



European Social Partners' project on Circular
Economy
Cluster seminar
Belgium - Czechia - Germany - Denmark

Dr. Laurent Zibell, PhD

on-line
29 October 2020

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What is Circular Economy?

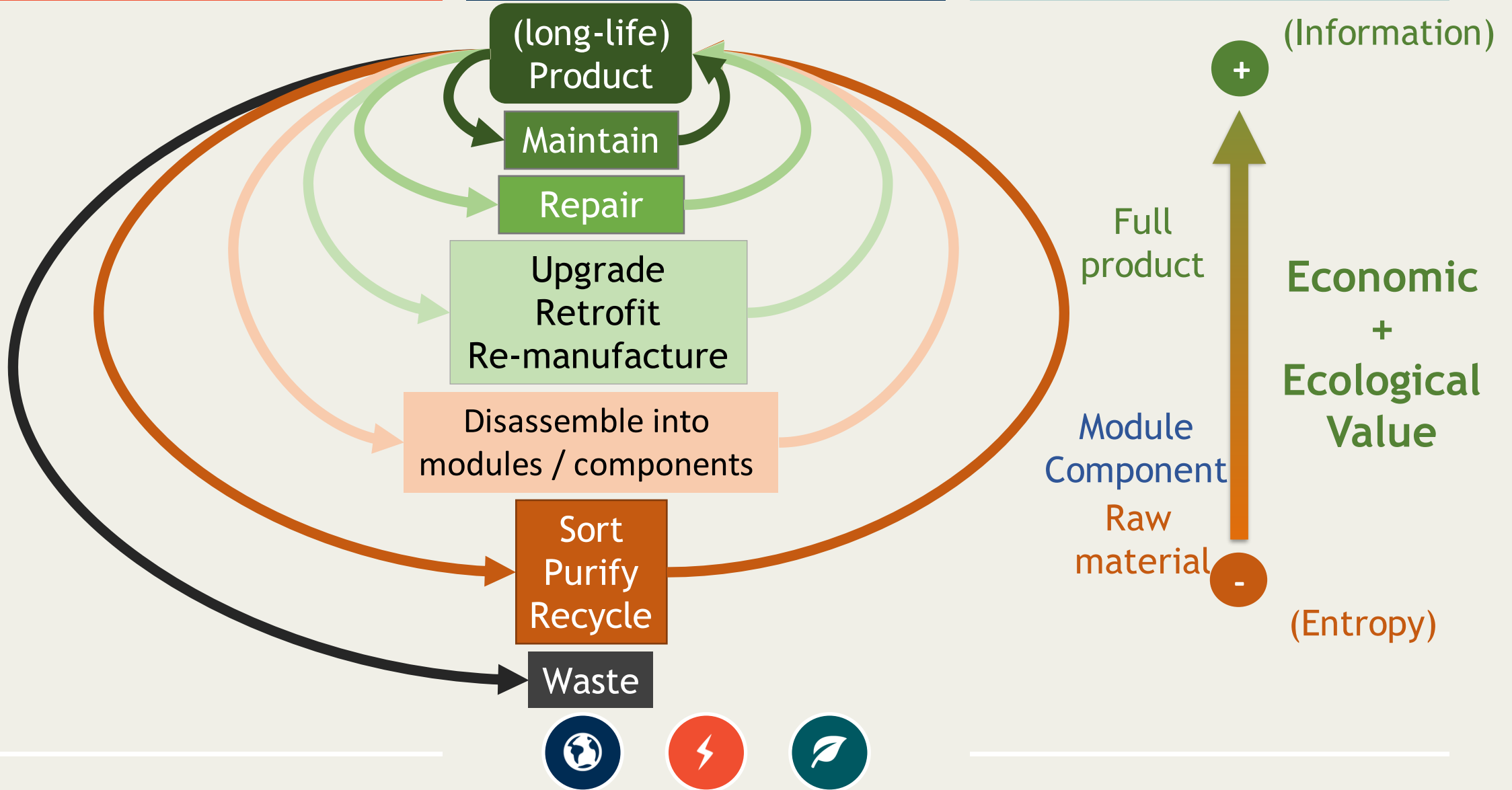
- European Commission “Circular Economy Action Plan” of 2015 definition:

An economy “*where the value of products, materials and resources is **maintained** in the economy **for as long as possible**, and the generation of waste minimised*”.

