



Virtual Conference "Construction Products - Fit for the Future"

18. and 20. November 2020

**Workshop 3 – “Construction product information –
the basis for circularity and sustainability of
buildings”**

Speaker:

Martin Car (European Quality Association for Recycling e.V.)

Who we are:

European Quality Association for Recycling e.V. (EQAR) is the European roof organization of

- national quality protection organizations (e.g. mineral recycling)
- Producers of quality-controlled recycled construction materials from EU member states

Tasks and targets of EQAR

- promotion of international cooperation
- exchange of experience between national quality protection organizations and their members
- know-how transfer
- support and dissemination for quality protection and quality assurance of RC construction materials at European level
- participation in European standardization and legislation in the recycling of building materials for
 - harmonized, EU conform requirements
 - inclusion of corresponding standards in CE norms

Member countries



Austria



Belgium



Czech Republic



Germany



Netherlands



South Tyrol/Italy



Switzerland

Sponsors



Germany



Ireland

European Green Deal integrates a new Circular Economy Action Plan

In March 2020 European Commission adopted a new **Circular Economy Action Plan**

- one of the strategic pillars of the European Green Deal is Circular Eco.
- Europe's new agenda for sustainable growth
- demands measures along the entire life cycle of products
- continues the work done since 2015
 - now with new focus on the design and production for a circular economy
 - uses as much recycled material as possible instead of primary raw materials

Construction Products Regulation (CPR) EU 305/2011

Basic Requirements for construction work

1. mechanic resistance and stability
2. safety in case of fire
3. hygiene, health and the environment
4. safety and accessibility in use
5. protection against noise
6. energy efficiency and heat retention
7. **sustainable use of natural resources (not implemented, yet!)**

Construction Products Regulation (CPR) EU 305/2011

Basic Requirements for construction work

7. sustainable use of natural resources → Annex I

“The construction work must be designed, built and dismantled in such a way that the use of natural resources is sustainable and **ensures the following in particular:**

- . Reuse or **recyclability** of the construction works, their **materials** or certain parts after dismantling
- . **Durability** of the construction work
- . **Use** of environmentally compatible raw and **secondary materials**”

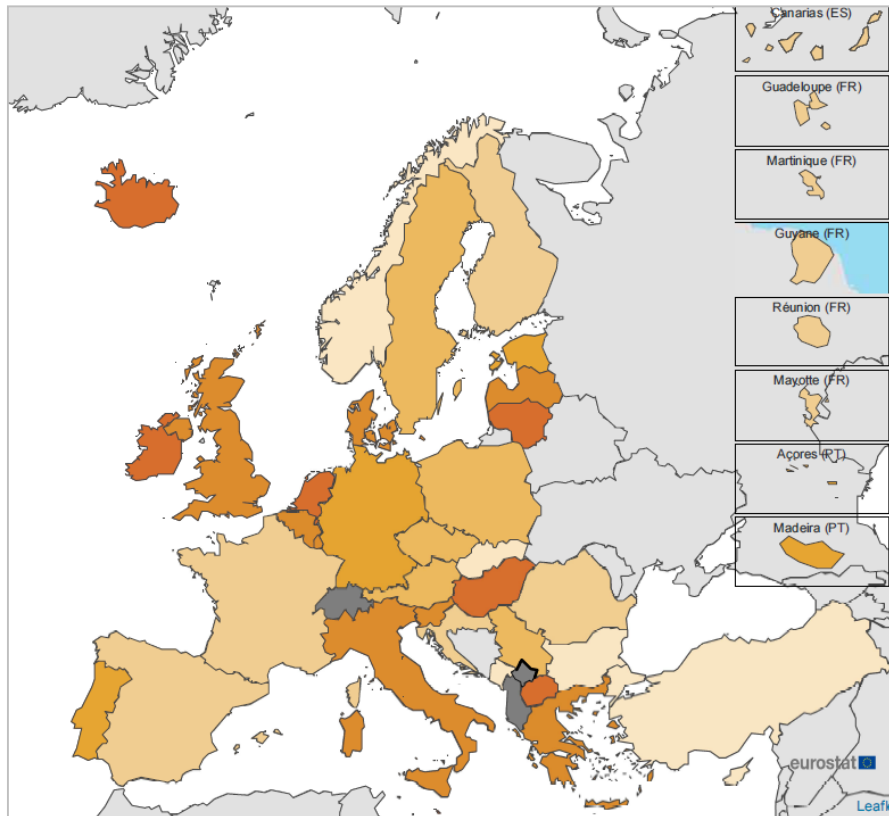
The aims of Circular Economy and the Construction Products Regulation (CPR)

