EC Workshop: Wireless resources for Advanced Manufacturing
STANDARDIZATION PERSPECTIVES

Geert Maes – CEN-CENELEC Workshop: Wireless resources for Advanced Manufacturing – 30 October 2014

European Standardization Organizations

European Committee for Standardization (non-electrotechnical and non-communications)

European Committee for Electrotechnical Standardization

European Telecommunications Standardization Institute

The **three** recognized European bodies for standardization in support of the European legal framework (Regulation 1025/2012/EC)

to prepare *voluntary* standards that help develop the Single European Market

European Standardization Organizations

➢ **33 Members**
(NSB/NC of 28 EU Members
+ 3 EFTA countries
+ 2 candidate countries)

➢ Affiliates (17 CEN, 13 CLC)

➢ 3 CEN Partner Standardization Bodies (Australia, Mongolia and Kyrgyzstan), in process with Kazakhstan

European Standard

'European standard' means a standard adopted by a European standardization organization'

Regulation 1025/2012

'*Standard adopted by CEN and/or CENELEC and carrying with it an obligation of implementation as an identical national standard and withdrawal of conflicting national standards'*

CEN-CENELEC Internal Regulations Part 2

Why is a European Standard so valuable

- Shaped by those who contribute
- Open and transparent process
- Market driven
- Representation of all interested parties
- Reached through consensus
- National commitment
- Technical coherence

… and remember …

Why is a European Standard so valuable

→ 1 European Standard

… replaces 33 different

national standards

in Europe

… creates access

to a market of

600 million…

CEN and CENELEC Members ■ CEN and CENELEC Affiliates ■ CEN Affiliates ■ EU neighbouring countries

Why is a European Standard even more valuable…

➤ Industry = global

➤ Avoid duplication of work on standards at global and European level

➤ Aim at identical worldwide and European standards

➤ Establish agreement on repartition work

➤ Carry out simultaneous commenting and acceptance procedures on single drafts

CENELEC

Why is a European Standard even more valuable...

Internationally recognized bodies

➢ International:

➢ Regional (Europe):

➢ National:
National Standards Bodies (CEN) or
National Electrotechnical Committees (CENELEC)

Geert Maes – CEN-CENELEC
EC Conference on Rolling Plan for ICT Standardization
Workshop: Wireless resources for Advanced Manufacturing – 30 October 2014
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Legislation & Standards

## New Approach Legislation (directive/regulation) → WHAT

- Define essential requirements (e.g.: health and safety, spectrum use)

- Indicate desired outcome WITHOUT specifying how it should be achieved

Harmonized Standards → HOW = STANDARD

- ESO develop or approve <u>Harmonized Standards</u>, i.e. harmonized to legislation

- hENs set out concrete technical specifications to meet Directive/Regulations essential requirements (this can be by new work or the revision of an existing standard)

- When a standard is accepted by the EC as a Harmonized Standard its application confers 'presumption of conformity'

