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DU MARCHÉ

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MÉTROLOGIE

NORMALISATION

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*Bienvenue*  
*Willkommen*

ILNAS



# SMART ICT STANDARDS ANALYSIS

Journée Mondiale de la Normalisation 2017

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## I **Context and objectives of the Smart ICT Standards Analysis**

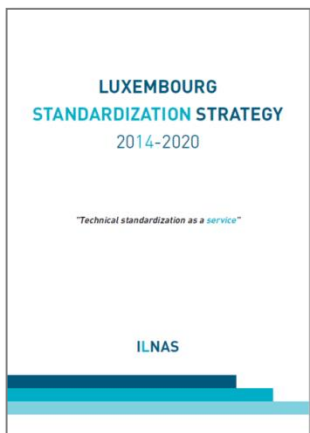
- A – Context of development
- B – Objectives

## II **Results of the Smart ICT Standards Analysis**

- A – Smart ICT technologies overview
- B – Standards watch
- C – Opportunities for the national market
- D – Some updates from ISO/IEC JTC 1 Plenary Meeting (October 2017)

## III **Smart ICT standardization situation in Luxembourg**

- A – ISO/IEC JTC 1
- B – Involvement of ILNAS & ANEC EIG
- C – ETSI members



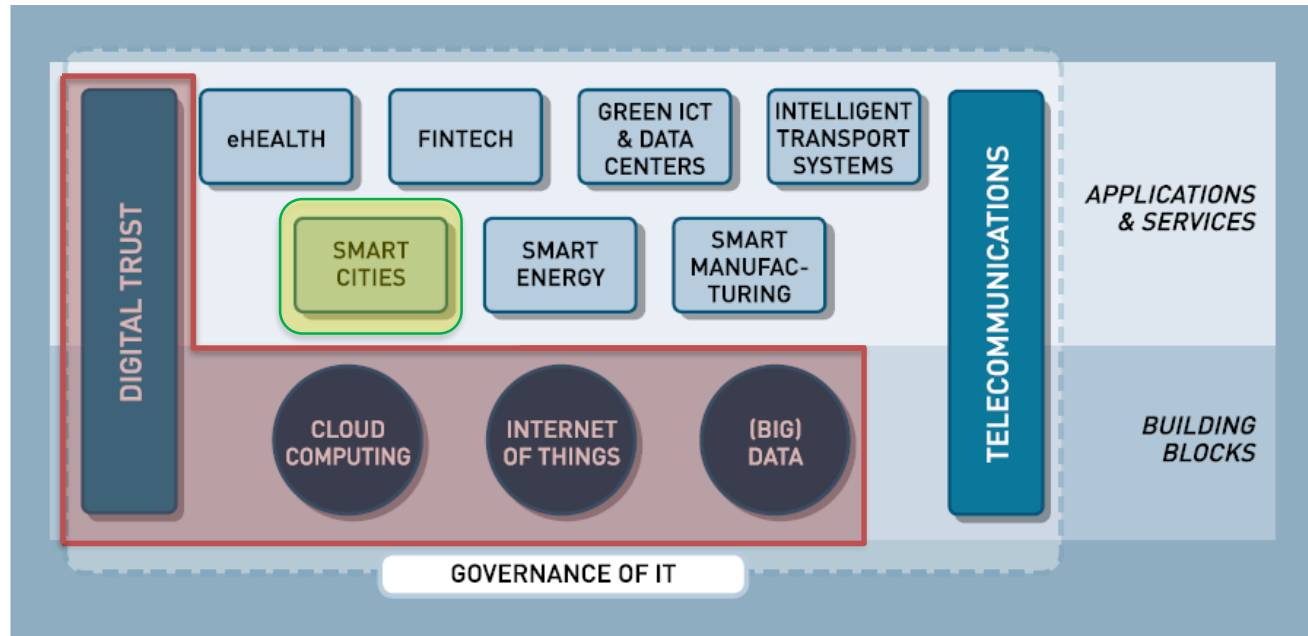
### – LUXEMBOURG STANDARDIZATION STRATEGY 2014-2020