- A central component of the EU’s efforts to develop a sustainable, low carbon, resource efficient and competitive economy



Circular Economy: illustration



Transition to a Circular Economy

- **Product design & manufacturing for:**
 - Longer lifetimes;
 - More maintenance and repair;
 - Less frequent replacement.
- • **More intense use via:**
 - Sharing;
 - Lending or leasing models;
 - Fewer units to serve the same market.
- • **Higher proportion in products of:**
 - **Recycled materials;**
 - **Sustainably-sourced renewable materials;**
 - Less primary, non-renewable raw materials.
- • **More waste being recycled or prepared for re-use.**



“Closing the loop - An EU action plan for the Circular Economy” COM(2015) 614 final

- Requirements on products: **durability, repairability, recyclability**;
- **Extended Producer Responsibility** at end of life;
- Guidance on and promotion of **industrial symbiosis**;
- Research on **premature obsolescence**;
- Circular Economy criteria in **Green Public Procurement**;
- More ambitious **recycling targets** for municipal waste;
- **Quality standards** for secondary raw materials;
- Reflection on the handling of **legacy hazardous substances** in products being recycled;
- **Plastics**: ban of some single-use items;
- Food waste, Critical Raw Materials, construction and demolition waste, bio-based materials;
- **Research & Innovation.**



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Setting the stage



Circular Economy Action Plan - For a cleaner and more competitive Europe COM/2020/98 final

- **Sustainable Product Initiative** on Eco-design + product passport + support for circular business models;
- **Right to repair**, Substantiating green claims;
- Mandatory **Green Public Procurement** criteria;
- Circularity criteria in revision of **Industrial Emissions Directive**;
- **Priority application** to ICT, batteries, packaging, plastics, textiles, construction, food, water, nutrients;
- Higher targets for recycling of **municipal waste**;
- Requirements for **recycled material content** in products;
- Restrictions to **extra-EU export of waste**.



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Increasing the
ambition





Circular Economy indicators



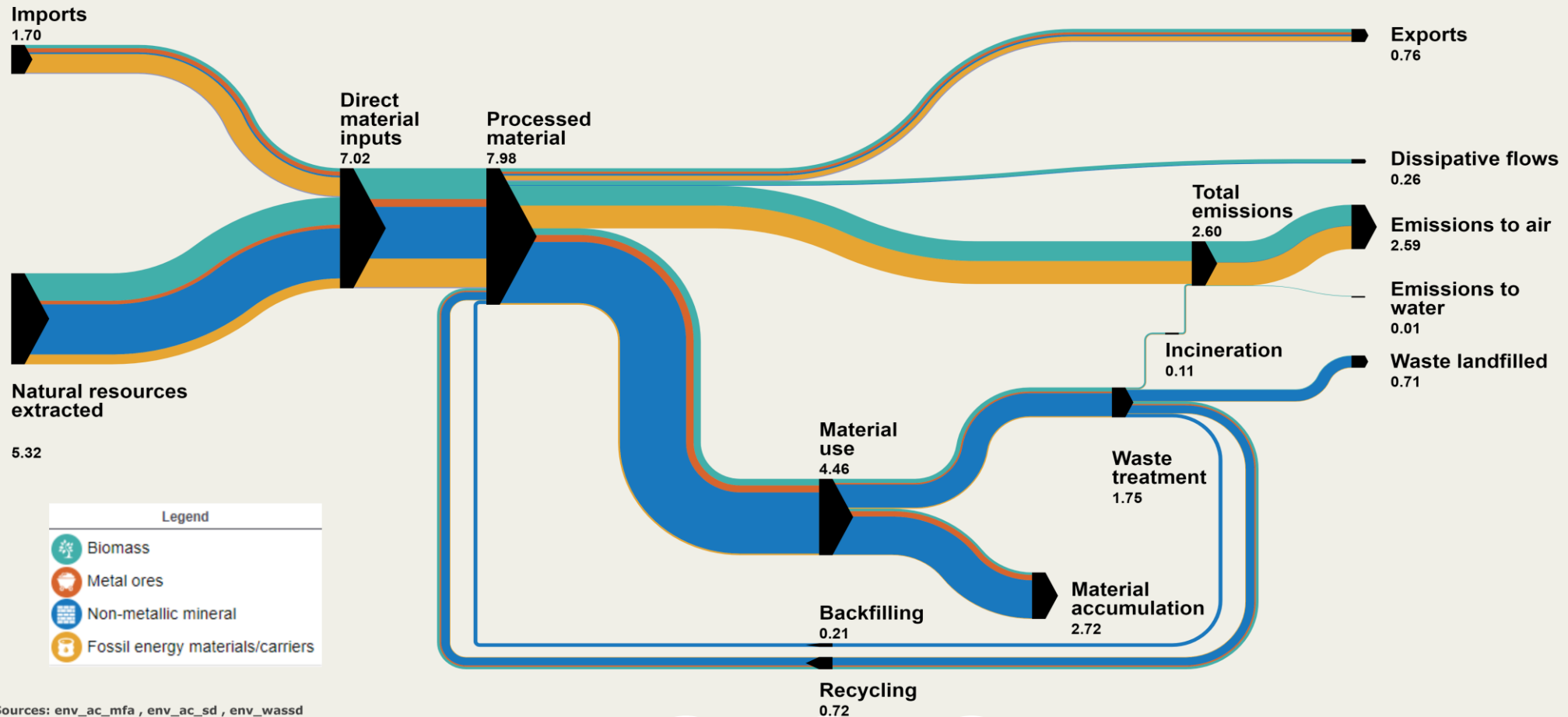
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Circular Economy indicators

