

# **C&DW recycling - Issues in Europe**

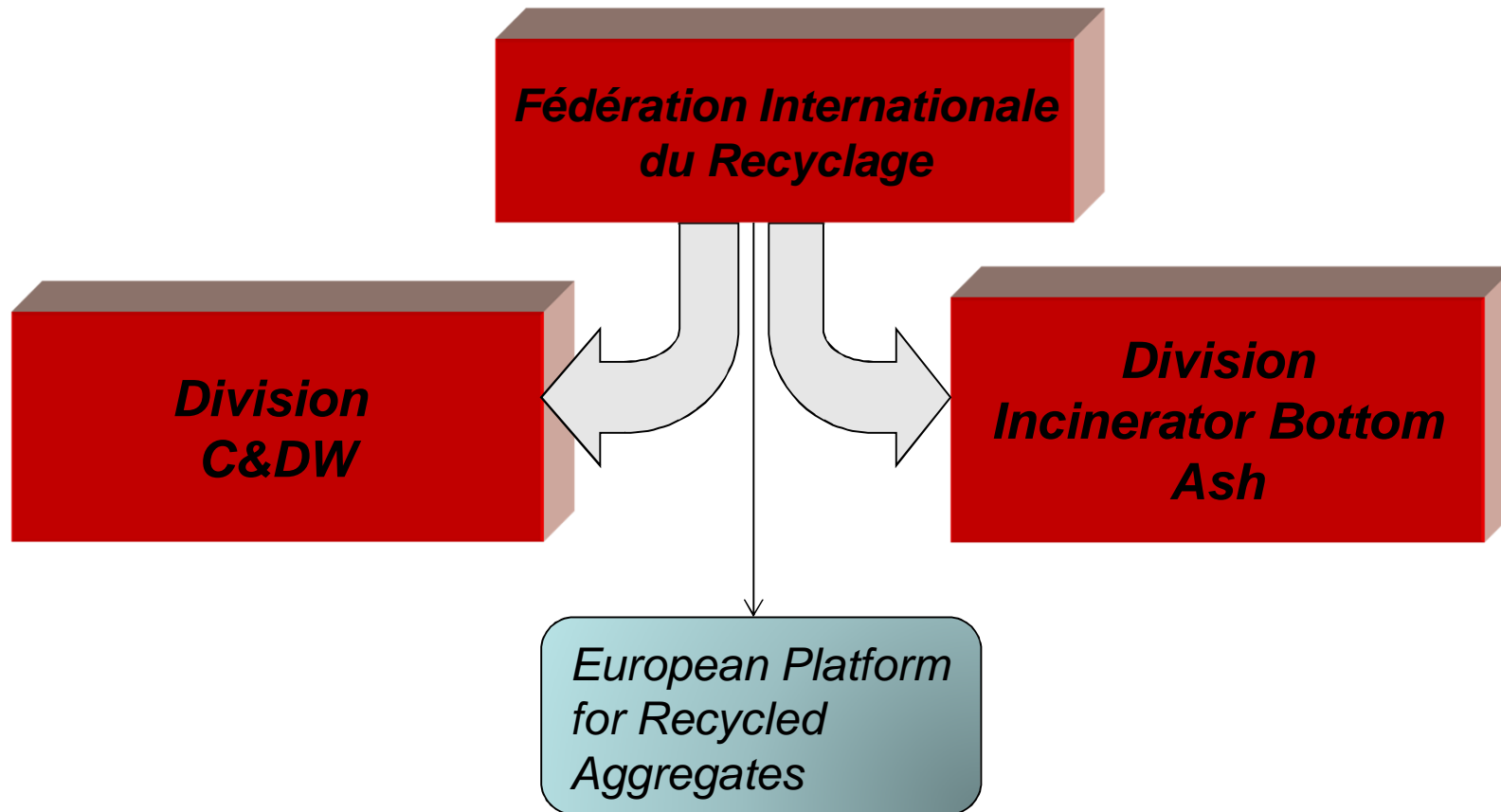
**Simmcenter/Absoils 11 September 2014**

