Delivering a material passport from strategy to customer value

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AMBITION - OUR ULTIMATE GOAL

Our ambition is to operate completely emission-free by 2030. In doing so, we are taking responsibility for the climate and committing ourselves to the agreements in the Paris Climate Agreement. To a large extent we can do this ourselves and to an extent we need help from others.

WHAT DOES EMISSION-FREE MEAN TO US?

REDUCE, NOT COMPENSATE
Emission-free for us means no emissions. We welcome compensation measures, but we see them as separate from our reduction target.

WE REDUCE ALL GREENHOUSE GASES
Besides CO₂, greenhouse gases such as Methane are also harmful. We convert this into CO₂ equivalents.

#EMISSIONFREE2030

Read more about our climate ambition, our approach and the progress we are making in our annual magazine (in Dutch).

QUESTIONS?
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This document is a translation from the original in Dutch
Don't lose it, reuse it!
R-ladder of circularity strategies

**R1. Refuse and Rethink**
- Forgoing certain products or using them more intensively

**R2. Reduce**
- Manufacturing products more efficiently or making them more efficient to use

**R3. Reuse**
- Product reuse
- Repair and reuse of product parts

**R4. Repair and Refurbish**

**R5. Recycle**
- Processing and recycling of resources

**R6. Recover**
- Recovering energy from materials

Innovation in
- Product design
- Technology
- Business model

Source: PBL
EMISSION-FREE

SUSTAINABLE FLEET
We are making our fleet more sustainable, for example by electrification.

MAKING LOCATIONS MORE SUSTAINABLE
We are making our offices and production sites more sustainable, for example by insulating them.

EQUIPMENT AND LOGISTICS
We make use of logistic hubs and invest in emission-free equipment.

AGREEMENTS WITH THE SECTOR
Together we make agreements on the sustainable use of materials such as concrete, asphalt and wood.

CLIMATE FORESTS
Together with environmental parties, we improve biodiversity and capture CO₂ by investing in forests.

MATERIALS PASSPORT
We register the materials used so that they can be reused later.
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In 2025, 80% of our projects have a material passport with a circularity score.
A material passport

- Asset identification information (object tunnel, bridge, building)
- Physical decomposition in parts
- Where, which and how much materials were used for all the parts
- Composition, residual life, detachability, environmental impact for each material
- Circularity and detachability score
- Benchmark the asset
Circularity score

- **Circularity construction phase**
  the extent to which the materials used are recycled, reused or renewable

- **Circularity of use phase**
  the lifespan

- **End of life circularity**
  the extent to which the materials used are reusable or recyclable at the end of the life of the building
Better insights lead to higher value
During design and asset management

Sharing at handover and renovation
Creating a digital twin and digital project delivery

Standardization
based on managed EPD database and openBIM
Challenges

- People and Mindset
- Process implementation
- Digital form PDF, Excel, 3D model
- Level of detail / Level of Information Needed
- Infra based data dictionary and exchange