



The Standards People



Understanding ICT Standardization Principles and Practice

Presented by: **Claire d'Esclercs**

For: **ILNAS**

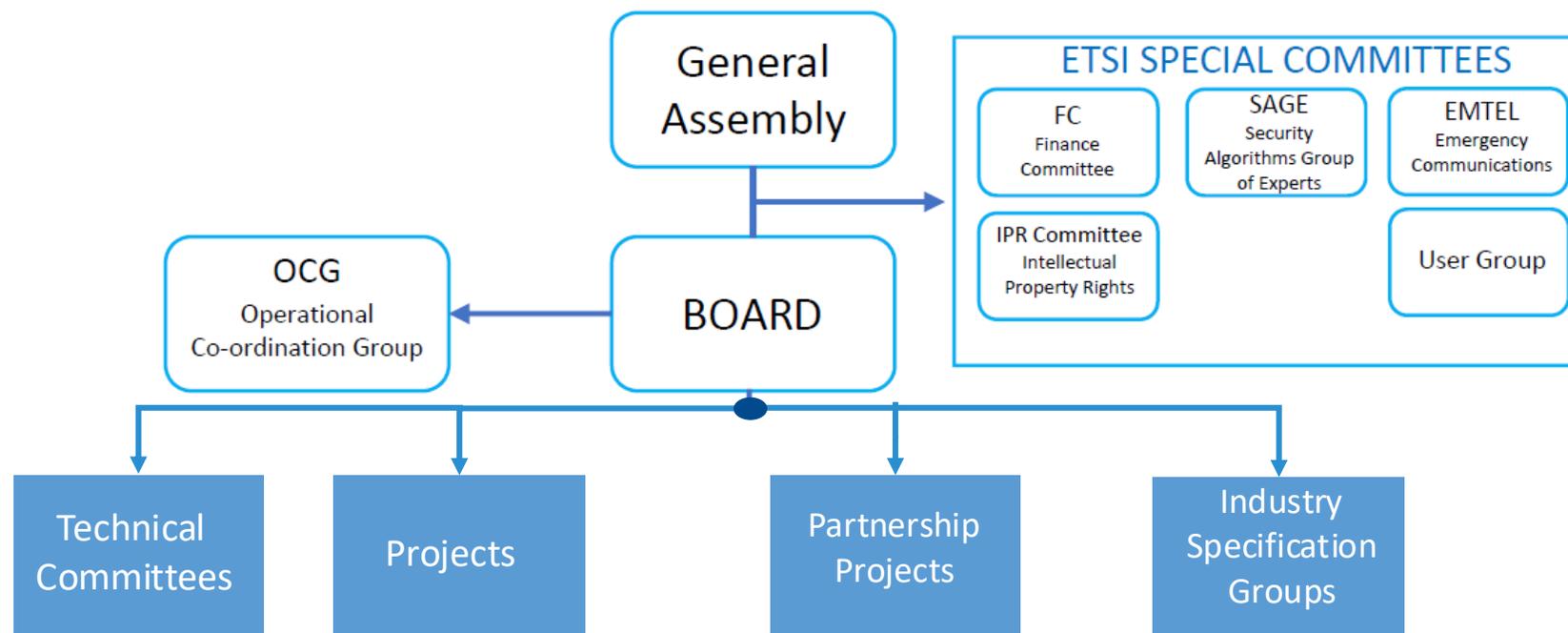
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ETSI in a nutshell

- Officially recognized by the EU as one of only **3** European Standardization Organizations
 - A brainchild of Europe ➔ EC and EFTA are Counsellors of ETSI
 - Standards in support of EU policies
 - Contributes to radio frequency requirements in EU
- Industry driven, independent, not for profit organization
- Focus on ICT Interoperability and Testing
- Made in Europe for global use
- Global outreach (over 100 partnerships worldwide)
- Collaborative working and partnerships, especially **3GPP** and **oneM2M**
- More than 50 Technical groups
- **900** member organizations, large & small, from **65** countries
- “All you can eat” membership model
- More than **45 000** Technical specifications, reports and Standards for free download
- Robust and respected Intellectual Property Rights (IPR) policy (FRAND)