- In the course of the **planned revision of the CPR**, the goals of recycling management in the construction industry and the **quality of recycled building materials are to be promoted**
- EQAR sees an **urgent need for action on Basic Requirement 7** “Sustainable use of natural resources” ...
 - accordingly, environmentally compatible raw and secondary materials **must be used** in the construction work
 - especially recycled building materials gain great importance here
 - there are no precise indicators, so far
 - manufacturers use EPD-s

Construction Products Regulation (CPR) and EU Waste Framework Directive

- Requirement from EU Waste Framework Directive - **70% recycling** of construction and demolition (C&D) waste by 2020
- To **promote** the use of recycled building materials:
 - for example, by setting a **recycling quota** (possibly differentiated by mineral and other building materials)
 - defined technical and environmental **quality**
 - **mandatory** inclusion in any **call for tenders**
 - **Prohibition of landfilling** of recyclable C&D-waste

Status of recycling of construction materials in Europe in terms of development of the recycling economy in the construction industry



Recycling rate of construction and building waste

Legend

- ≥ 0 zur 69
- ≥ 69 zur 81
- ≥ 81 zur 93
- ≥ 93 zur 97
- ≥ 97 zur 99
- ≥ 99
- No data available

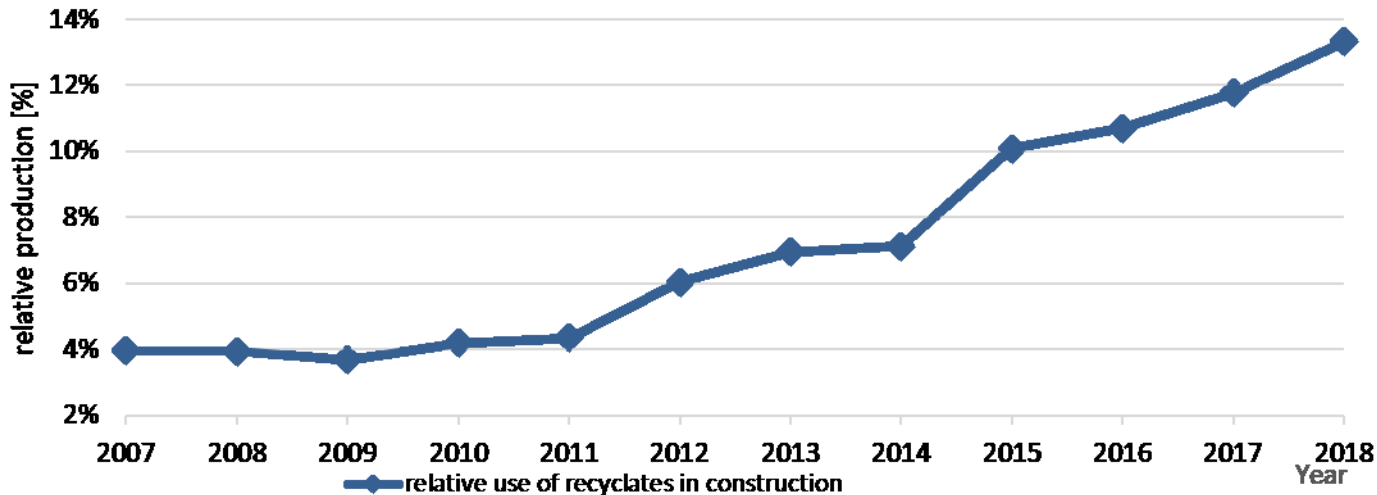
Source: Eurostat (online data code: CEI_WM040)



The success of recycling of construction materials in the member states is hard work and differs from state to state

Example: Czech Republic

The ratio of the production of recycled materials to the total production of inert mineral materials in the construction industry in Czech Republic



Source: ARSM (Skopan)



