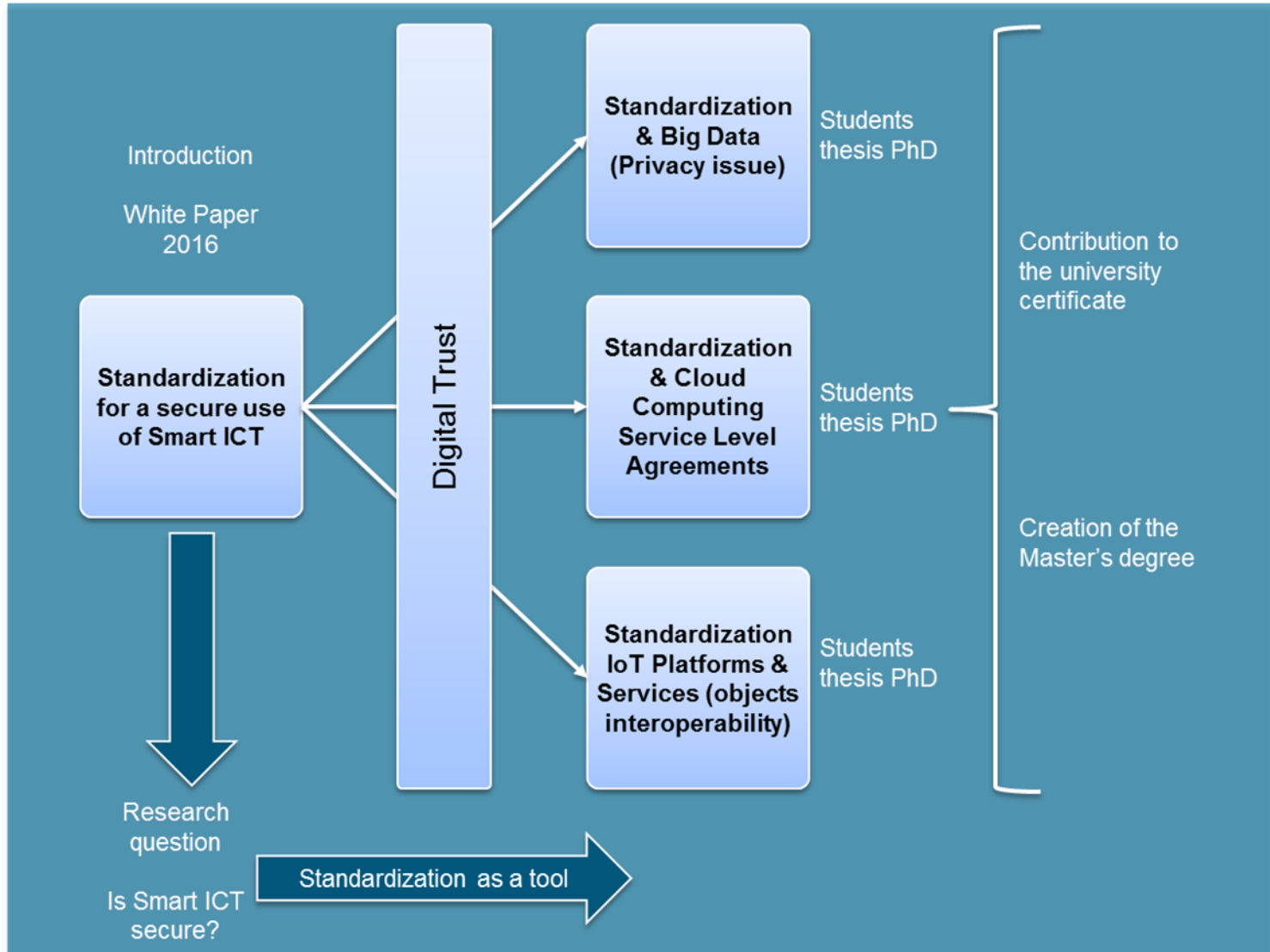B. University certificate "Smart ICT for Business Innovation"

- **Place**: University of Luxembourg – Campus Belval

- **Duration**: 1 year program (Thursday and Friday evenings + some Saturday mornings) - 2 semesters: 18 ECTS

- **Language**: English

- **Prerequisite**: Bachelor degree with a minimum of 3 years professional experience in ICT or Master degree in ICT

- **Number of students**: 20 max.

- **Fees**: 3 600 €

- **Start of the courses**: February 2018

- **Supporting organizations**:

- **Industrial partners**:

http://smartict.uni.lu

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C. Research Program (2017-2020) on Digital Trust for Smart ICT

D. Master Project "Smart Secure ICT for Business Innovation"

Strengthening ILNAS's relations with academic partners with the aim of structuring education about standardization and ad-hoc research in the Grand Duchy of Luxembourg

- **Origin:**
  - o Pilot project conducted between September 2015 and September 2016: "Smart ICT for Business Innovation" university certificate in partnership with the University of Luxembourg
  - o Current promotion: February 2018 to January 2019

- **Objective: University Master in the field of technical standardization (horizon 2020)**
  - o Will answer national priorities related to "Smart ICT" topics, providing a smart way to link technology, standards and the business world, while creating an additional means of innovation at the national level

MERCI POUR VOTRE CONTRIBUTION !

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ILNAS

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