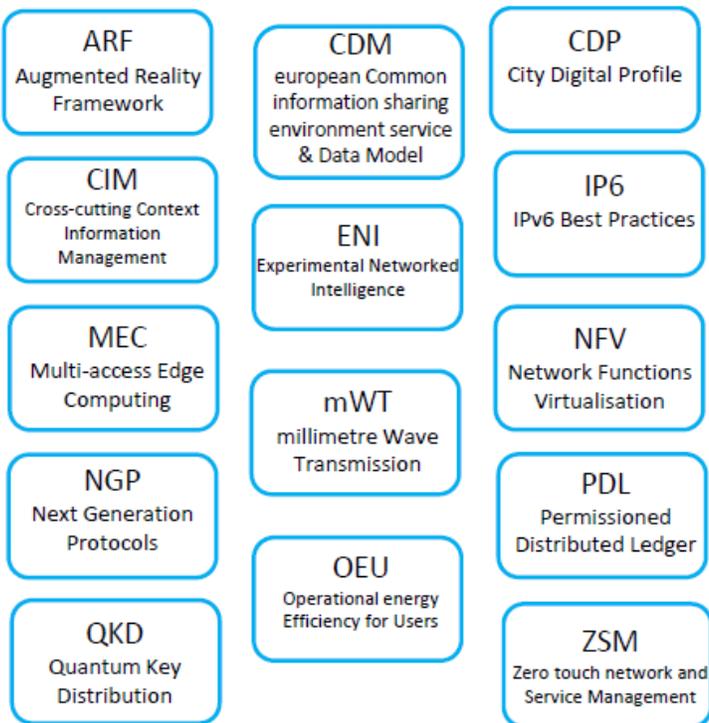
ETSI structure



At all levels,
consensus is sought

Areas covered

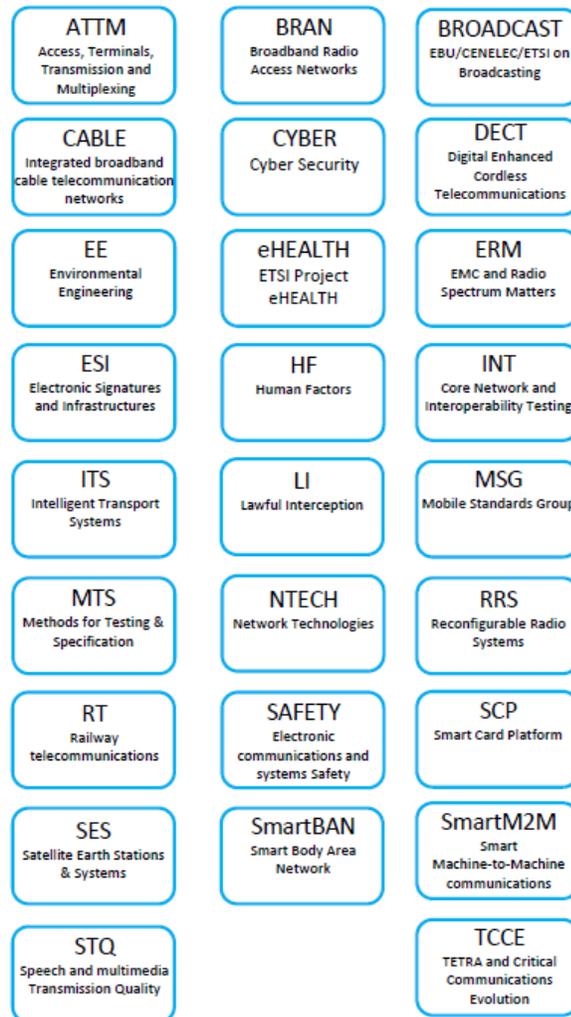
ETSI INDUSTRY SPECIFICATION GROUPS



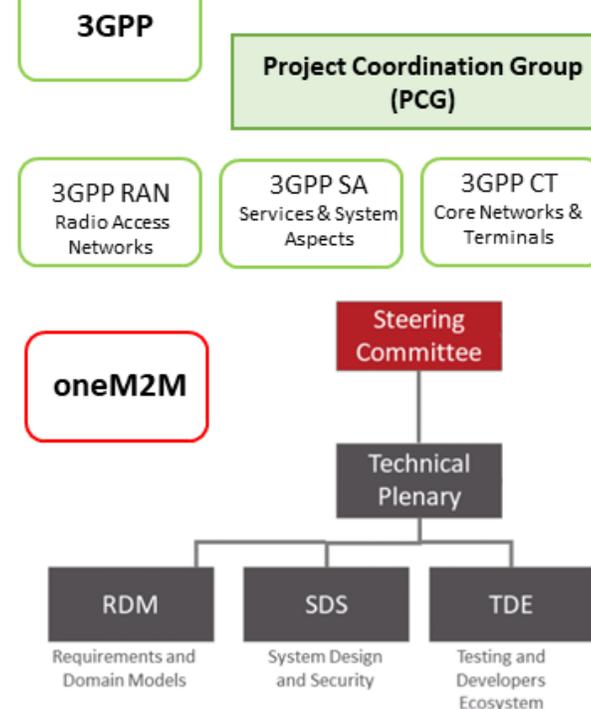
OTHER ETSI GROUPS

OSM
Open Source Mano

ETSI TECHNICAL COMMITTEES / ETSI PROJECTS



ETSI PARTNERSHIP PROJECTS



Development of Teaching Materials for Education on Standardization with a Focus on ICT



- ✔ Project Duration: 1st January 2016 to 31st December 2018
- ✔ Special Task Force (STF) 515 initiated by ETSI and supported by the European Commission and EFTA Secretariat
- ✔ Main Objective: improved employability of future graduates in the area of ICT standardization by ensuring they understand the importance of standards & standardization
- ✔ Under direction of Fraunhofer Center for International Management and Knowledge Economy (IMW), a team of five experts in standardization research and practice developed a comprehensive course on ICT standardization

Development of Teaching Materials for Education on Standardization with a Focus on ICT