Material flow diagrams 2017 for

European Union (27 countries)

Gigatonnes



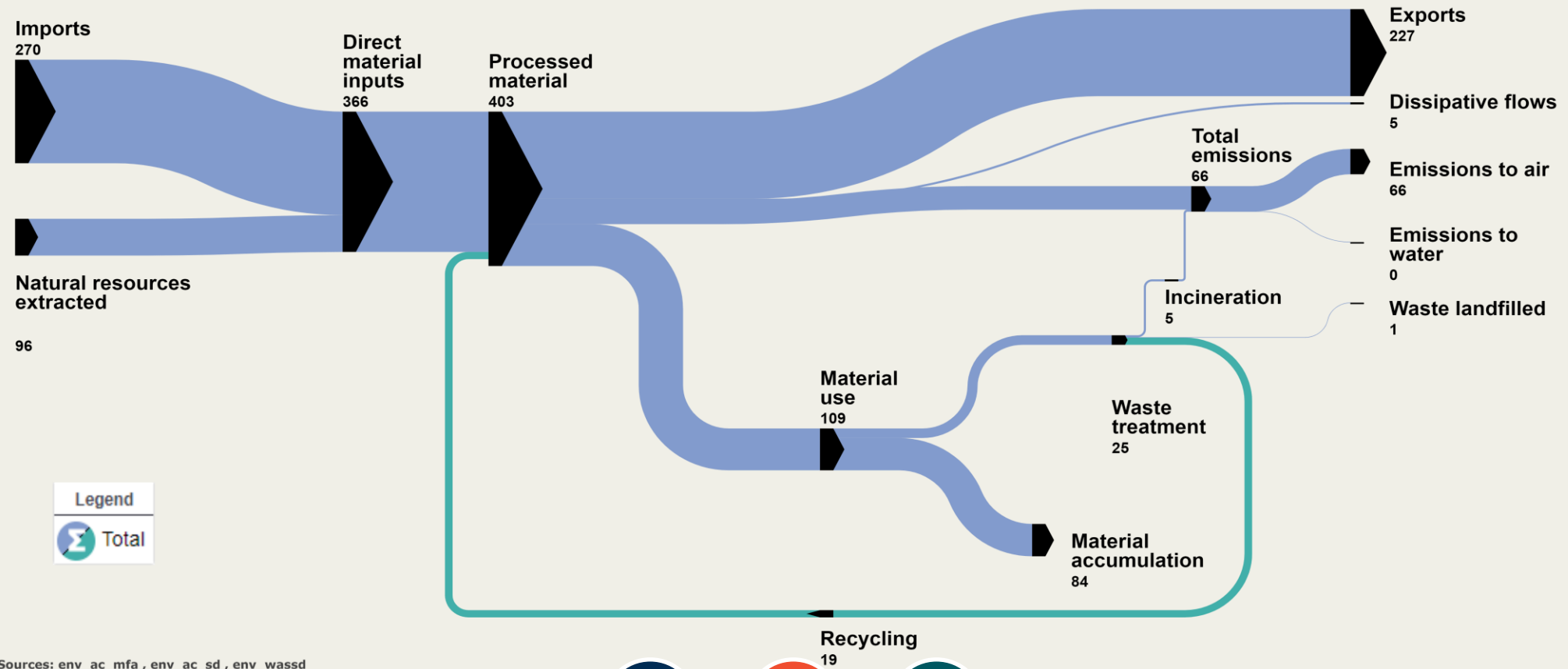
Sources: env_ac_mfa , env_ac_sd , env_wassd



