



# Policy on ICT technical standardization (2015-2020)



In 2014, the Luxembourg's National Standards Body, ILNAS, updated its national standardization strategy for the period of 2014-2020, following approval by the Minister of Economy. The afore-mentioned document aims at ensuring development of a unified technical standardization (hereinafter referred to under the generic term "standardization") culture, as well as the growth of various economic sectors in Luxembourg. In furtherance of the above objective, the national development of education about standardization (EaS) as well as related research activity are the strategy's keystone.

In this frame, the national standardization strategy has targeted the importance of the Information and Communication Technology (ICT) sector as a horizontal support for all economic sectors. In line with the above, the ICT sector is already active at the national standardization level.

Finally, the "Luxembourg's policy on ICT technical standardization" has been defined in order to foster and strengthen the national ICT sector involvement in standardization work through three lead projects<sup>1</sup>:

- Developing the interest and the involvement of the market;
- Promoting and reinforcing the participation of the market;
- Supporting and strengthening the EaS and related research activities.

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<sup>1</sup> Managing these projects will allow development to be measured and consequently, will enable the "Luxembourg's policy on ICT technical standardization" to be adapted.

### A) Drawing up a yearly national standards analysis for the ICT sector

The national standards analysis for the ICT sector aims to constitute a sector-based “snapshot”.

This survey and analysis of European and international standards related to ICT shall be realized in several steps listed hereafter:

- Execution of a standards watch of the related sector (inventory of standards – both published and under development – at the European and international levels; identification and description of technical standardization committees; mention of the related national representation);
- Identification of relevant *Fora/Consortia* related to the ICT sector; identification of technical committees dealing with ICT as a supporting sector;
- Preparation of the final report of analysis and opportunities.

In this context, ILNAS commissioned ANEC (*“GIE Agence pour la Normalisation et l’Economie de la Connaissance”* – Standardization department) to conduct, on a yearly basis, the survey and analysis of European and international ICT sector standards (which can be realized twice a year, depending on new and relevant related developments).

### B) Defining a national implementation plan for ICT technical standardization (in line with the national standards analysis for the ICT sector)

A national implementation plan for ICT technical standardization, directly related to the national standards analysis for the ICT sector framework shall be developed by ANEC, under the supervision of ILNAS. Based on the detailed information provided, the aim is to involve targeted stakeholders of the Grand Duchy of Luxembourg in a global approach to standardization in order to support the sector in terms of competitiveness, visibility and performance, while enhancing the international recognition of the Grand Duchy of Luxembourg at the standards level.

This implementation plan will be drawn up on a yearly basis in order to ensure that it is in line with national standardization priorities, notably the prospective domain of “Smart ICT”.

### A) Providing information to the national community

The ICT economic sector is a prominent supporting sector in Luxembourg and, in parallel, the area of ICT standardization has also become a major economic field of interest, contributing in particular to improving productivity at work, facilitating trade and developing new markets.

At national level, the ICT sector is already active concerning standardization. In order to share ICT standardization knowledge, with related community in Luxembourg (ISO/IEC JTC1; ETSI; ICT *Fora* and *Consortia*, etc.), ANEC organizes, under the supervision of ILNAS, related workshops at national level, specifically in the frame of the ICT prospective and the domain of "Smart ICT".

### B) Participating in relevant technical committees

In order to provide the most relevant information for the national ICT standardization community (Chapter II – Part A), ILNAS commissioned ANEC to follow closely and directly the below technical committees (please note that this is a non-exhaustive list and its monitoring depends on available resources):

- ISO/IEC JTC1: Information technology;
- ISO/IEC JTC1/SWG 3: Planning (SWG-P);
  
- ISO/IEC/JTC 1/WG 7: Sensor Networks;
- ISO/IEC/JTC 1/WG 9: Big Data;
- ISO/IEC/JTC 1/WG 10: Internet of Things (IoT);
- ISO/IEC/JTC 1/SC 6: Telecommunications and information exchange between systems;
- ISO/IEC/JTC 1/SC 31: Automatic identification and data capture techniques;
- ISO/IEC/JTC 1/SC 32: Data management and interchange;
- ISO/IEC/JTC 1/SC 38: Cloud Computing and Distributed Platforms;
- ISO/IEC/JTC 1/SC 39: Sustainability for and by Information Technology;
  
- ETSI TC ESI: Electronic Signatures and Infrastructures;
- ETSI TC Smart M2M: Smart Machine to Machine communications.

### A) Managing the university certificate “Smart ICT for Business Innovation”

ILNAS, in collaboration with the University of Luxembourg, has developed the university certificate “Smart ICT for Business Innovation”. This diploma will allow the students to take a broad view of the cutting-edge Smart ICT concepts and tools at their disposal in order to develop their sense of innovation. Therefore, the related academic course is designed for experienced professionals who wish to enhance their ICT skills.

This university certificate will focus on important aspects of Smart ICT and their applications, such as Smart cities, Smart grid, data digitization, Big data and analytics, cloud computing and environmental issues related to ICT. Furthermore, in an interconnected world, information security and ICT governance are essential and these aspects will be dealt with by international experts.

Embracing all these issues, technical standardization is a key source of knowledge in constant evolution. Therefore, the courses of the university certificate are substantially based on completed, on-going and planned standardization developments.

In this frame, all the Smart ICT issues are being detailed and studied by an international community of experienced industrials and researchers involved in international and European standardization committees and, in particular, in the different technical committees detailed above (Chapter II – Part B).

ILNAS commissioned ANEC to implement yearly this university certificate, and to carry out its development.

### B) Developing research activities

ILNAS commissioned ANEC to reinforce the research and innovation activities related to standardization in the field of ICT, notably by defining some new research projects with the different stakeholders at national level, principally with the University of Luxembourg.

In this frame, the different developments could be:

- Future PhDs on “Smart ICT” topics;
- White Papers on “ Digital Trust & Smart ICT ”[An update every two years is required];
- Development of a research program, with the University of Luxembourg, dedicated to the domains of “ICT Technical Standardization”.

### C) Prospective of new diplomas

ILNAS and ANEC, in collaboration with the University of Luxembourg, will analyze the possibility to define and propose, in the area of ICT standardization, new diplomas in line with the needs of the national market. These future developments will be based on the outcomes of the different research activities and the information provided by the different technical committees detailed above (Chapter II – Part B).

In this frame, the different developments could be:

- Proposal of new ICT standardization modules for current Bachelor's or Master's Degrees;
- Proposal of other potential specific standardization university certificates;
- Proposal concerning a dedicated ICT standardization Master's Degree.

**The Luxembourg's policy on ICT technical standardization (2015-2020) should enable to:**

- **Strengthen the national ICT standardization community;**
- **Organize and develop the ICT technical standardization representation at national level;**
- **Increase the national representation within European and international entities in the field of ICT technical standardization;**
- **Contribute to raising awareness on ICT standardization according to market-sector needs;**
- **Develop research activities in relation to ICT standardization, considered to be of national interest.**

The logo for ILNAS, featuring the letters 'I', 'L', 'N', 'A', and 'S' in a serif font. The 'L' is colored yellow, while the other letters are blue.

1, avenue du Swing, L-4367 Belvaux  
Tel.: 247 743 - 70  
anec@ilnas.etat.lu  
[www.portail-qualite.lu](http://www.portail-qualite.lu)