1

The economies of waste

Staggering waste statistics

"in Europe 90% of raw materials used in manufacturing become waste before the product leaves the factory, while 80% of products made get thrown away in the first six months of their existence."

According to the Cambridge Circular Economy Centre

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The Linear Economy

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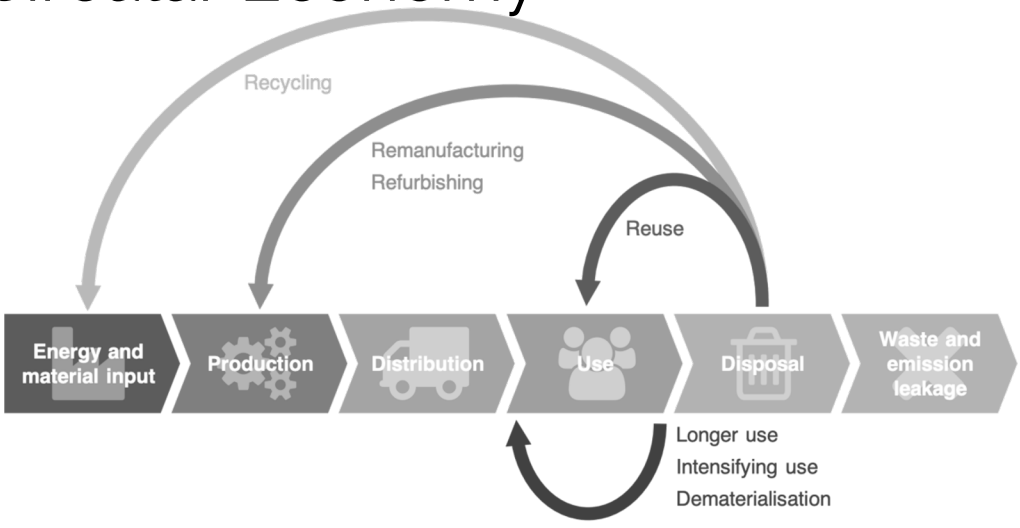
The Circular Economy



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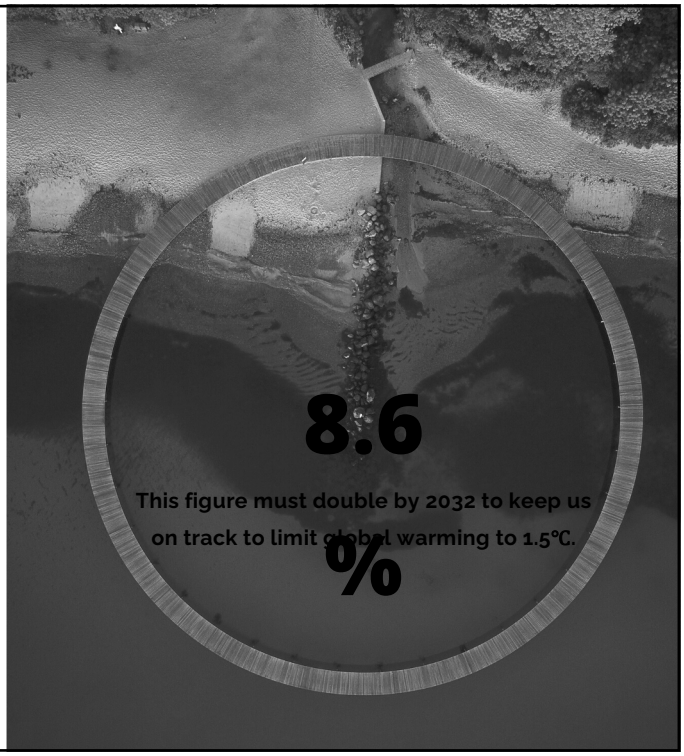
"The circular economy seems to be stuck in the future"

Re-using & re-cycling is difficult

- **Supply:** legacy materials are not used for high value next use opportunities
- **Demand:** secondary materials are not used enough in new products/buildings
- **Data availability:** data on waste & secondary materials is hard to find



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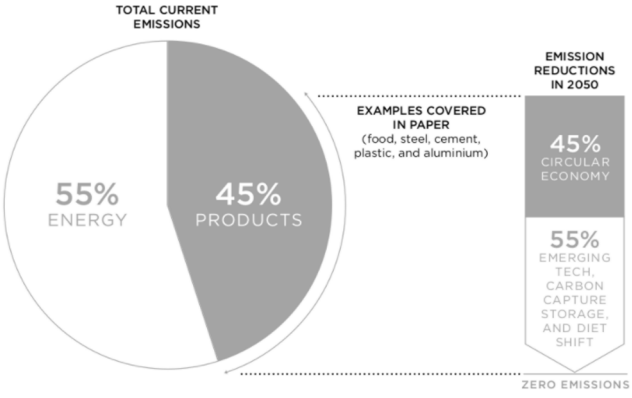
Why should anyone care?