Circular Economy indicators

Material flow diagrams 2017 for

Belgium
Million tonnes



Legend



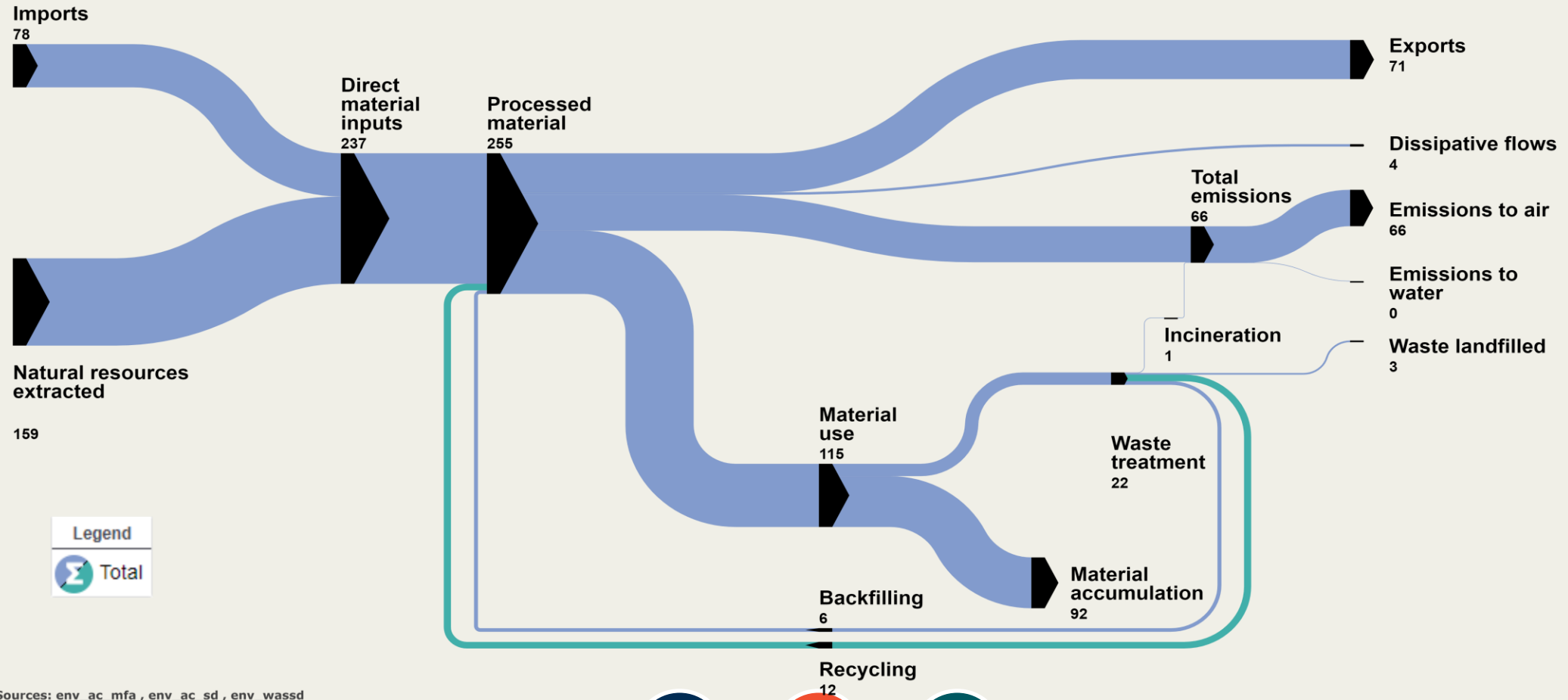
Sources: env_ac_mfa , env_ac_sd , env_wassd