Legislation & Standards

Application by manufacturers / service providers:
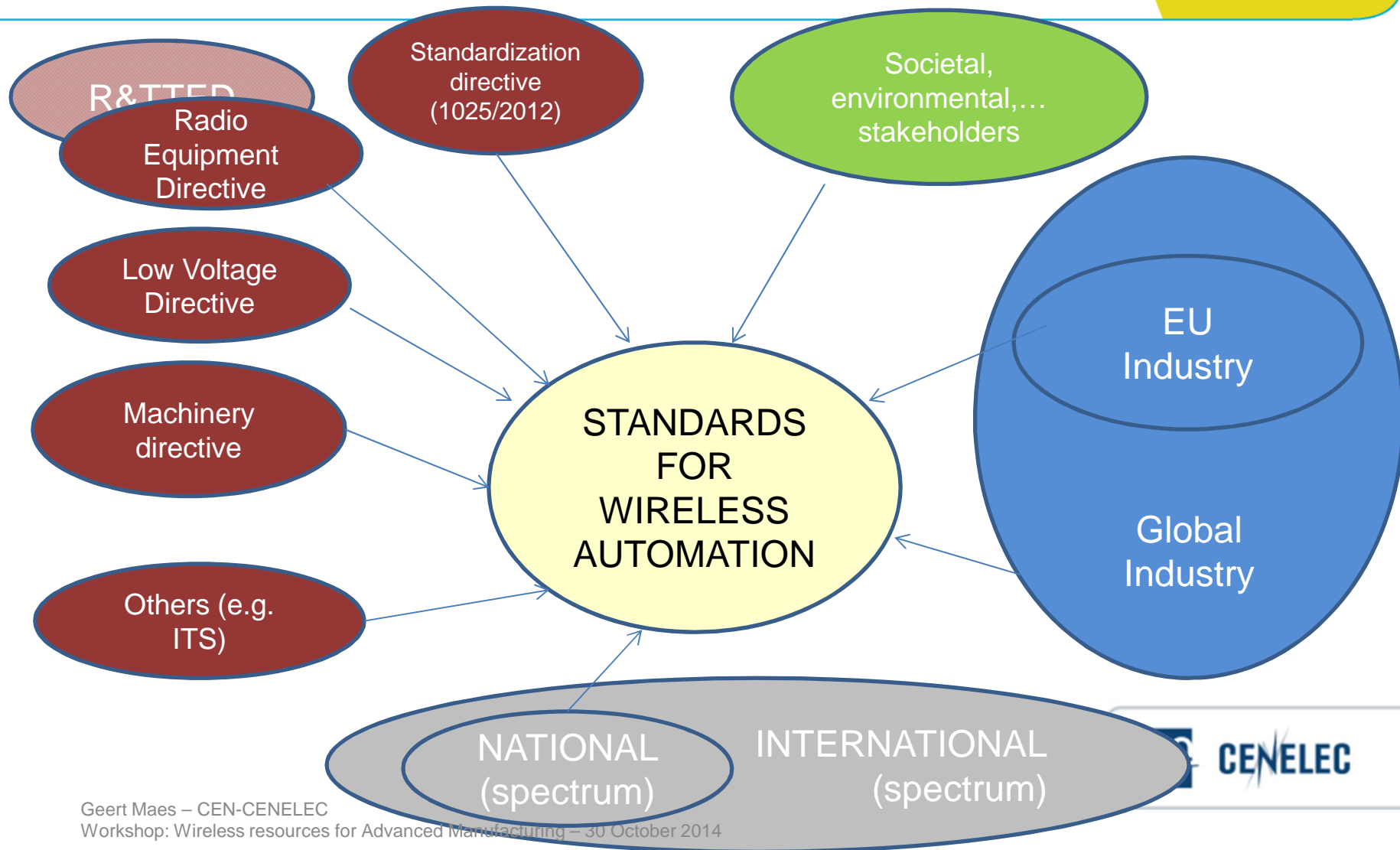
Compulsory