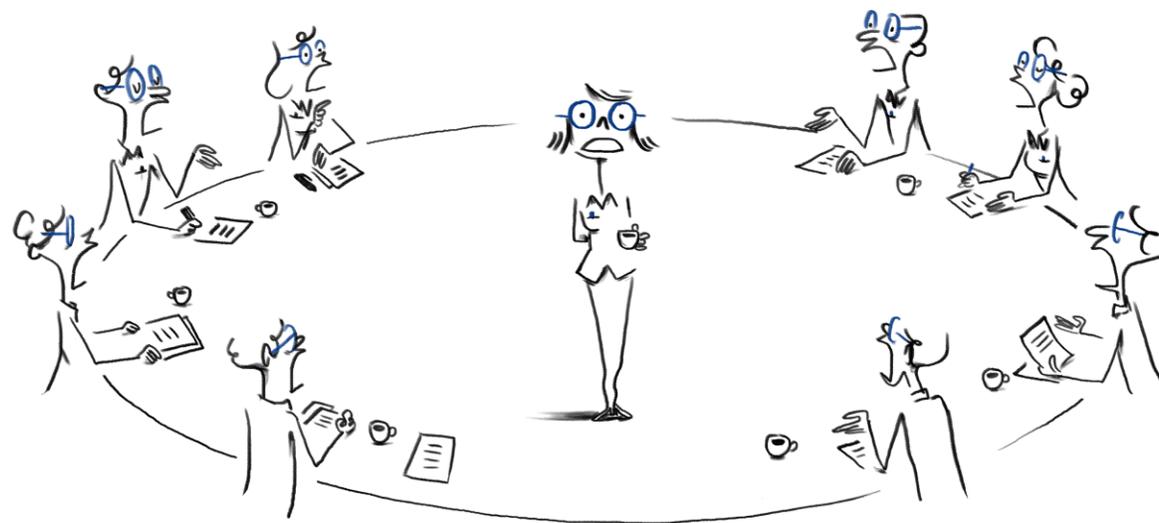


- ✔ Identification of optimal teaching methods and topics via the inputs from 25 experts
- ✔ Development of teaching materials:
 - ✔ Set of 395 slides
 - ✔ Accompanying 260 page textbook “Understanding ICT Standardization: Principles and Practice”
 - ✔ Case studies and other materials, e.g. quizzes, examples and visualizations to increase attractiveness of overall topic for teachers and students
- ✔ Modular design to suit different higher education levels and different study programs
- ✔ All teaching materials resulting from this action are available for free from the ETSI website: <https://www.etsi.org/media-library/education>

A closer look at the teaching materials

MAIN GOALS

- ✔ To facilitate education on ICT standardization among lecturers and students
- ✔ To foster the position of ICT standardization in educational programs, trainings, and academic curricula
- ✔ To improve the employability of future graduates in the area of standardization



Teaching Materials for Education on Standardization with a Focus on ICT - overview



The curriculum of the teaching materials covers the following topics:

- ✔ Standardization basics
- ✔ The standards ecosystem
- ✔ The production of standards
- ✔ Standardization and innovation
- ✔ A strategic perspective on standardization
- ✔ A business perspective: Intellectual Property Rights (IPR) and standardization
- ✔ The economic benefits of standards

Teaching materials – Textbook Structure

Contents/Chapter structure:

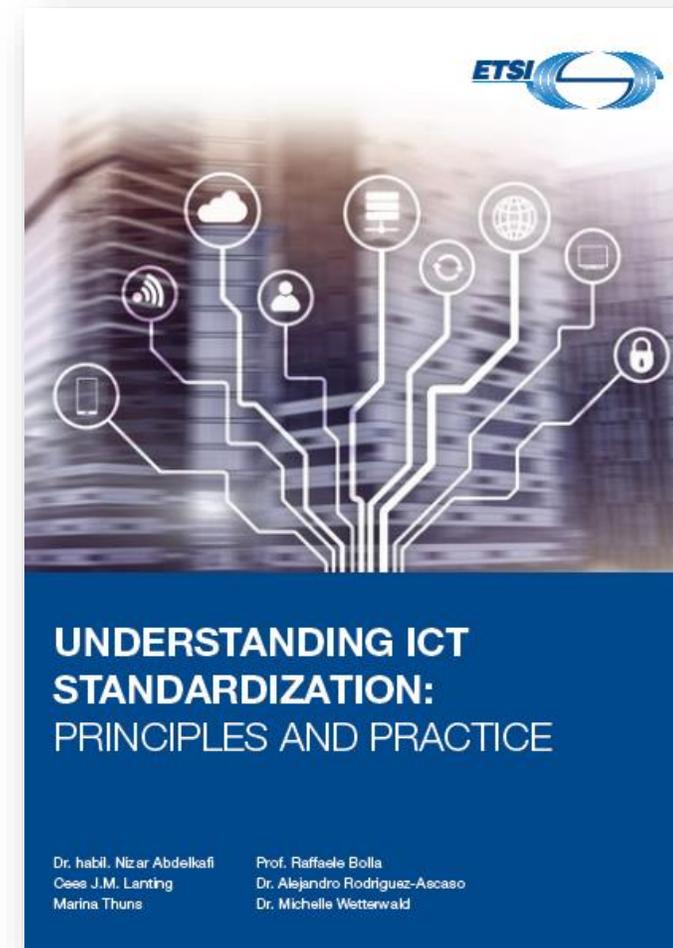
1. Introduction
2. Introduction to standards
3. The standards ecosystem
4. The production of standards
5. Standardization and innovation
6. A strategic perspective on standardization
7. A business perspective: IPR and standardization
8. An economic perspective on standardization
9. Conclusion

Key concepts

More advanced topics

Each textbook chapter includes

- Learning objectives and key messages
- Glossary, list of abbreviations, useful reference list