Circular Economy indicators

Material flow diagrams 2017 for

Czechia
Million tonnes



Legend
 Total

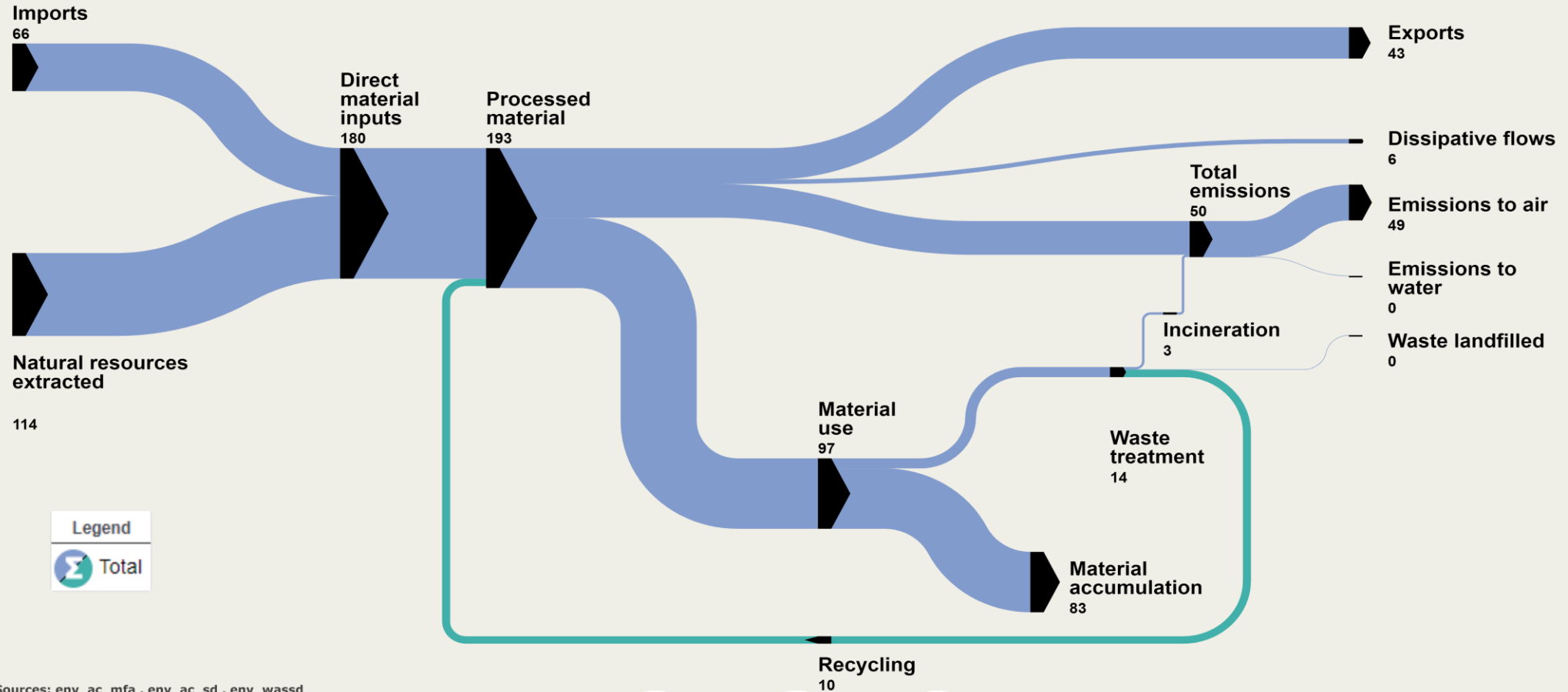
Sources: env_ac_mfa , env_ac_sd , env_wassd




