



European
Environment
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Addressing the environmental and climate
footprint of buildings

EEA Report 09/2024

Climate-neutral and circular buildings: The responses needed to achieve a sustainable building system by 2050

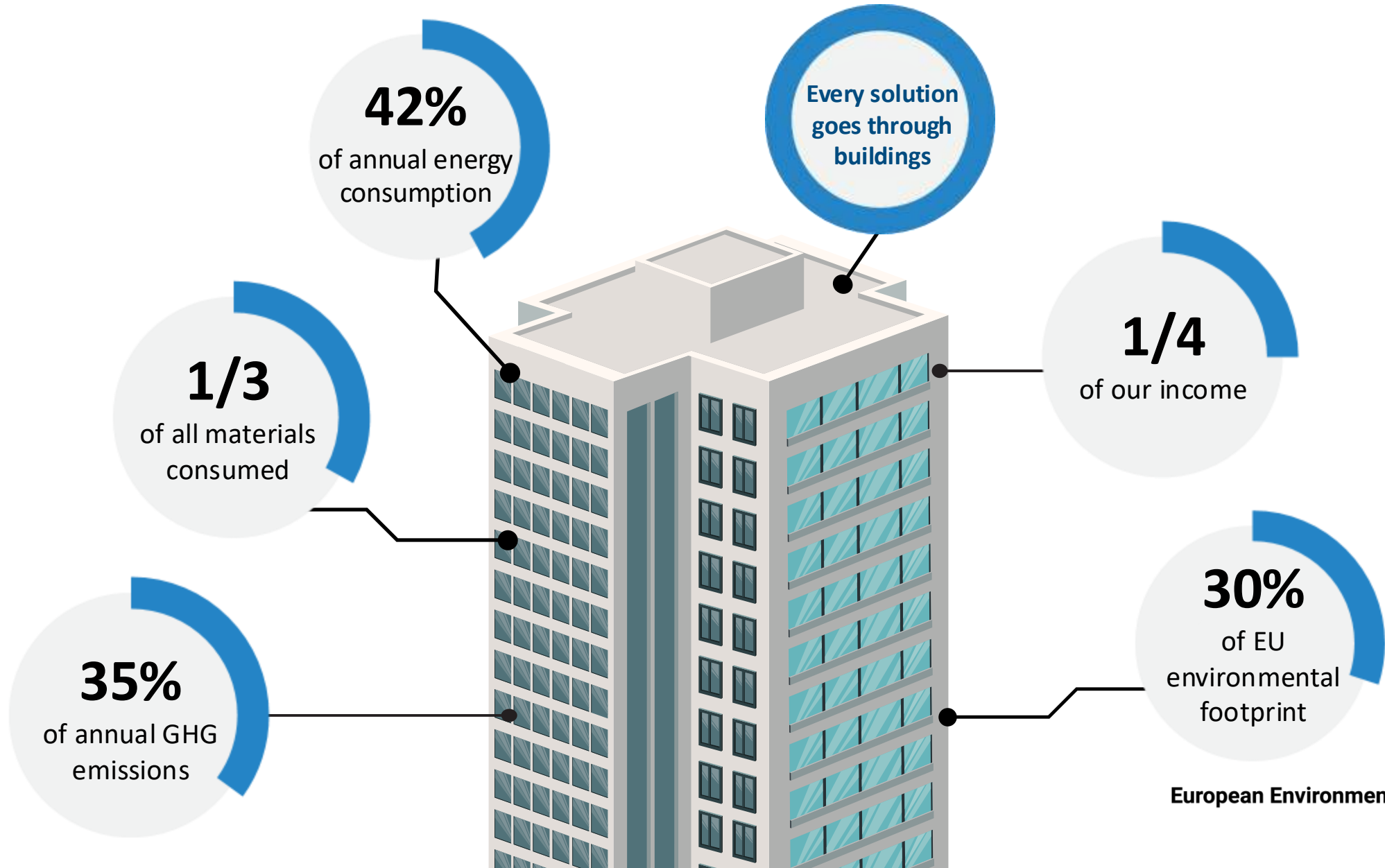
Vienna, 8 April 2025

Ioannis Bakas

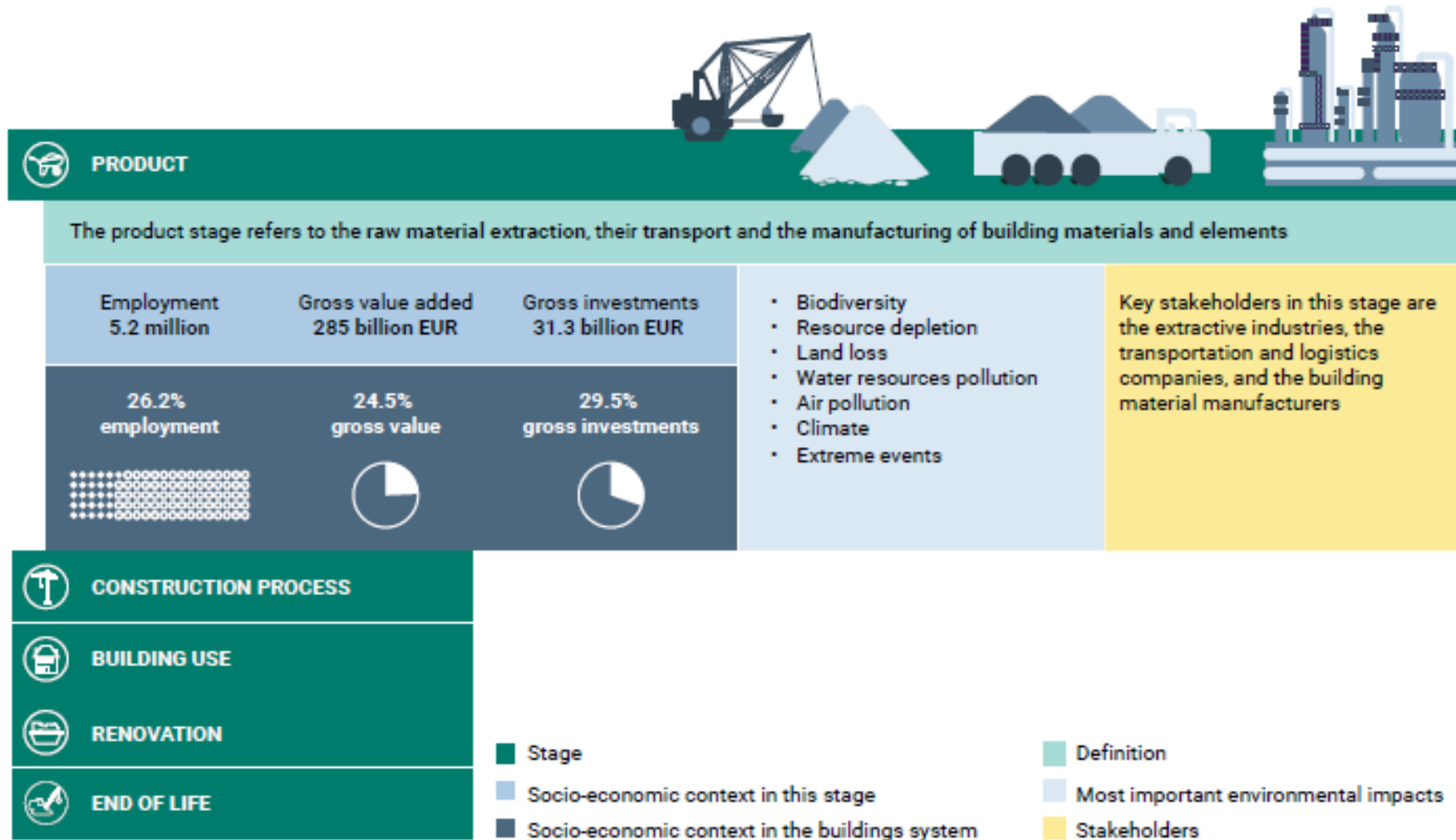


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Why buildings matter?



