



Delivering a material passport

from strategy to customer value

Jeroen Tishauser | VolkerWessels Infrastructuur







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?

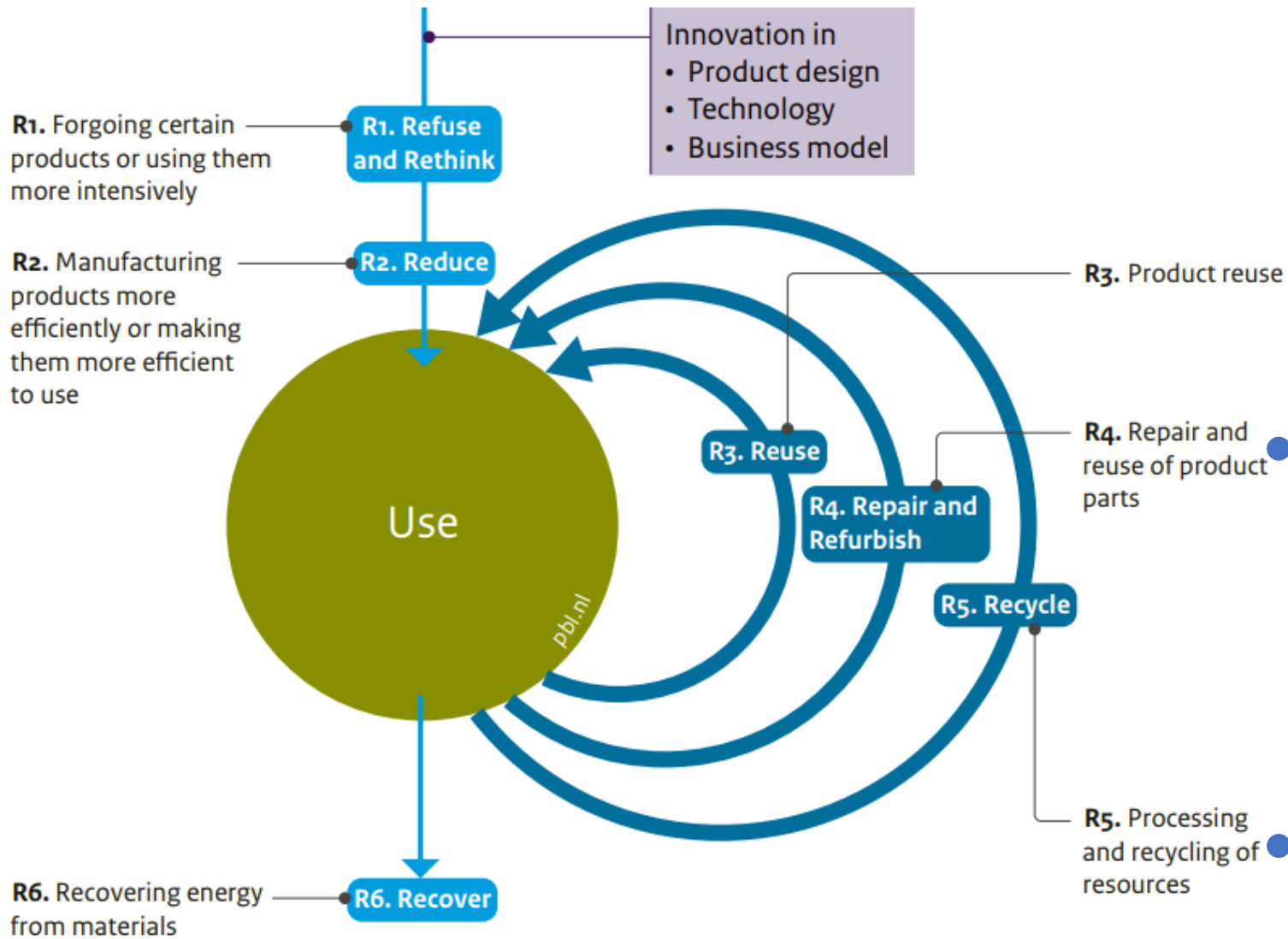
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This document is a translation from the original in Dutch





