Rijkswaterstaat Circular Economy Programme 2030

Circular and sustainable procurement in infrastructure projects
Focus areas sustainability Rijkswaterstaat

**Energie en klimaat**
- 2020: -20% CO2
- 2030: Energy neutral
- 2030: Climate neutral

**Circulaire economie**
- 2030: RWS works circular
- 2030: -50% use of raw materials
- 2050: No waste

**Duurzame gebiedsontwikkeling**
- Integral sustainable approach towards area development, multiple use of available space
- In collaboration with stakeholders

*“To realise Paris goals”*
*“No waste”*
*“Sustainable area development”*
Why work towards a circular economy?
• 50% of all raw materials used in the Netherlands are related to construction

• The largest volumes of raw materials used by RWS for: *Earth moving, coast supplementation*

• Materials with *highest environmental impact*: CO₂-emission, use of land and pressure on natural capital: *asphalt, soil/sand and concrete*
In the Netherlands most materials are recycled, but in a circular way?

Why is the building sector relevant for CE?
Ambition:

In 2030, Rijkswaterstaat works in a completely circular way by 2030 via the intensive re-use of raw materials and by producing as little waste as possible.
Main focus of the circular programme:

1. Preserving and re-use of our materials
2. Circular design, build and maintain
3. Data system (materials passport)
4. Circular procurement
1. Preserving and re-use of our materials
Re-use of Archbridge Vianen
New destination for our materials in youth clinic Emergis in Kloetinge.

De-assembly and re-use of Rijkswaterstaat building
Circular design of a viaduct

de- assemble
modular design
less material used
fast building process
3. Development of a “Materials passport”

**Phase 1:**
- What information do we need per actor?
- On what level of detail do we wish to document the information?

**Phase 2:**
- Which information is available
- Where do we want to document the information

**Phase 3:**
- Information criteria for a “material passport”
- Criteria for how organization of the information
Sustainability in projects: a process approach

1. Put ‘sustainability’ in the project goals
2. Investigate chances for PPP
3. Set sustainability ambitions for the project
4. Research measures to reach the ambitions
5. Put requirements in the contract and set MEAT criteria
6. Execute the tender and perform audits
Sustainability in projects: instruments

Stappen

1. Analyse vraag en ambities
2. Onderzoek kansen
3. Vastleggen ambities
4. Vertaalslag naar ontwerp en specificaties
5. Afwegen en toetsen
6. Vastleggen en verantwoorden

Instrumenten

- Ambitieweb
- Toolkit
- Multicriteria-analyse

Verantwoording:
- O.a. Overdrachtsdocument, EMVI
- Handreiking Duurzaam Inkopen
- (CO₂-prestatieladder, DuboCalc, RBA-criteria)
Procura+ award winning SAA project: A6 Almere for ‘Best tender procedure of 2016’

- Smart transportation solutions
- Use of recycled materials
- Smart use of asphalt
- Energy neutral
- LED lightning

Reduction of 52,800 ton CO2 / Energy reduction 15,048 toe / Reduction of 39,900 ton asphalt
Which one is more sustainable/circular?

- Low temperature asphalt
- 50 km

- 50% recycling
- 40 km

- 15% less asphalt
- 50 km

- Traditional asphalt
- 10 km

- Low temperature asphalt + 50% recycling
- 100 km

Which one is more sustainable/circular?
Development of circular procurement
Development of circular procurement

1. Bying products as a service, f.e. light, furniture
2. Demanding minimum %/ base re-used material
3. Demanding recyclable materials
4. Stimulating circular solutions in EMVI
5. Launching customership
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Measures and technology

Available sustainable materials in The Netherlands:
- Asphalt produced at a low temperature (110º instead of 160º)
- Asphalt produced with 50 – 90 % recycled asphalt in bin/base
- Concrete with ‘hoogovenslakken’ (coal slags / blast-furnace slags) instead of cement

Other examples:
- Reuse of road side elements (barriers)
- Short transport distances for soil