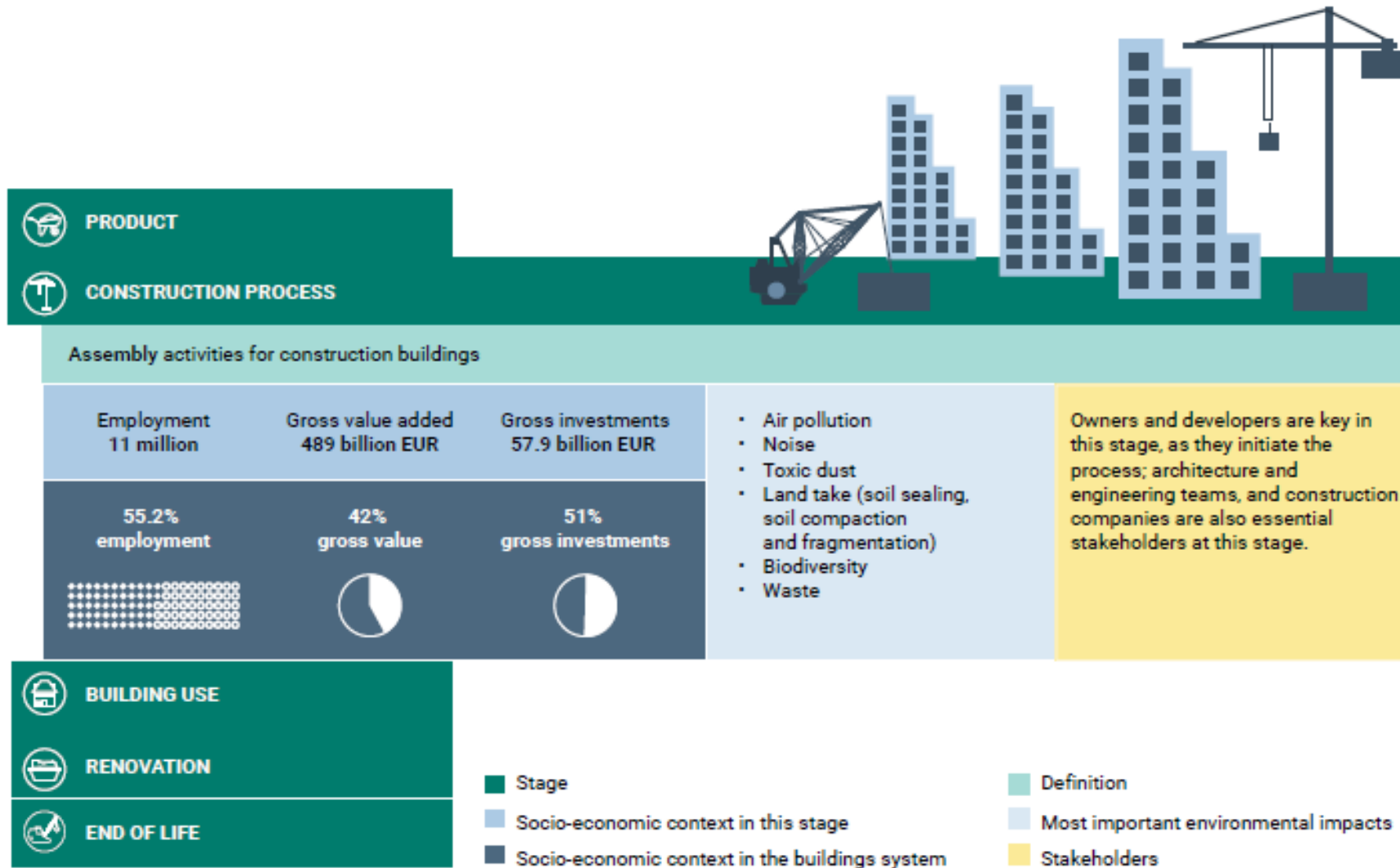
Hotspots in buildings' life cycle - product