- Pillar 1: ICT technical standardization



### – LUXEMBOURG'S POLICY ON ICT TECHNICAL STANDARDIZATION 2015-2020

- To foster and strengthen the national ICT sector involvement in standardization work through three leading projects:
  - Developing market interest and involvement
  - Promoting and reinforcing market participation
  - Supporting and strengthening the Education about Standardization (EaS) and related research activities



### – FOCUS ON SMART ICT AND DIGITAL TRUST

- Cloud Computing
- Internet of Things
- Big Data
- Digital Trust related developments

## INFORM

about Smart ICT  
standardization  
developments

## IDENTIFY

standardization  
opportunities for the  
national market

## ENCOURAGE

the involvement  
in the standardization  
process

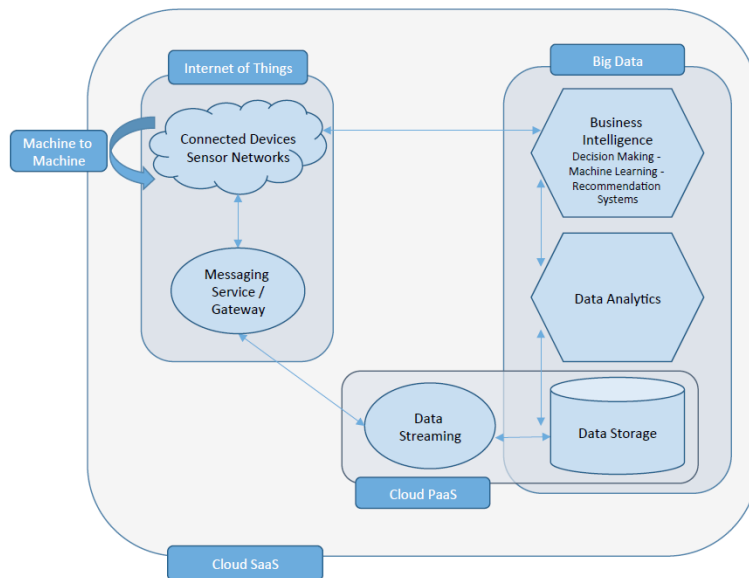
## DEVELOP

“standards-related”  
skills and  
collaborations

For the benefit of all national stakeholders

### Smart ICT

Smart ICT corresponds to a holistic approach of ICT development, integration and implementation, where a range of emerging or innovative tools and techniques are used to maintain, improve or develop products, services or processes with the global objective to strengthen different societal, social, environmental and economic needs. It includes, through related interconnected ecosystems, advanced ICT such as Cloud Computing, Big Data and Analytics, Internet of Things, Artificial Intelligence, Robotic and new ways of gathering data, such as social media and crowdsourcing.



### – SMART ICT COMPONENTS AND THEIR INTERACTIONS

- General introduction of the Smart ICT landscape and of the existing interactions between Cloud Computing, IoT and Big Data

### – FUNDAMENTAL CHARACTERISTICS OF SMART ICT AND RELATED DIGITAL TRUST

- Cloud Computing: ISO/IEC 17788:2014, Information technology -- Cloud computing -- Overview and vocabulary
- Internet of Things: ITU-T Y.4000/Y.2060 (06/2012), Overview of the Internet of things
- Big Data: ISO/IEC 20546 (under development), Information Technology -- Big Data -- Definition and Vocabulary
- Digital Trust: based on the ILNAS White Paper “Digital Trust for Smart ICT” (October 2016)

## CLOUD COMPUTING



### – TECHNICAL COMMITTEES (1)

- ISO/IEC JTC 1/SC 38 “Cloud Computing and Distributed Platforms”

### – PUBLISHED STANDARDS (13)

- ISO/IEC 17788:2014, Information technology -- Cloud computing – Overview and vocabulary
- ISO/IEC 17789:2014, Information technology -- Cloud computing – Reference architecture
- ISO/IEC 19086-1:2016, Information technology -- Cloud computing – Service level agreement (SLA) framework -- Part 1: Overview and concepts
- ...

### – STANDARDS UNDER DEVELOPMENT (10)

- ISO/IEC DIS 19086-2, Information technology -- Cloud computing – Service level agreement (SLA) framework -- Part 2: Metric Model
- ISO/IEC FDIS 19941, Information technology -- Cloud computing -- Interoperability and portability
- ...