Material available for each chapter

- ✓ Following example taken from Chapter 2 (applies to all chapters)
- ✓ **Main Table of Contents** allows to identify easily what is covered

FOREWORD	1
1 INTRODUCTION	2
2 INTRODUCTION TO STANDARDS	4
2.1 BASICS OF STANDARDIZATION	5
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2.1.2 STANDARDS IN EVERYDAY LIFE	7
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Target audience : students and teachers

✓ Students

- ✓ **Future professionals** still at **higher education** such as Polytechnics and Universities
 - ✓ Master and PhD engineering students
 - ✓ MBA/management/law students

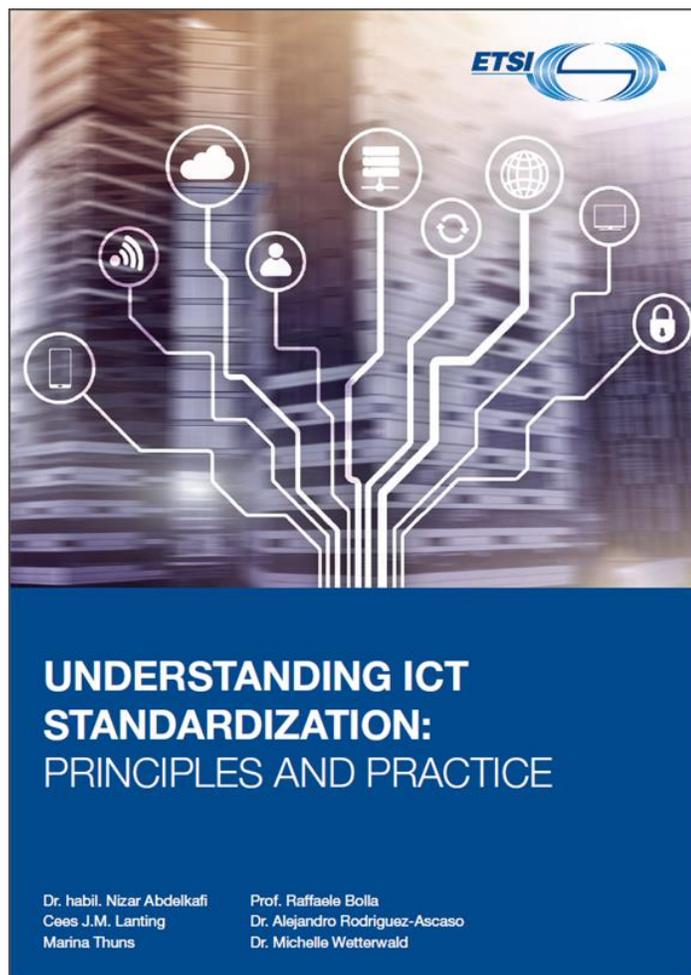
Can be extended to **any group of persons** interested in **the mechanisms, the benefits and the economics of standardisation**, in particular concerning ICT

✓ Teachers (**teach the teachers**)

- ✓ Lecturers willing to include ICT standardization in an existing curriculum or offer a new full curriculum on ICT standardization

With or without **previous knowledge** on standardization (Key concepts / advanced topics for critical understanding)

Obtaining the material



- The textbook can now be purchased from 10 different online bookstores
- All teaching materials are available for free from the ETSI website:
<https://www.etsi.org/media-library/education>
- The slides are also available in Microsoft PowerPoint format:
ETSI grants licenses for academic users (teachers, lecturers etc.) to integrate some or all of these slides in their own coursework, upon request to legal@etsi.org
- The proceedings of the ETSI conference, “*Boosting ICT Business and Innovation: A Comprehensive Approach to Standardization Education in Europe*”, held on 4-5 October 2018, are also available:
<https://www.etsi.org/images/files/e-proceedings/e-proceedings-Education-Standardization.pdf>

Feedback appreciated

- ✔ We would be very pleased to get your feedback with respect to the teaching materials and to introduce your improvements in the second edition
- ✔ Feedback form: <https://www.surveymonkey.com/r/JHQL2HW>