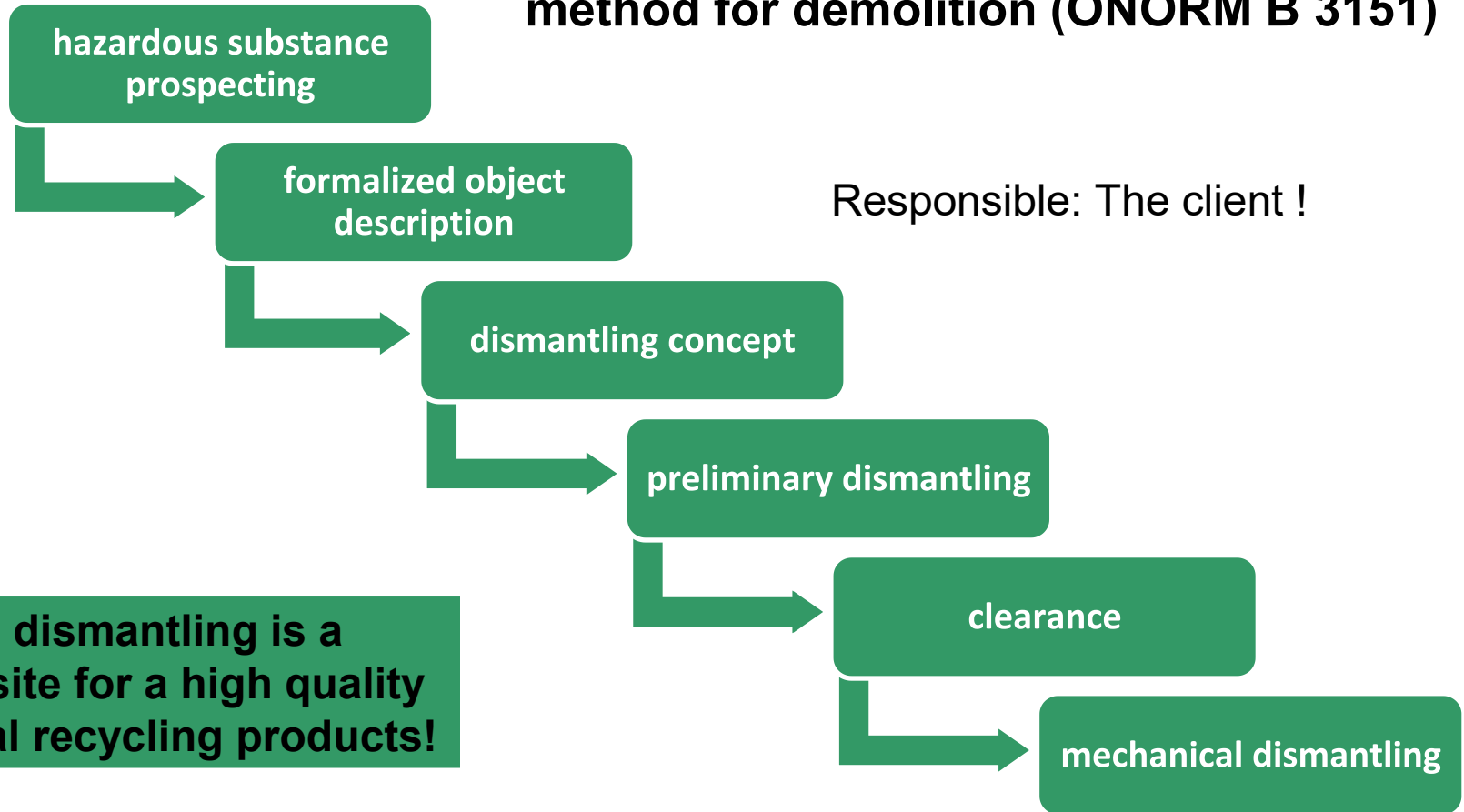
Identification of obstacles to more recycling in the construction sector

- a heterogeneous picture emerges for the recycling of building materials in Europe
- the reasons are different basic conditions:
 - While in the Netherlands, Italy and Austria the **product status** applies to RC construction materials, the end of waste for RC construction materials is still a long way off in other Member States
 - The **product status** for quality-assured recycled construction materials is, however, the **key to a successful recycling economy** for construction in Europe

Identification of obstacles to more recycling in the construction sector

- Regarding the requirements and testing of the **environmental compatibility** of recycled construction materials, there is also a great heterogeneity in the member states.
- European standards for recycled construction materials lack performance characteristics for environmental compatibility.
- In only a few EU member states there are legal obligations for the demolition of buildings to carry out **selective demolition**.
 - significantly influences the quality and quantity of the obtained materials (C&D-waste) for recycling

Best practice (Austria): Dismantling of buildings as a standard method for demolition (ÖNORM B 3151)



All steps must be performed by a „dismantling specialist“ and have to be documented.

Is there a market demand for recycled construction products?

- depending on the type of raw materials and the legal frame
 - high demand for recycled concrete
 - high demand for recycled asphalt
 - low demand for recycled broken bricks / masonry
(further applied research is necessary!)

Quality is the key for a recycling market !!