## INTERNET OF THINGS



### – TECHNICAL COMMITTEES (5)

- ISO/IEC JTC 1/WG 7 “Sensor networks” (disbanded)
- ISO/IEC JTC 1/WG 10 “Internet of Things” (disbanded)
- ISO/IEC JTC 1/SC 41 “Internet of Things and related technologies”
- ISO/IEC JTC 1/SC 31 “Automatic identification and data capture techniques”
- ETSI/TC Smart M2M “Smart Machine-to-Machine Communication”

### – PUBLISHED STANDARDS (24)

- ETSI TR 103 375 (10/2016), SmartM2M; IoT Standards landscape and future evolutions
- ...

### – STANDARDS UNDER DEVELOPMENT (26)

- ISO/IEC CD 20924, Information technology -- Internet of Things -- Definition and Vocabulary
- ISO/IEC CD 30141, Information technology -- Internet of Things -- Internet of Things Reference Architecture (IoT RA)
- ...



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## DIGITAL TRUST



### – TECHNICAL COMMITTEES (6)

- ISO/IEC JTC 1/SC 27 “IT security techniques”
- ETSI/TC CYBER “Cyber Security”
- ETSI/TC ESI “Electronic Signatures and Infrastructures”
- ...

### – PUBLISHED STANDARDS (8)

- ISO/IEC 27018:2014, Information technology -- Security techniques -- Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors
- ETSI TS 118 103 V2.4.1 (09/2016), oneM2M; Security solutions (oneM2M TS-0003 version 2.4.1 Release 2)
- ...

### – STANDARDS UNDER DEVELOPMENT (7)

- ISO/IEC CD 19086-4, Information technology -- Cloud computing -- Service level agreement (SLA) framework -- Part 4: Security and privacy
- ISO/IEC AWI 20547-4, Information technology -- Big Data Reference Architecture – Part 4: Security and Privacy Fabric
- ...

## II Results of the Smart ICT Standards Analysis

C - Opportunities for the national market



### INFORMATION ABOUT STANDARDIZATION

- Smart ICT workshops
- Awareness sessions
- Smart ICT standards watch
- Publications and disseminations
- Free consultation of the standards
- Smart ICT standardization research results



### TRAINING IN STANDARDIZATION

- One-day training on digital trust
- University certificate Smart ICT for Business Innovation



### INVOLVEMENT IN STANDARDIZATION

- Become national delegate in standardization
- Comment standards under public enquiry
- Propose new standards projects
- Monitor the standardization work performed by the European Multi-Stakeholder Platform on ICT Standardization (MSP)

- **ISO/IEC JTC 1 Plenary Meeting**

- ISO/IEC JTC 1 organized its 30<sup>th</sup> plenary meeting from 02/10/2017 to 07/10/2017 in Vladivostok

- **Objectives**

- Review JTC 1 activities (JAG, SCs, WGs)
- Discuss and define future directions of JTC 1
- Vote and publish resolutions