**Geert Cuperus**



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# FIR



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# The target

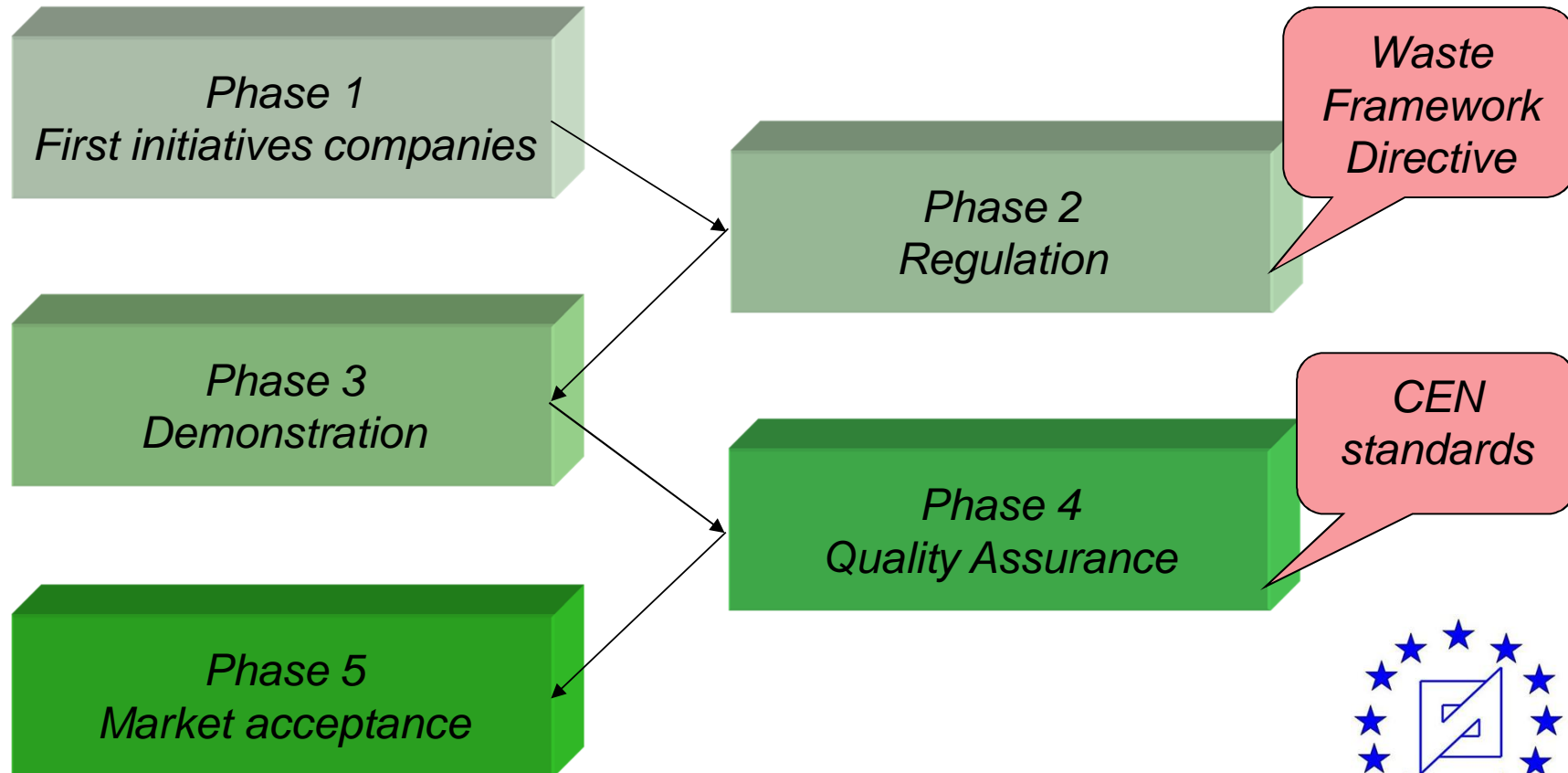
**70% recycling target**

**Well achievable**



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# Development of recycling



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# Example: The Netherlands

- >1980: tipping everywhere
- +/-1980: C&DW to be brought to recycling plants
- No markets available
- +/- 1990:
  - Implementation plan
  - Standardisation
  - Landfill taxes and bans
- Prohibition on land filling
- Soil Quality Decree
- National Waste Management Action plan - minimum standard for processing per waste stream (80)
- Prescribed use of recycled aggregates
- Certified recycled aggregates