R-ladder of circularity strategies



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

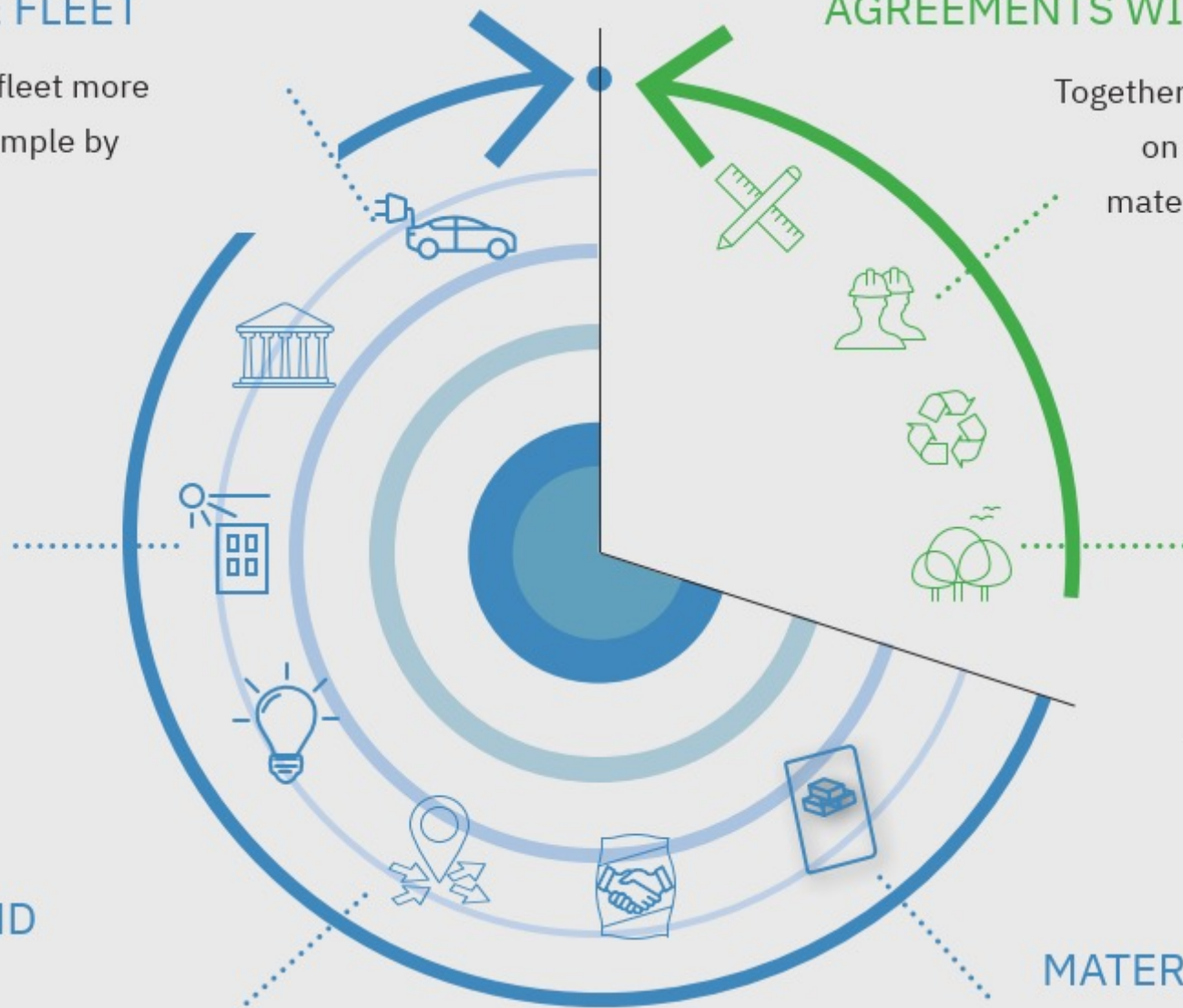
Together we make agreements on the sustainable use of materials such as concrete, asphalt and wood.