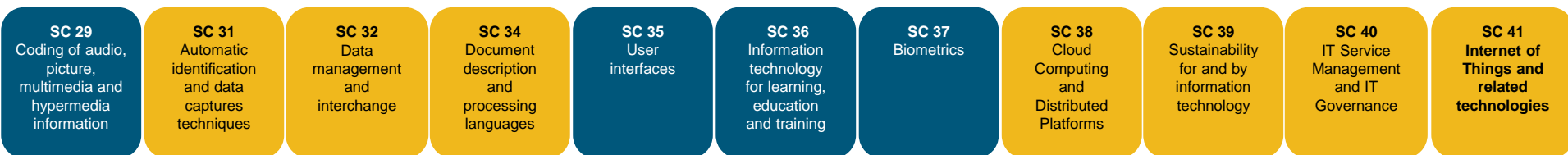
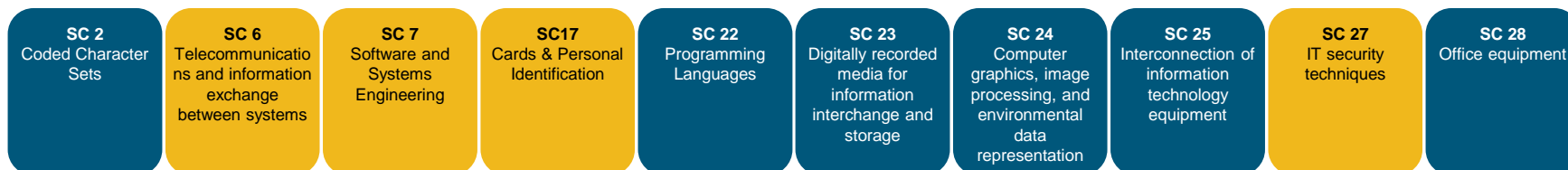
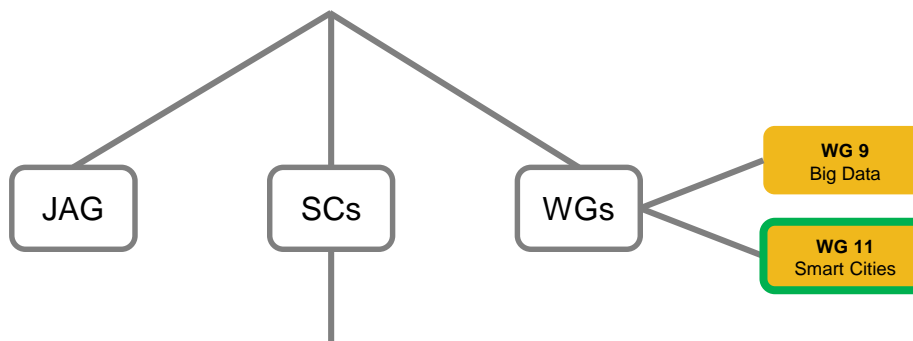
- **Main resolutions related to Smart ICT**

- **Establishment of JTC 1/SC 42, Artificial Intelligence**
- JTC 1 transfers the JTC 1/WG 9 program of work to SC 42, Artificial Intelligence
- Establishment of JTC 1/WG 12 on 3D Printing and Scanning