Voluntary
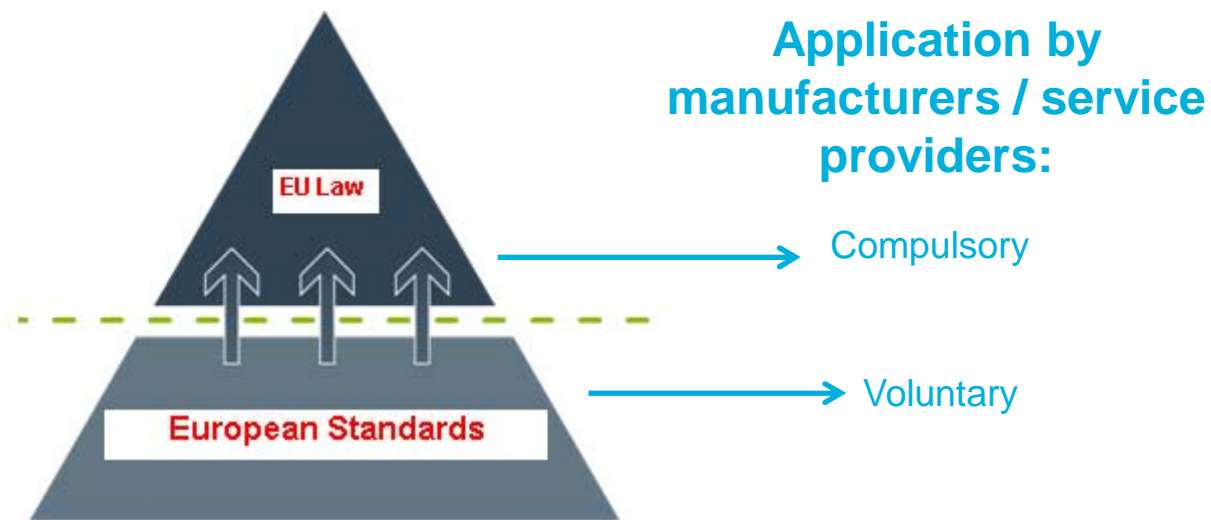
NEW APPROACH

Legislation and standards

1) focus on **essential health & safety requirements** of **product groups** (danger/hazard) & **harmonise legislation** at EU level

2) use **standards** to translate essential requirements into technical products specifications

3) **harmonised standard(s)** confer **presumption of conformity**

PLAYFIELD FOR WIRELESS AUTOMATION STANDARDIZATION

R&TTED

Radio Equipment Directive

Standardization directive (1025/2012)

Societal, environmental,… stakeholders

Low Voltage Directive

Machinery directive

Others (e.g. ITS)

STANDARDS FOR WIRELESS AUTOMATION

EU Industry

Global Industry

NATIONAL (spectrum)

INTERNATIONAL (spectrum)

CENELEC

MAIN CHALLENGE

RED (and R&TTE)

- Health and safety aspects
- EMC-aspects
- Effective and efficient spectrum use
- For certain categories:
  - interworks with accessories
  - interworks via networks with other radio equipment
  - can be connected to interfaces of the appropriate type throughout the Union
  - does not harm the network or its functioning nor misuse network resources, thereby causing an unacceptable degradation of service;
  - to ensure that the personal data and privacy of the user and of the subscriber are protected;
  - protection from fraud
  - access to emergency services
  - facilitate its use by users with a disabilities
  - software can only be loaded into the radio equipment where the compliance of the combination of the radio equipment and software has been demonstrated.

Manufacturing- and Process-automation need

- Based on mass production products
- Using non licensed bands (e.g. 2,4 GHz)
- Deterministic
  - Temporal definition, predictive behavior
  - No starvation - no cut off of communication)
- Short latency (Fast response)
- Robustness (Availability of the link)
- Security (Data integrity)
- Co-existence & range (Plant management)
- Energy efficiency (Battery operated devices)

The aspects above are not only wireless specific, for wireless they build on experience in wired automation

BASED ON BUILT EXPERIENCE

- ➤ Examples :
  - ➤ Ethernet
  - ➤ Network Administration Tools
  - ➤ Operating System: Windows
  - ➤ Displays (consumer core technology, ruggedized for IA)
  - ➤ 2.4 GHz band (adequate and essential – international & global – long term experience – based on existing know-how)

REQUIRES

➢ OPEN COOPERATION

  REGULATORS – STANDARDIZERS – INDUSTRY
  - STAKEHOLDERS

  HELICOPTERVIEW & COMPROMISE

➢ EYE FOR THE INTERNATIONAL SCENE

  ➢ Maintaining competitiveness for markets
    outside Europe

  ➢ Preserving potential for innovations

  ➢ Securing investments of manufacturers
    (R&D) and plant operators

Many thanks for your attention

Need for more info?

→ www.cen.eu

→ www.cenelec.eu

→ www.cencenelec.eu

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