Circular Economy indicators

Material flow diagrams 2017 for

Denmark
Million tonnes



Legend

 Total

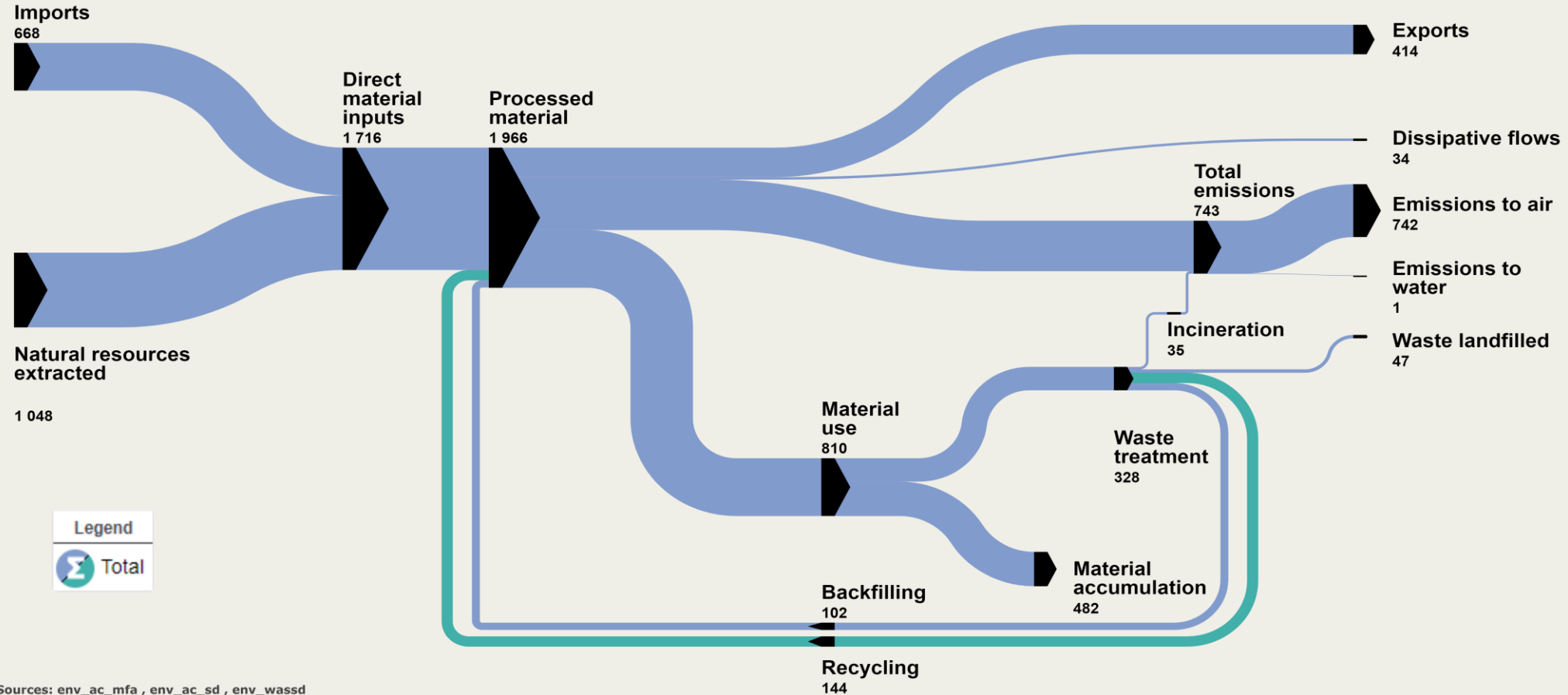
Sources: env_ac_mfa , env_ac_sd , env_wassd




