

EU Legislation/Standardisation Construction

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- 1. Background**
- 2. The Eurocodes**
- 3. This seminar**

Background – EU Principles

1. Single European Market

Efficient economy through increased competition

- 4 freedoms EU Treaty:
Free movement of **People, Goods, Services and Capital**
- Main Challenge:
 - Bring down barriers/simplify rules - individuals, consumers and businesses can make the most of the opportunities offered (~ 500 million inhabitants).
 - BUT while ensuring Safety & Health, Environmental protection, Social standards, etc

2. Member states responsible for safety of their citizens

Construction regulations set on EU Member State level

Background - Single Market

Legislation/Standards specifically for Construction:

- **CPD**, Construction Products Directive (89/106/EEC) - CPR
- **Eurocodes** (European standards)

Legislation/Standards not targeting construction but **influencing**, for ex:

- **Services**: Directive on Services in the internal market
(Dir 2006/123/EC)
Right to establish and provide services in all EU Member States
- **Public Procurement Directives** (Dirs 2004/17/EC and 2004/18/EC).
Fairness and transparency when concluding public contracts
- **Labour mobility** Posting of workers (Dir 96/71/EC) and other Dir's

Why Eurocodes?

Technical means to support political objectives

1. Health and safety

- High level of safety for construction works (buildings, bridges, etc.)
- Contribute to harmonized standards for structural products

2. Market functioning/efficiency

An efficient Construction sector; services and products

- Free circulation of products and services (contractors, engineers, etc)
- Large and efficient market for structural design (for ex. development of common design tools like calculation software)

Why Eurocodes?

Technical means to support political objectives

3. Technical aspects

- Advanced, complete and coherent common codes at the forefront of technical developments
- A common reference to prove compliance of building and civil engineering works with the CPD Essential Requirement (ER) n° 1 “Mechanical resistance and stability” and n° 2 “Safety in case of fire”
- To determine the performance of structural construction products
- Common basis for research and development in all MS – pooling resources

Eurocodes

Current situation

- All 58 European standards (EN) ready and published
- 2007-2010 Transition period for the implementation of ENs as national standards – National Design Codes usually phased out
- The Member States define the Nationally Determined Parameters (NDPs).
 - difference in climate, soil, seismic activity, etc.
 - Safety/risk approach affects safety factors for each country
- Eurocodes (ENs) must be accepted/used for public projects
- Public Procurement Directives
- Information/training activities in the MS, for ex:
 - Incorporation in curricula engineers/architects/etc.
 - Courses for practicing designers
 - Information sites/Help Desks (authorities, sector/trade associations, training institutions)

Eurocodes, design codes for today and tomorrow

An ongoing process - take on board:

- o Market developments, inventions
 - ✓ new materials, methods
- o Research findings – design methods/calculations

New demands

- o Sustainability, incl. energy
- o Security
- o Comfort

Facilitate use by designers

- o Easy to use
 - ✓ Accurate, technically reliable (maintenance)
 - ✓ Tools available (calculation software)
- o Up-to-date (balance stability-developments)
- o Accepted on markets (promotion)

Eurocodes, ongoing actions

- Training of designers/operators (Member States)
- Promotion in 3rd Countries (Commission, MS, CEN)
- “Maintenance”, correction of mistakes
- Harmonization (reduce number of NDPs)
- Incorporate new materials/construction methods (glass, FRP)
- Take up and adapt to new research findings/calculation methods (ex. seismic, foot bridges)
- “Widen” the scope (sustainable construction, energy efficiency) –
Cover all Essential Requirements on works in CPD

Eurocodes, Commission support actions

- ENC Group – regular meetings (Member States, Com, CEN, Industry)
advisory/consultative/guiding role, development + signal problems implementation
- JRC/ENTR Agreement, 3 years (- mid 2011)
support implementation/development (all issues listed, incl today's workshop)
- Promotion 3rd countries, Strategy development + Funding
- Lead Market Initiative, Sustainable Construction
Supports “widening” of the Eurocodes into sustainability issues
- COM Mandates further Eurocodes standardization work (new materials/etc)
for CEN
- New Commission Recommendation/Communication
– Future of the Eurocodes

Eurocodes, Sustainable Construction

“Widen the scope” (methodology)

Many existing EU-level policies/legislation influence construction design
(Energy efficiency in Buildings, Waste, Green Procurement, Life-Cycle Costing)

Objective: Integrate into comprehensive design tools

Step I

Assessment of needs and gaps (CEN WG 206, LMI)

Step II

Assessment of the existing rules/instruments

can they enter into Eurocode - compatible format? (CEN WG 206)

Step III

Define “road map” - development per sub-sector (timing, resources, etc)

Eurocodes, Sustainable Construction

“Widen the scope” (output)

Objective: Integrate into comprehensive tools

- Develop new Eurocodes or Eurocode-compatible tools
- Enable integration of relevant aspects (ex noise, energy efficiency, waste,..) from the beginning of the design process
- Flexibility
 - Incorporate or not
 - Adapt to different conditions (National Parameters)
- Timeframe: 3 - 5 years

This event (training of national trainers)

Objectives:

- Assist training efforts undertaken in the EU Member States (and participating EFTA countries)
 - Obtain first-hand information/knowledge on the codes and their implementation from the experts developing the Eurocodes
 - Receive state-of-the-art training material and background information.
- Facilitate national implementation
- Create opportunities for exchanges of views, networking and establishment of cooperation between national practitioners

This event (training of national trainers)

- Previous event in February 2008
 - Covered all Eurocodes except Eurocode 6
 - Most appreciated by participants
 - Successful in achieving objectives
- This event one code, Eurocode 6, Masonry structures
 - Benefit from experience of last event
 - Focused group of participants

Thank you

More info on the Eurocodes:

the Europa site of the European Commission, DG Enterprise
http://ec.europa.eu/enterprise/construction/internal/essreq/eurocodes/eurointro_en.htm

and the dedicated and constantly updated site « Building the future » of the Joint Research Centre (JRC)
<http://eurocodes.jrc.ec.europa.eu>