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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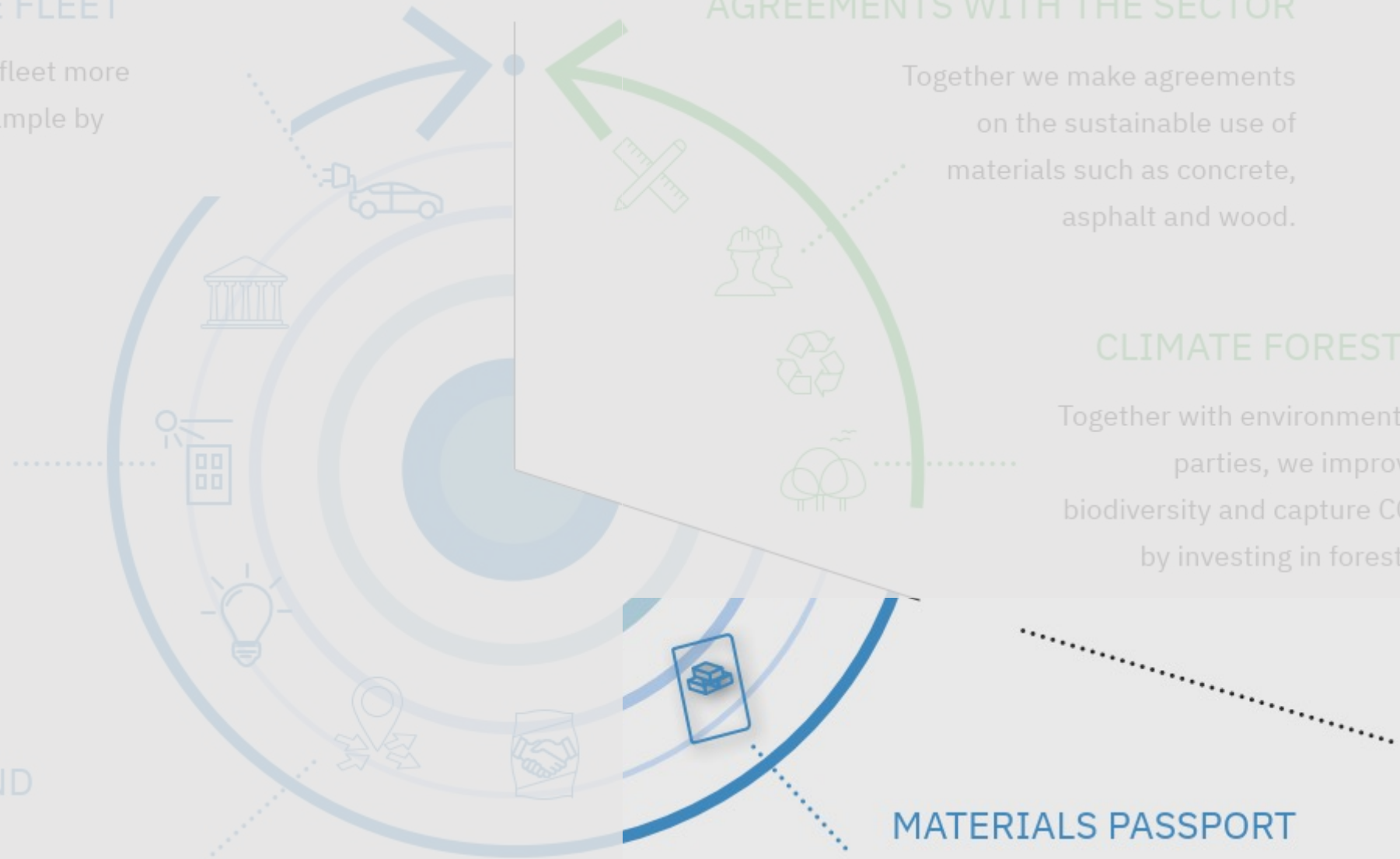
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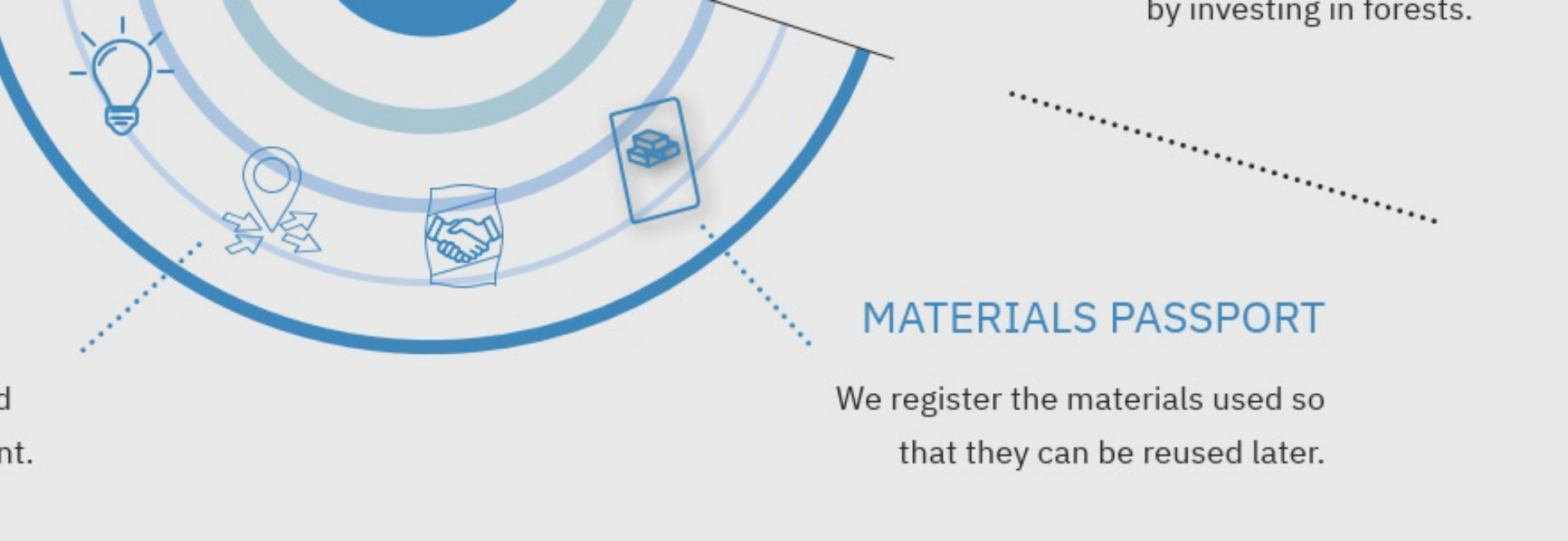
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In 2025, 80% of our projects have a material passport with a circularity score