Circular Economy indicators

Material flow diagrams 2017 for

Germany
Million tonnes



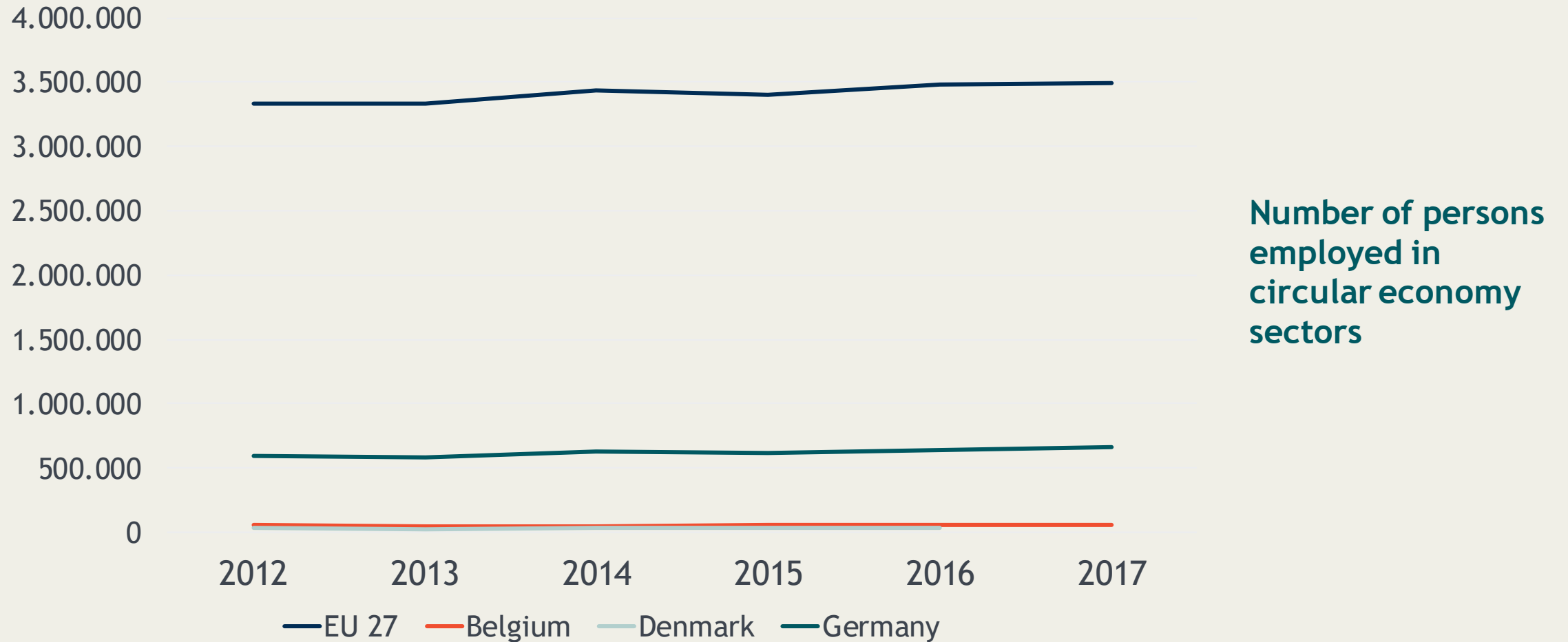
Legend

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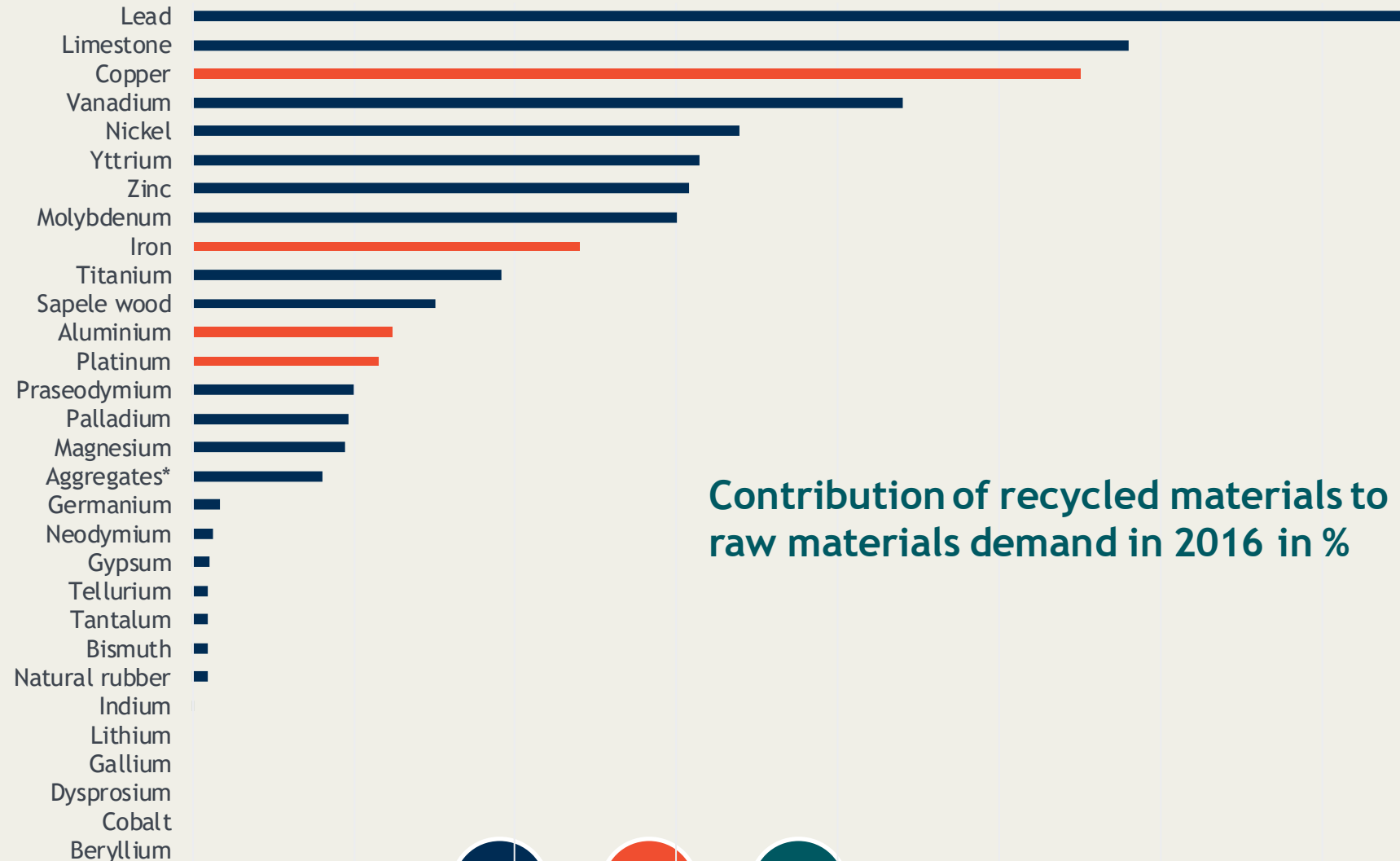
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Circular Economy indicators