Impact potential: circular economy

Adopting the circular economy principles has the potential to get us 45% closer towards the Paris Climate agreement targets (source: Ellen MacArthur foundation)



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Imagine a world in which the use of secondary materials and waste is:

- **second nature**
- **cheaper** than virgin materials
- **reduces** your environmental impact

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There are obstacles

Adopting circular economy principles creates some obvious (often technical) above the waterline challenges, but also a number of implicit below the water line challenges.

These are often challenges of a less technical nature and run deep into organisations.

Lack of transparency
Information asymmetries on where materials are and in which quality & quantity

Increased liability
Unclarity on material quality leads to increased liabilities with buyers & sellers

Lack of standards
No standards (or governance) to give guidance / clarity in secondary material sourcing and selling

Poor data availability
Data on excess materials (and waste) is often poorly documented making it harder to find high-value matches.

No burning platform
- no resource scarcity (yet)
- no stringent govt policy (yet)
- current situation is acceptable
- etc.

No incentives
Externally there is no strong push from govts / public.
Internally there is often a lack of strong KPIs.

Linear lock-in (1)
Most organisations are locked into linear processes. It requires a system change to become 'unstuck'.

Linear lock-in (2)
Current products, components, materials are hard to disassemble, re-use and/or re-cycle

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Dating-site approach

The Excess Materials Exchange (EME) is digital B2B SaaS platform. Where we actively connect buyers & sellers of any excess material (including waste). Next to that, we also link in what we call 'value added providers'. These are companies that can make a difference in making matches happen. You can think of technology providers, logistical service providers, law firms, banks, but also government entities.

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Our approach

How do we find the highest value match?

Our approach to making sure that your excess materials find the highest value match is three-pronged.

Identity

We give products, materials or waste streams an identity with our digital Resources Passport.

Intelligence

We enrich the data filled in the Resources Passports with data required to improve data-driven decision making

Integral approach

We link our data with data on environmental, social and financial impact

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Our features (1/6)

To support our approach, we have developed a number of features

Resources Passport

The resources passport gives excess products, components and materials an identity. The passports store information on:

- Characteristics
- Functionalities
- End-of-life opportunities
- Environmental & financial impact

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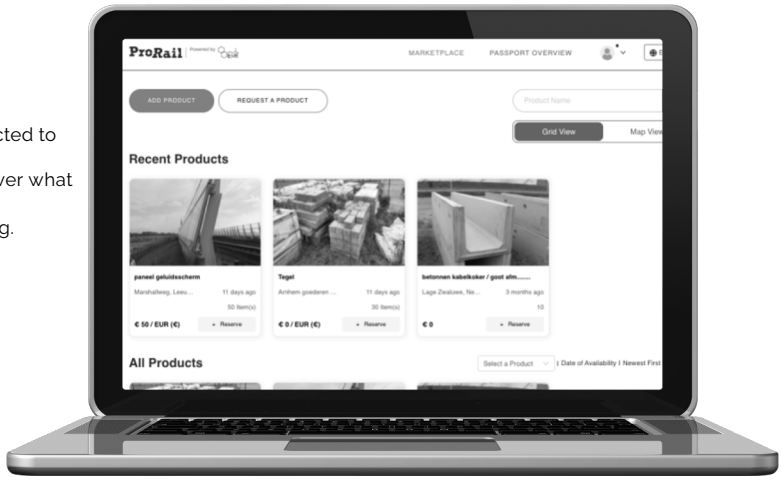
Our features (2/6)

To support our approach, we have developed a number of features

Internal circular marketplace

Manage your excess material flows and their associated passports on our platform connected to our marketplace. This will give you control over what resources you have and where they are going.



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Our features (3/6)

To support our approach, we have developed a number of features

Track & trace

The track & trace functionality has the potential to scan an RFID tag, QR-code or Bar-code of an object or component and show/update the location on a map, as well as to show/update Resources Passport characteristics.

Resources Passports can be scanned and updated easily. They can also accompany the product/ /component and/or material to the next owner.