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

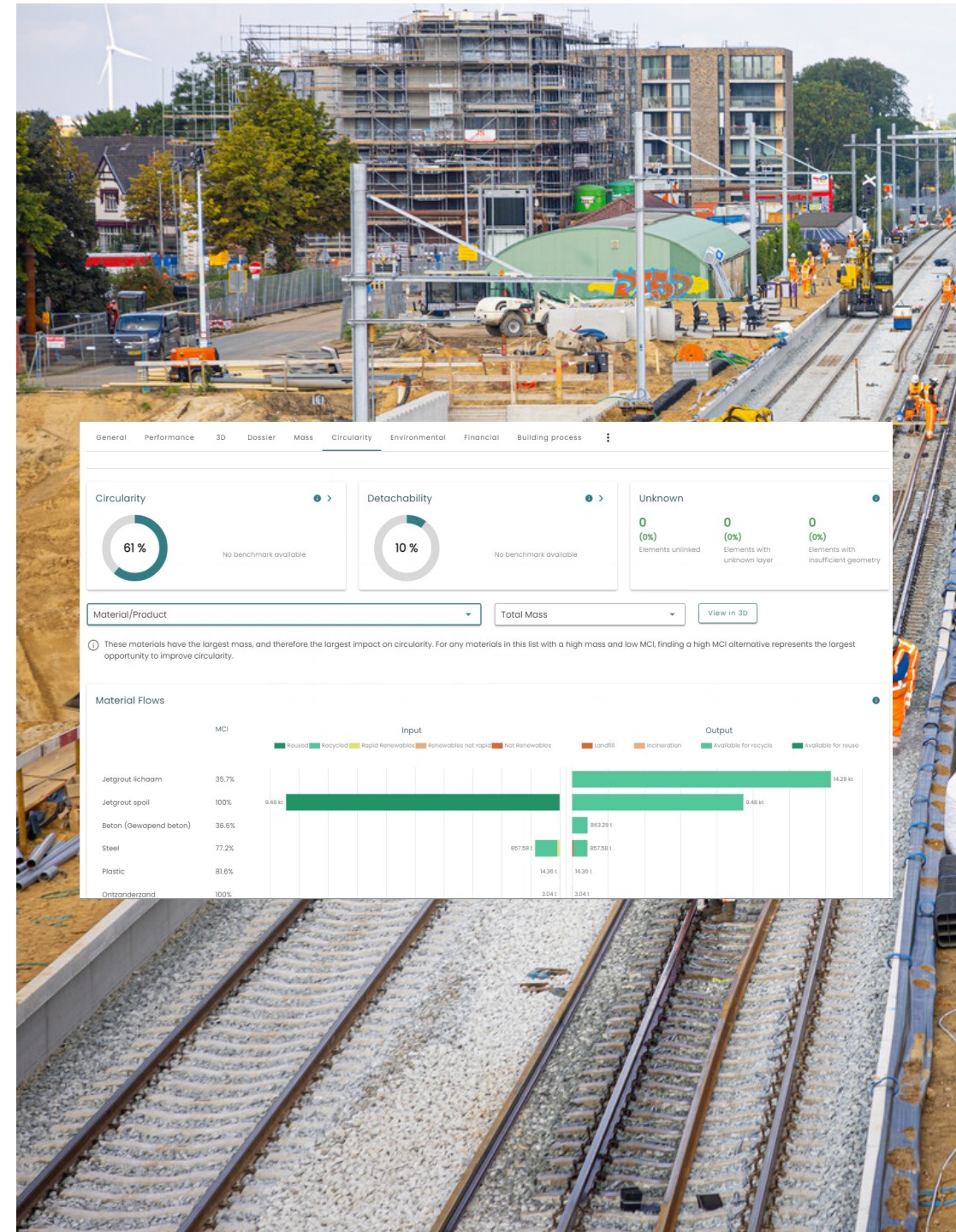


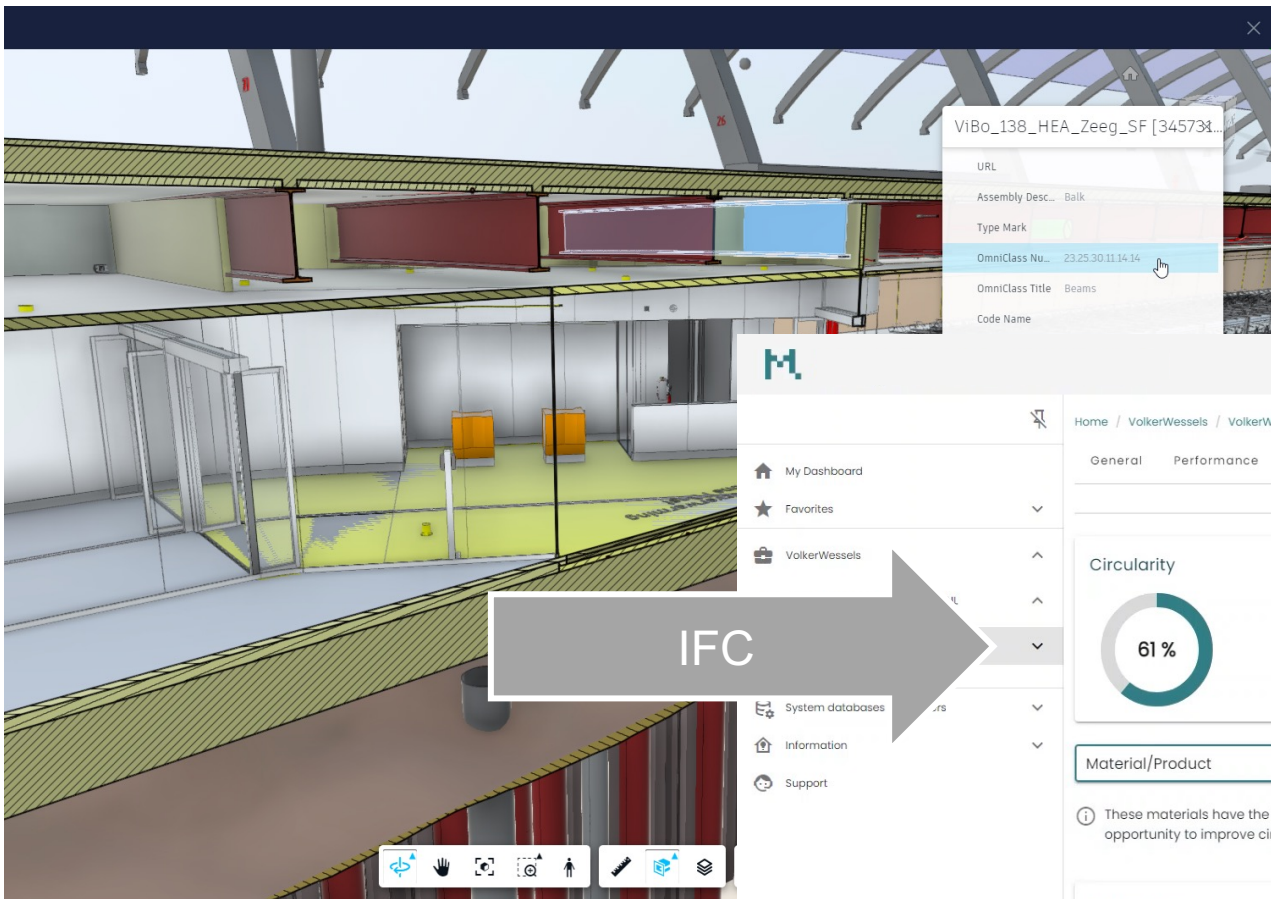
Circularity score

↑ 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





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General Performance 3D Dossier Mass **Circularity** Environmental Financial Building process

