Challenges for Construction and Demolition Waste (CDW) management in EU

• Construction and demolition: 1/3 of all waste
• Only 50% of C&D waste is recycled today in the EU
• Main priority: Improve recycling and reuse of CDW
• Main hurdle is the lack of confidence in CDW quality
Circular Economy Package

- *Increase the durability and recyclability of building components*
  - Building design improvements
  - Pre-demolition and renovation waste audits

- *Construction and demolition waste (CDW)*
  - Recycling of CDW encouraged by a mandatory target: 70% by 2020 (WFD2008/98)
  - Sectorial actions of the Circular Economy Action Plan
  - Promoting best practices in recycling of CDW
Energy Union and Climate: Accelerating clean energy in buildings

- Construction of new buildings or retrofitting buildings
  - to render them more energy-efficient
  - to rethink construction and demolition practices
  - to take into account broader resource efficiency aspects
- Principles and rules for the sustainable design of buildings
  - to generate less construction and demolition waste
  - to facilitate materials recycling

These initiatives will reduce energy consumption and construction materials costs
Construction & Demolition: Priority of the Circular Economy Action Plan

- Plastics
- Food waste
- Critical Raw Materials
- Construction & Demolition
- Biomass & bio-based products
### Sectorial action

#### Construction and Demolition

<table>
<thead>
<tr>
<th>Description</th>
<th>Year</th>
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<tr>
<td>Pre-demolition assessment <strong>guidelines</strong> for the construction sector.</td>
<td>2017</td>
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<td>Voluntary industry-wide <strong>recycling protocol</strong> for construction and demolition waste.</td>
<td>2016</td>
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<td><strong>Core indicators</strong> for the assessment of the lifecycle environmental performance of a building, and incentives for their use.</td>
<td>2017 onwards</td>
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EU C&D Waste Management Protocol

The EU Protocol and the Pre-demolition audits

- Improve C&D Waste collection, separation and process
- Boost demand for C&D Waste recycled materials

Protocol's key aspects:
Quality - Confidence - Market
EU C&D Waste Management Protocol


- From and for construction businesses EU wide
- Co-production with industry and Member States
- Involves all value chain stakeholders and addresses all the value chain
- Its overall aim is to increase confidence in the C&D waste management process and the trust in the quality of the secondary raw materials recycled/derived from the C&D waste.
EU C&D Waste Management Protocol

- Waste identification, source separation and collection
- Waste logistics
- Waste processing
- Quality management
- Policy and framework conditions
“EU Construction and Demolition Waste Protocol”

Checklist

- IMPROVE WASTE IDENTIFICATION
- IMPROVE SOURCE SEPARATION
- TRANSPARENCY, TRACKING AND TRACING
- IMPROVE LOGISTICS
- STOCKPILING POTENTIAL AND PROPER STOCKING
- WASTE PROCESSING AND TREATMENT OPTIONS
- PREPARATION FOR REUSE
- RECYCLING
- MATERIAL AND ENERGY RECOVERY
- QUALITY OF THE PRIMARY PROCESS
- QUALITY ASSURANCE RELATED TO PRODUCTS AND PRODUCT STANDARDS
“EU Construction and Demolition Waste Protocol”

**Wider benefits**

- Increased demand for C&D recycled materials
- New business activities
- Increased cooperation along the value chain
- Progress towards meeting C&D waste targets
- Progress towards harmonised EU markets for C&D recycled materials
- Generation of reliable C&D waste statistics Reduced environmental impacts and contribution to resource efficiency
“EU Pre-demolition & Renovation Waste Audits”

Development of Specific Tools and/or Guidelines for Assessment of Construction and Demolition Waste Streams prior to Demolition or Renovation of Buildings and Infrastructures

- a specific task within the project planning
- the first step towards recycling
- fair competition amongst contractors
- awareness and traceability processes.
- assurance that contaminants are safely removed
- better demolition waste management
“EU Pre-demolition & Renovation Waste Audits”

**CDW WASTE AUDIT GUIDELINE: General scheme**

- Desk study
- Site visit
- Inventory
- Management recommendations
- Reporting
- Quality assurance
  - Original building documentation
  - Maintenance protocols
  - Measurements, laboratory tests
  - Waste classification
  - Legal and other requirements
  - Templates
“EU Pre-demolition & Renovation Waste Audits”

CDW WASTE AUDIT GUIDELINE: role of participants
“EU Pre-demolition & Renovation Waste Audits”

CDW WASTE AUDIT GUIDELINE: Decision-making

- **Liability of the waste holder**
  - Elements
    - Not contaminated
    - Contaminated
  - Materials
    - Non-hazardous
    - Contaminated

- **Liability of the auditor**
  - Reusable
    - Not reusable
  - Recyclable
    - Not recyclable

- **Liability of the waste producer**
  - Reuse
    - Not reused
  - Recycling
    - Not recycled

Management of other waste:
- **Backfilling**
- **Energy recovery**
- **Landfill**
Levels of maturity of EU member states in CDW management implementation (Study Bio by Deloitte-BRE-ICEDD-RPS-VTT-FCT in 2015-2016)

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Added value of EU actions to implement Circular Economy policy in the construction sector

**Recycle and keep value of CDW**
- Greater efforts towards Member States lagging behind the Waste Framework Directive objective
- Promote best practices throughout the Protocol and Pre-demolition/renovation audits
- Stimulate investments in CDW recycling infrastructure

**Better knowledge and monitoring of CDW management actual practices**
- Improve data/statistics collection and consistency with EUROSTAT
Securing sustainable construction materials and waste management

A comprehensive scheme in progress

- Achievable target of 70% by 2020 for all MS
- Fostering collaborative schemes between demolition and construction sectors aiming at sharing costs
- Study on CDW recycling business models and support investments in new CDW recycling projects
  - Horizon 2020 projects supporting innovation projects in the area of CDW recycling to higher-grade applications (e.g. BAMB, FISSAC, HISER, VEEP, Re4, Green Instruct, InnoWEE...)
  - Study "Development and implementation of initiatives fostering investment and innovation in construction and demolition waste recycling infrastructure"

A prospective view

- Principles and rules for the sustainable design of buildings
  - Design for Deconstruction vs. Durability
Thank you for your attention

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