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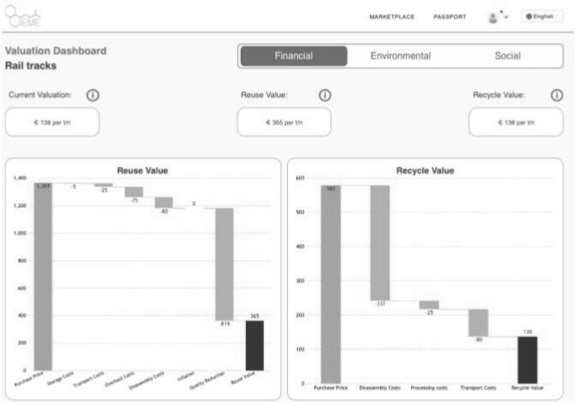
Our features (4/6)

To support our approach, we have developed a number of features

Financial valuation

All Resources Passports can be accompanied by an estimate of the end-of-life value for both re-use and re-cycle options.



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Our features (5/6)

To support our approach, we have developed a number of features

Environmental impact

All Resources Passports can be enriched with the embedded environmental impact as well as the impact of alternative end-of-life scenarios.

We have developed this approach together with EY. This can steer strategy and decision making with accurate data.

"Anyone who takes the idea of the circular economy seriously must take the entire life cycle of products into account […]. Norms and standards, which must be securely and comprehensibly followed, play a major role in this." -- German Environment minister

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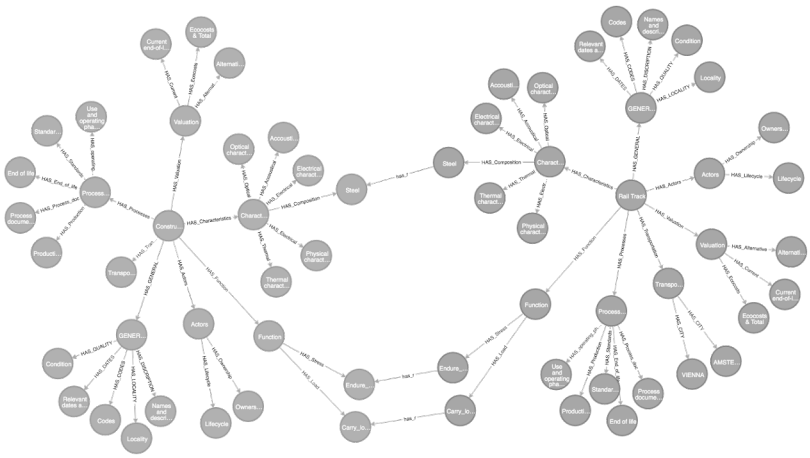
Our features (6/6)

To support our approach, we have developed a number of features

AI assisted matchmaking

By storing the data in the Resources Passport in a so-called 'semantic' way, we are able to find new innovative next uses for any excess resources.