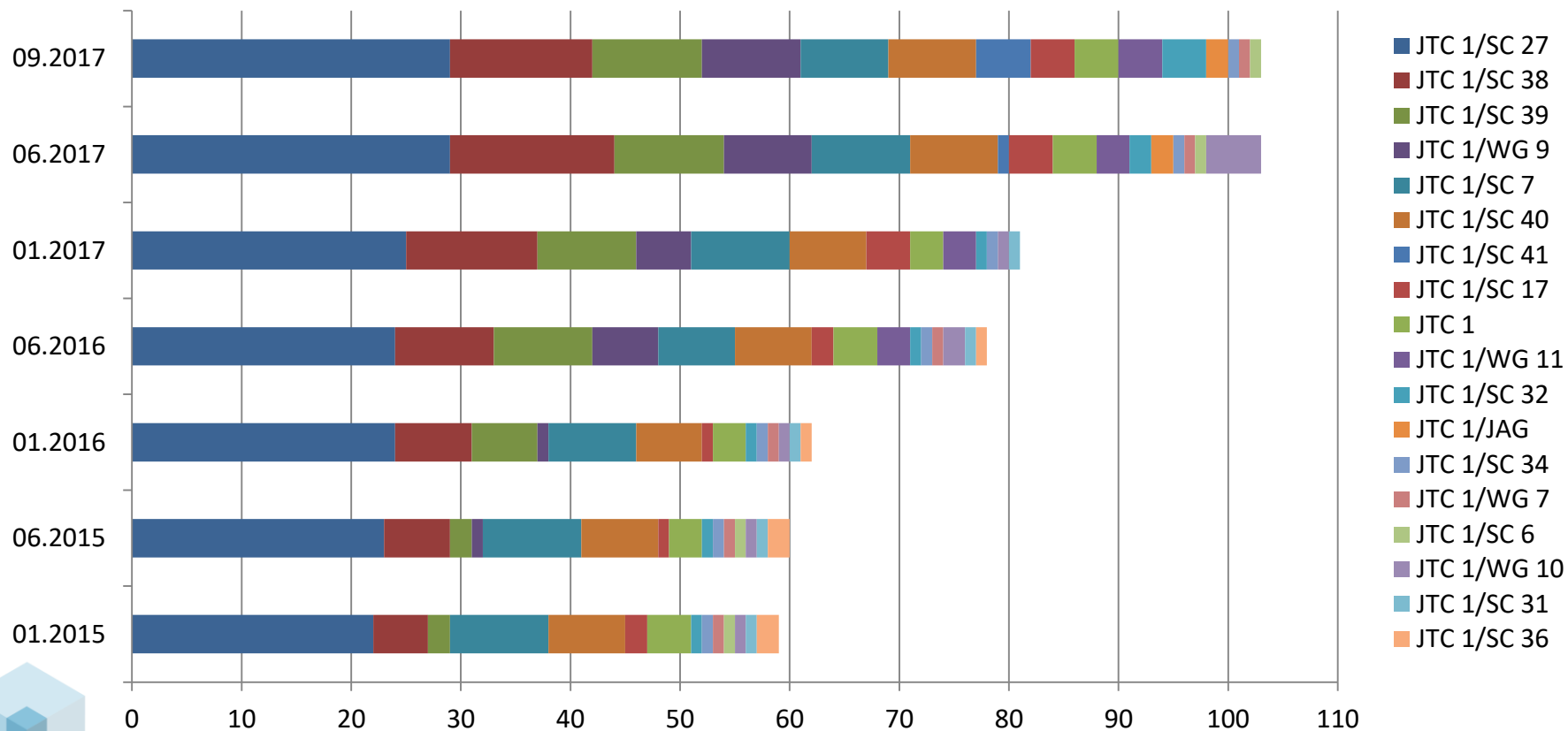
Luxembourg's involvement

Not involved



### – 64 national delegates registered

- 29 delegates in the Digital Trust domain
- 13 delegates in the Cloud Computing domain
- 5 delegates in the IoT domain
- 9 delegates in the Big Data domain





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



Plenary meeting ISO/IEC JTC 1/WG 9  
(15/08/17 – 18/08/17)

- **Strong involvement of ILNAS and ANEC EIG in National Mirror Committees related to SMART ICT**
  - **ISO/IEC JTC 1/WG 9 “Big Data”**
    - Single Point of Contact: Mrs. Natalia CASSAGNES (ANEC EIG)
  - **ISO/IEC JTC 1/SC 38 “Cloud Computing and Distributed Platforms”**
    - National Chairman: Dr. Johnatan PECERO (ANEC EIG)
  - **ISO/IEC JTC 1/SC 41 “Internet of Things and related technologies”**
    - Acting Chairman: Dr. Shyam WAGLE (ANEC EIG)
- **Representation of Luxembourg in international meetings**
- **Management of votes and comments**
- **Organization of national meetings**
  - Preparatory meetings before the international meetings
  - Debriefing after international meetings
  - Breakfast/Lunch meetings to make professionals aware of Smart ICT standardization developments and opportunities to be involved
  - Organization of awareness-raising sessions in companies

- **Involvement at JTC 1 strategic level**
  - **ISO/IEC JTC 1 “Information Technology”**
    - o National Chairman: Dr. Jean Philippe HUMBERT (ILNAS)
  - **ISO/IEC JTC 1/JAG “JTC 1 Advisory Group”**
- **Monitoring of Technical Committees related to Digital Trust**
  - ISO/IEC JTC 1/SC 27 “IT security”
  - ISO/TC 307 “Blockchains and distributed ledger technologies”
  - ETSI/TC CYBER “Cyber Security”
  - CEN-CLC/TC 13 “Cybersecurity and Data Protection”
- **Creation of an internal Working Group ILNAS/ANEC dedicated to ISO/IEC JTC 1**
  - **Meets twice a month**
  - Objectives:
    - o Report and share the weekly review of ISO/IEC JTC 1 documentation (N-Documents) → Focus on Smart ICT standardization (Big Data, Cloud Computing, IoT)
    - o Follow-up of ISO/IEC JTC 1 votes
    - o Prepare Plenary Meetings (JTC 1, JTC 1/WG 9, JTC 1/SC 38, JTC 1/SC 41)
    - o **Discuss and define strategy to strengthen ISO/IEC JTC 1 at national level**



- 9 ETSI members at national level:





**Join the ILNAS Network -- Prepare for the future !**





*Thank you  
Merci  
Danke*



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