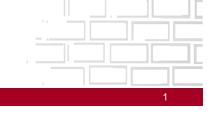


Dissemination of information for training - Brussels, 2-3 April 2009



## 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).
  - o difference in climate, soil, seismic activity, etc.
  - o Safety/risk approach affects safety factors for each country
- Eurocodes (ENs) <u>must</u> be accepted/used for public projects
   Public Procurement Directives
- Information/training activities in the MS, for ex:
  - o Incorporation in curricula engineers/architects/etc.
  - o Courses for practicing designers
  - o Information sites/Help Desks (authorities, sector/trade associations, training institutions)



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## 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)

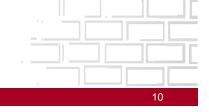




## Eurocodes, ongoing actions

- 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





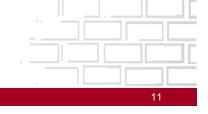
#### Eurocodes, Commission support actions

- 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



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### 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)

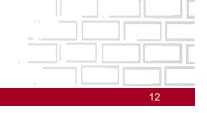
**Objective**: Integrate into comprehensive design tools

**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)



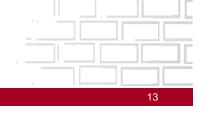


## Eurocodes, Sustainable Construction "Widen the scope" (output)

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



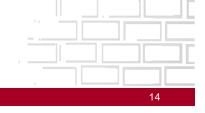


## This event (training of national trainers)

#### 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



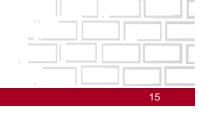


## This event (training of national trainers)

- 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



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# Thank you

### More info on the Eurocodes:

the Europa site of the European Commission, DG Enterprise http://ec.europa.eu/enterprise/construction/internal/ess req/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