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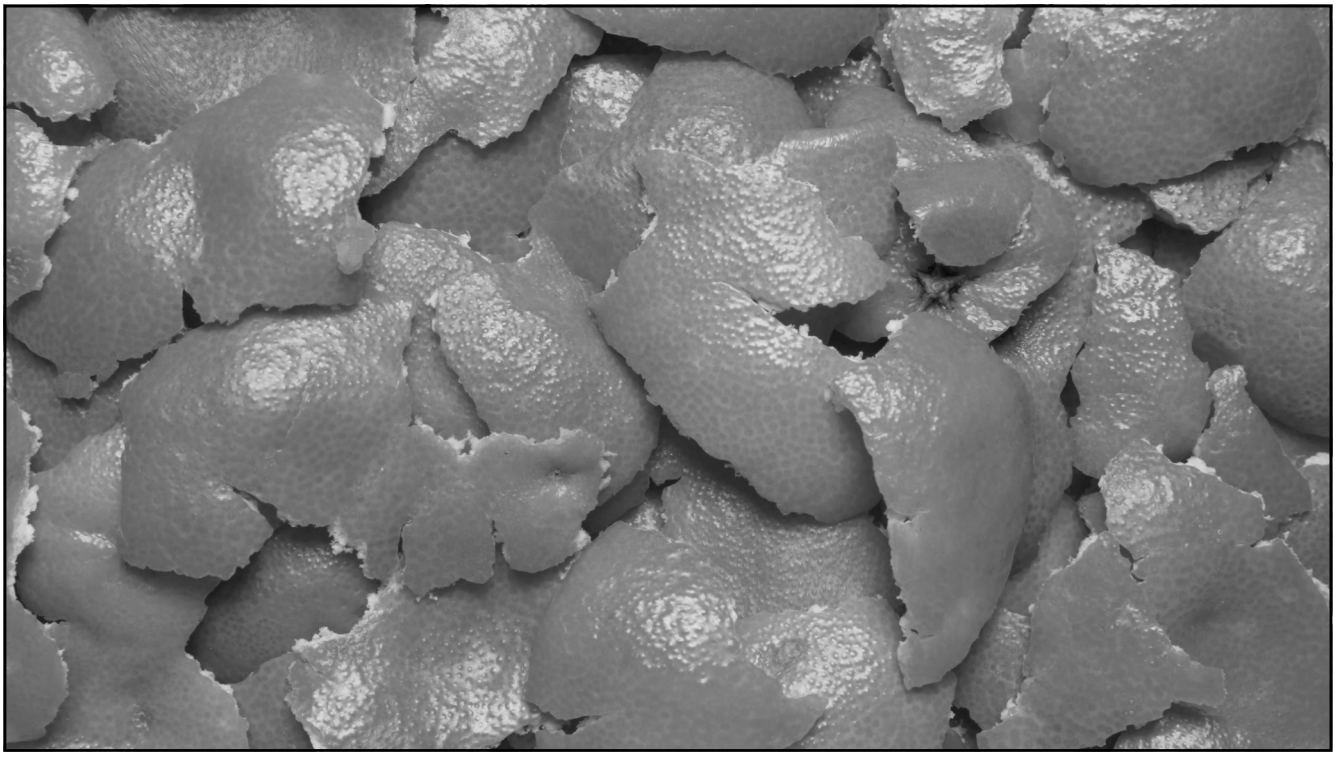

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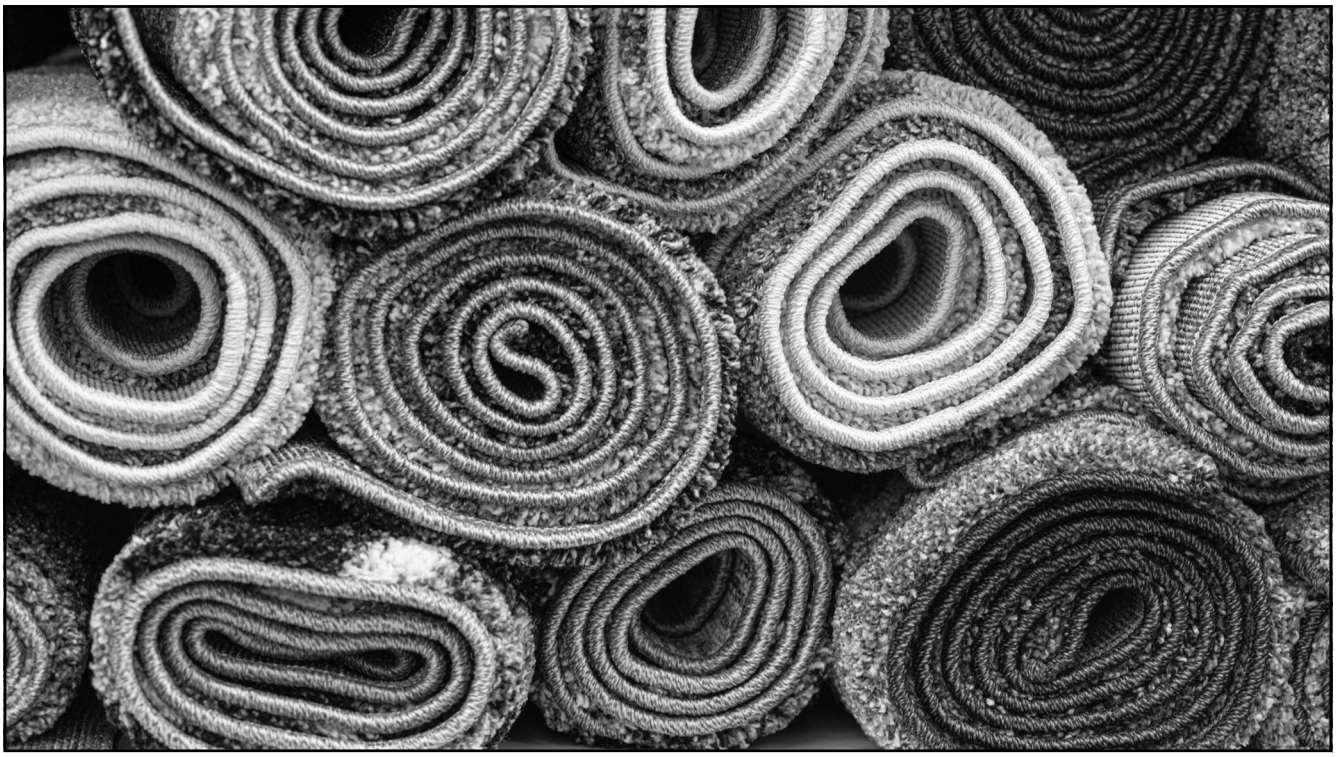