Circularity

61%

No benchmark available

Detachability

10%

No benchmark available

Unknown

0 (0%) Elements unlinked

0 (0%) Elements with unknown layer

0 (0%) Elements with insufficient geometry

Material/Product Total Mass View in 3D

These materials have the largest mass, and therefore the largest impact on circularity. For any materials in this list with a high mass and low MCI, finding a high MCI alternative represents the largest opportunity to improve circularity.

Material Flows

Material	MCI	Input	Output
Jetgrout lichaam	35.7%		14.29 kt (Available for reuse)
Jetgrout spooil	100%	9.46 kt (Available for reuse)	9.46 kt (Available for reuse)
Beton (Gewapend beton)	36.6%		863.29 t (Available for reuse)
Steel	77.2%	857.58 t (Available for reuse)	857.58 t (Available for reuse)
Plastic	81.6%	14.36 t (Available for reuse)	14.36 t (Available for reuse)
Ontzanderzand	100%	3.04 t (Available for reuse)	3.04 t (Available for reuse)

2023 - Madaster (Build: 21209)

Address

Het Nieuwe Werk 54 b
1781 AC Den Helder
Netherlands

Owner

Owner: Provincie Noord-Holland
Address: Houtplein 33
2012 DE Haarlem

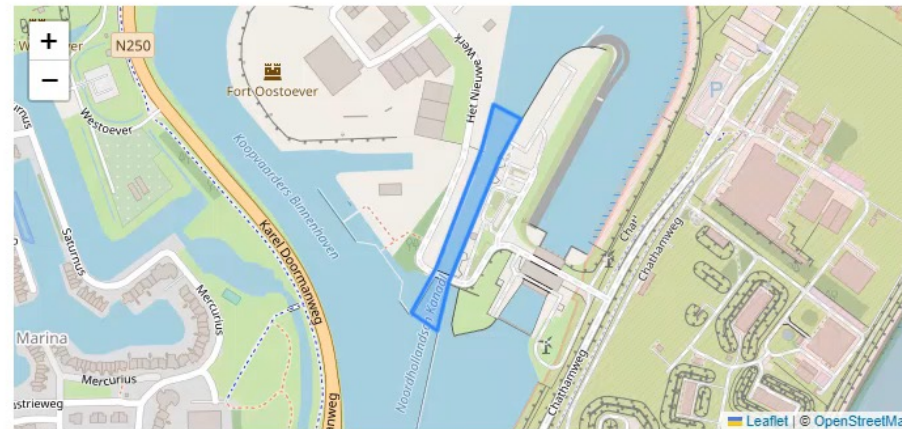
Madaster information

Prepared by: Van Hattum en Blankevoort
Design Stage: LOD 350 - Construction Documentation
Material Classification: Madaster
Usage: kunstwerkdeel (Sluis)
Gross Surface Area: 1,621 m²
Building phase: Renovation
Delivery date: 12-03-2026
Last renovation date: 15-12-2015

Cadaster information

Cadastral designation: HDROO
Cadastral surface area: 41,880 m²
I-295

Open Street Map



Images



- My Dashboard
- Favorites
- VolkerWessels
- VolkerWessels Infrastructuur NL
- System databases & suppliers
- Information
- Support

A blue-tinted photograph of two construction workers, a man and a woman, wearing hard hats and safety vests. They are looking at a tablet held by the man. The background shows a control room with multiple computer monitors displaying data and charts.

🏠 Better insights lead to higher value
During design and asset management

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

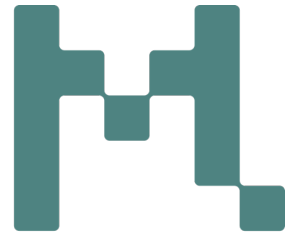
🏠 Standardization
based on managed EPD database and
openBIM

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



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