- *60 Mton waste in total per year: 83% recycled*
- *25 Mton C&DW :96 % recycled*
- *20 Mton inert C&DW: 99,8 % recycled*

# Recycling in The Netherlands





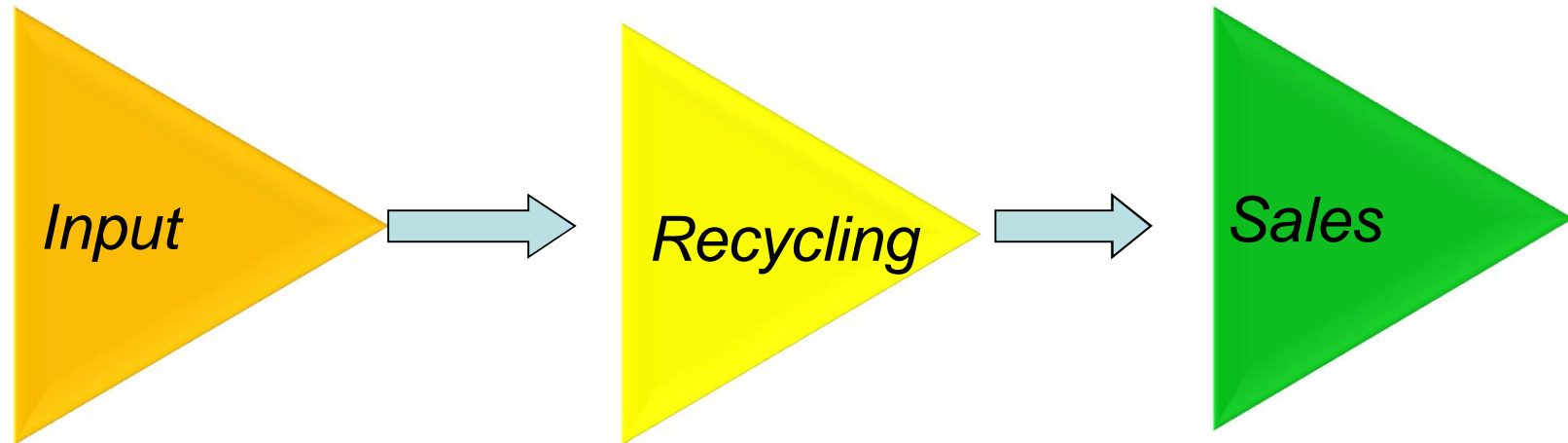
# Requirements for recycling

- No illegal dumping
- Prohibition of C&DW landfilling
- Selective demolition
- Standards for recycled aggregates
- Recognition by clients of recycled aggregates as a product
- Prescription of the use of recycled aggregates in public procurement

*Recommendations  
from TG3 of  
“Competitiveness of  
the Construction  
Industry”*



# Requirements for recycling



**Landfill ban  
Enforcement  
Monitoring**

**Infrastructure  
QA schemes**

**Prescribed  
use**



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# Requirements for recycling