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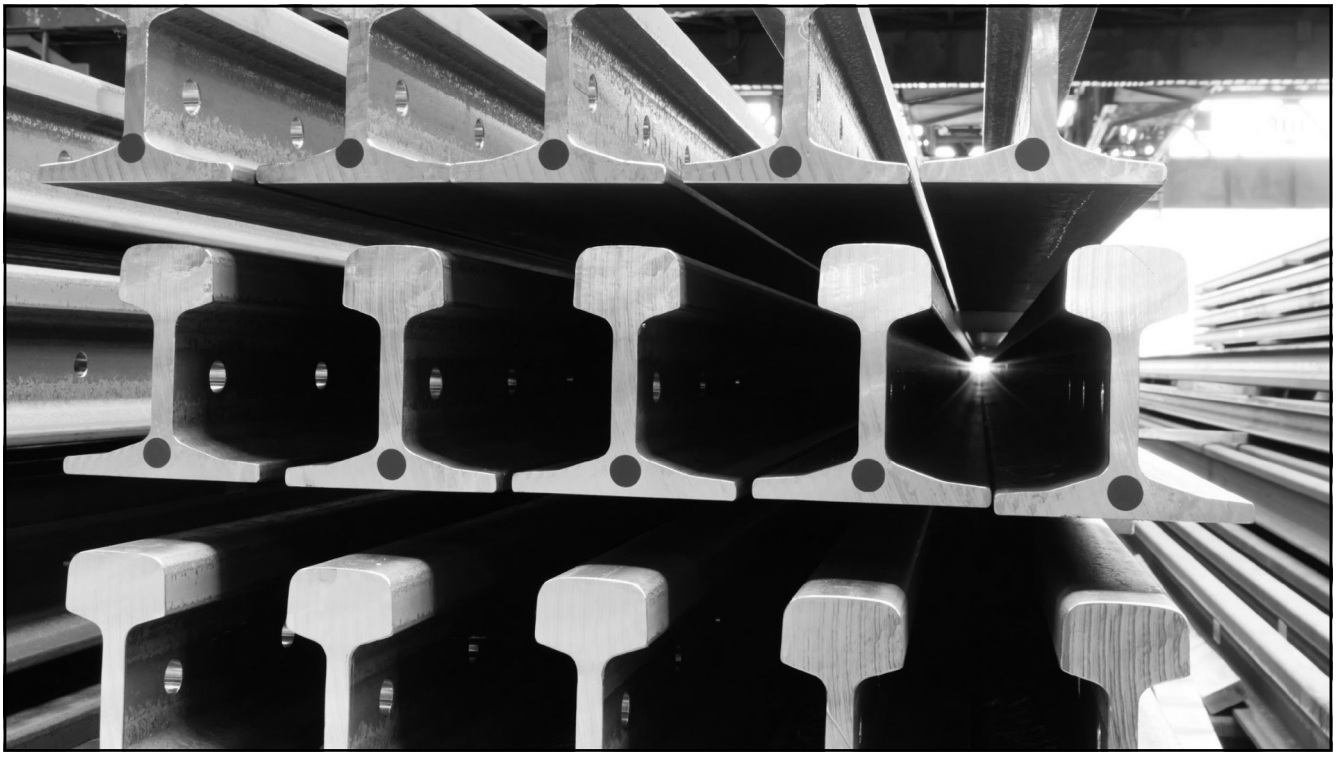

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"I was intrigued to hear about the innovative approach being developed in the Netherlands by a company called the Excess Materials Exchange"

HRH Prince Charles

"By creating a transparent market value for excess materials EME revolutionizes the waste paradigm. They offer an indispensable tool that takes the Circular Economy to the next level."

Jan peter Balkenende - former prime minister of the Netherlands

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WORLD ECONOMIC FORUM

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