Circular Economy indicators



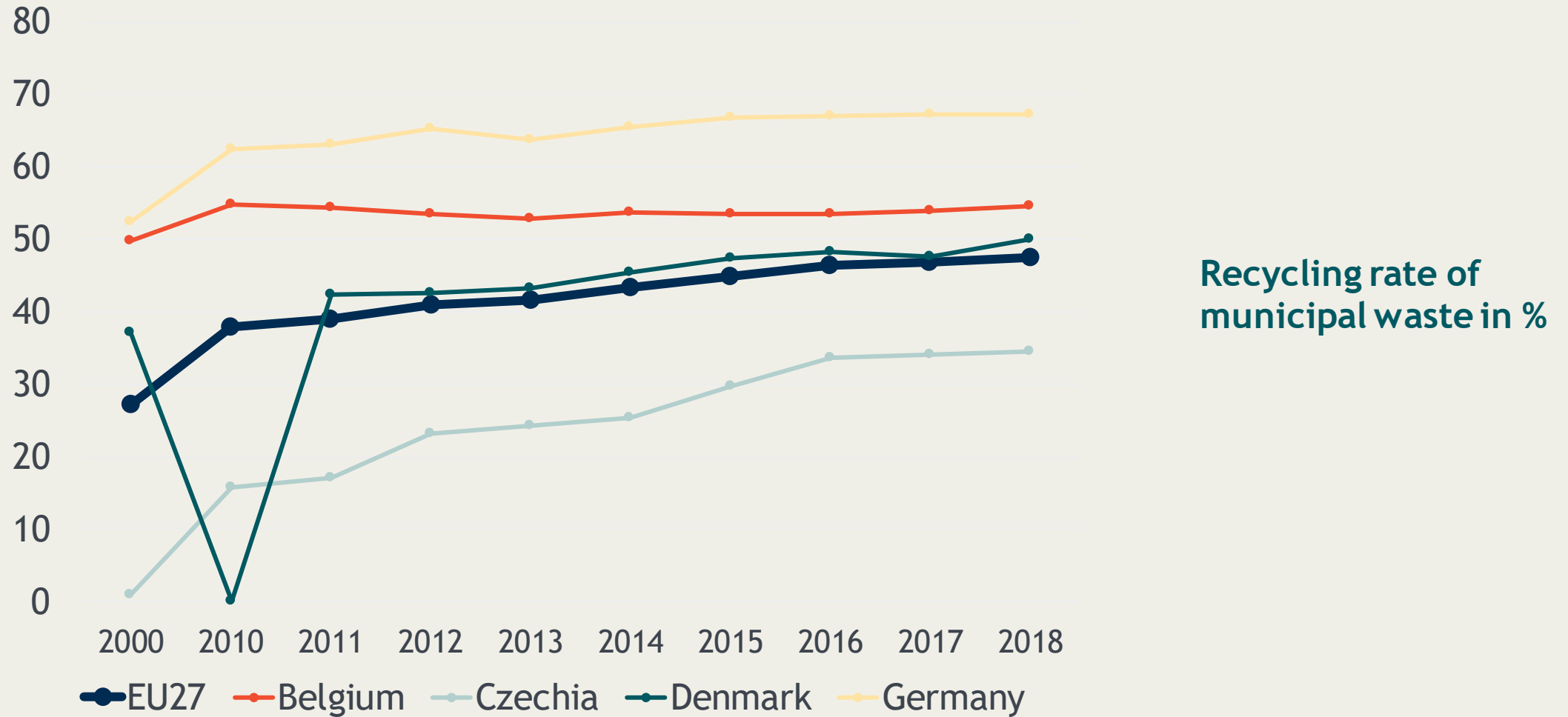
Contribution of recycled materials to raw materials demand in 2016 in %

*crushed rock, other sands (not silica), pebbles, gravel, bitumen additives



0 10 20 30 40 50 60 70 80

Circular Economy indicators





Impacts on employment volume and competitive position



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- **Employment volume: Convergent quantitative studies**
 - Limited, but **positive**, overall impact: 250 to 700 thousand for EU;
 - **Sector contrasts:**
 - Positive: repair, maintenance, recycling, re-manufacturing;
 - Negative: extractive, construction, durable goods, [retail].
- **Competitive position: Interviews**
 - **Positive** impact at company level
 - Circular Economy meets expectations of **customers** (construction materials, chemicals, basic metals)
 - Circular Economy meets expectations of **qualified workers** (waste management)
 - Circular Economy requirements can create **market opportunities** for EU manufacturers (batteries)





Impacts on qualifications & skills, forms & organisation of work, health & safety



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- **Qualifications & skills: Convergent studies + interviews**
 - **Higher requirements:**
 - Work on irregular input, adaptability (using recycled materials);
 - Reliability, quality (for longer-life products);
 - Complex equipment (automated sorting + recycling);
 - Increase in **mid-level** qualifications (repair, maintenance)
- **Forms & organisation of work: limited information**
 - Concerns for specific cases (sharing economy; informal economy)
 - Start-up model of new businesses
 - “Advanced” companies for Circular Economy: also on social dimension
- **Health & safety: Convergent studies + interviews**
 - Handling of **legacy hazardous substances**;
 - Waste management;
 - Usage of secondary raw materials (e.g. dust from recovered construction materials)





Thank you for your attention, please contact us for more information



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