**Exclude backfilling  
from the 70% target**



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# Current issues

- Circular Economy package
- Sustainable construction
- Green Public Procurement
- Construction product Regulation (CPR)
- Sustainability
- Leaching testing
- List of Waste
- End of Waste
- BREF



# Circular Economy Package

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS

**Towards a circular economy:  
A zero waste programme for Europe**

envisages measures to stimulate markets in recycled materials derived from **construction and demolition waste** and develop a common EU assessment framework for the environmental performance of buildings;



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# Circular Economy Package

Proposal for a

## **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**amending Directives 2008/98/EC on waste, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2000/53/EC on end-of-life vehicles, 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on waste electrical and electronic equipment**

'(17a). "backfilling" means any of the following types of recovery:

- (i) recovery where waste is used in excavated areas such as underground mines or gravel pits for the purpose of slope reclamation, safety, or for engineering purposes in landscaping;
- (ii) recovery where waste is used for the purpose of construction, stowage of mines and quarries, for re-cultivation, land reclamation, or landscaping and where the waste is substituting other non-waste materials which would otherwise have been used for that purpose:';



F.I.R.

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# Circular Economy Package

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**amending Directives 2008/98/EC on waste, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2000/53/EC on end-of-life vehicles, 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on waste electrical and electronic equipment**

'3. The Commission may adopt implementing acts necessary to ensure a uniform implementation of the target laid down in paragraph 2(b) as regards backfilling. Those implementing acts shall be adopted in accordance with the procedure referred to in Article 39(2).



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# Sustainable Construction

"Strategy for the sustainable competitiveness of the construction sector and its enterprises" (COM (2012) 433 final)

## Thematic Group 3 – Sustainable use of natural resources

9. Encourage the creation of an EU framework for **building assessment** in terms of evaluation/comparability of the environmental performance of buildings. Promote a single structure for the **assessment of the environmental performance of construction products** building based on existing environmental assessment tools and European standards. Use existing instruments within the framework of ESI Funds and Horizon 2020 to **incentivise resource efficiency** in the construction sector. Consider Green Public Procurement as a tool to increase demand for sustainable buildings. Using **communication tools**, increase awareness/ knowledge about integrated design and sustainable buildings amongst different actors. **Collect data to assess building /product sustainability**. Consider feedback from buildings in operation, and transparent communication of operating data, to gain valuable information for future investment.
10. Explore ex-ante assessment of buildings prior to demolition to identify viable/potential opportunities to facilitate maximizing the valorisation of Construction and Demolition (C&D) waste. Identify **economic instruments that provide incentives for recycling C&D waste**. Improve the recycling infrastructure throughout Europe by **clarifying definitions** in the context of the Waste Framework Directive. Develop a realistic target for C&D waste recycling based on sound waste management statistics.

*EPD: EN15804  
New CEN group for  
assessment sustainability  
in road construction*



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# CPR

## CPR Annex I: BWR7= Sustainable Use of natural resources:

- The construction works must be designed, built and demolished in such a way that the use of natural resources is sustainable and in particular ensure the following:
  - (a) reuse or recyclability of the construction works, their materials and parts after demolition;
  - (b) durability of the construction works;
  - (c) use of environmentally compatible raw and secondary materials in the construction works

*Environmental Product Declaration (EPD)*



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# Leaching Testing

- Dutch approach
  - $L/S = 10$
  - $< 4\text{mm}$
  - Low velocity
- German approach
  - $L/S = 2$
  - No crushing
  - Higher velocity
- Compromise EN16637



# Various

- List of Waste
  - Adopted by TAC
  - HP14 (ecotoxicity) no criteria yet
- End of Waste
  - Flanders, UK adopted
  - Netherlands: notified
  - France, Austria preparing
  - Germany, Italy interest
- BREF
  - WT: temporary storage at C&DW plants
  - WI: Incinerator Bottom Ash



# Conclusions

- 70% well achievable
- EC proposals not decisive
- Backfilling should not be in the target
- Sustainability issues need close follow up