› **Resource depletion**

› **Great value added**

Hotspots in buildings' life cycle - construction

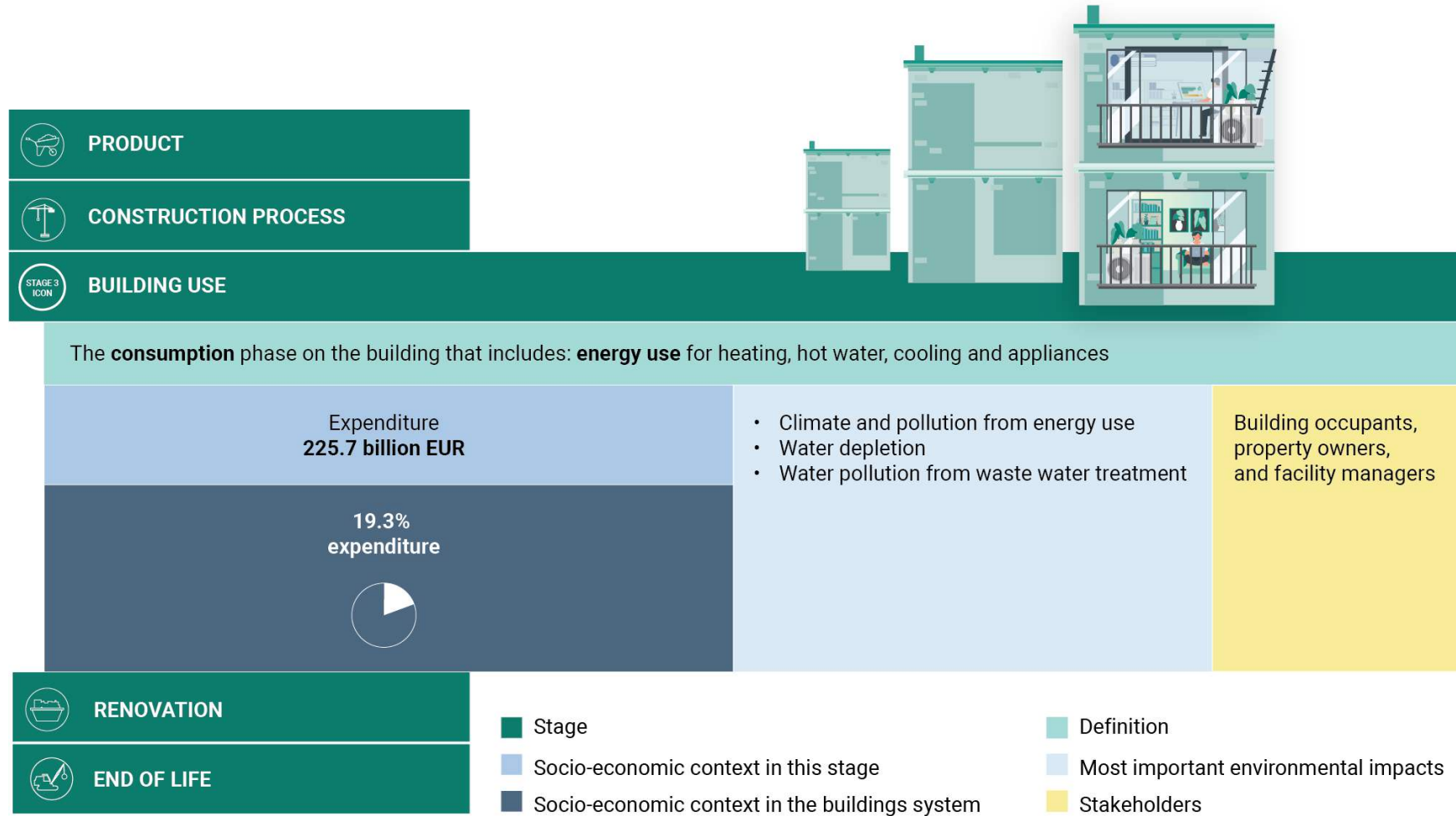


› A lot of **local impacts**

› Most relevant **socio-economically**



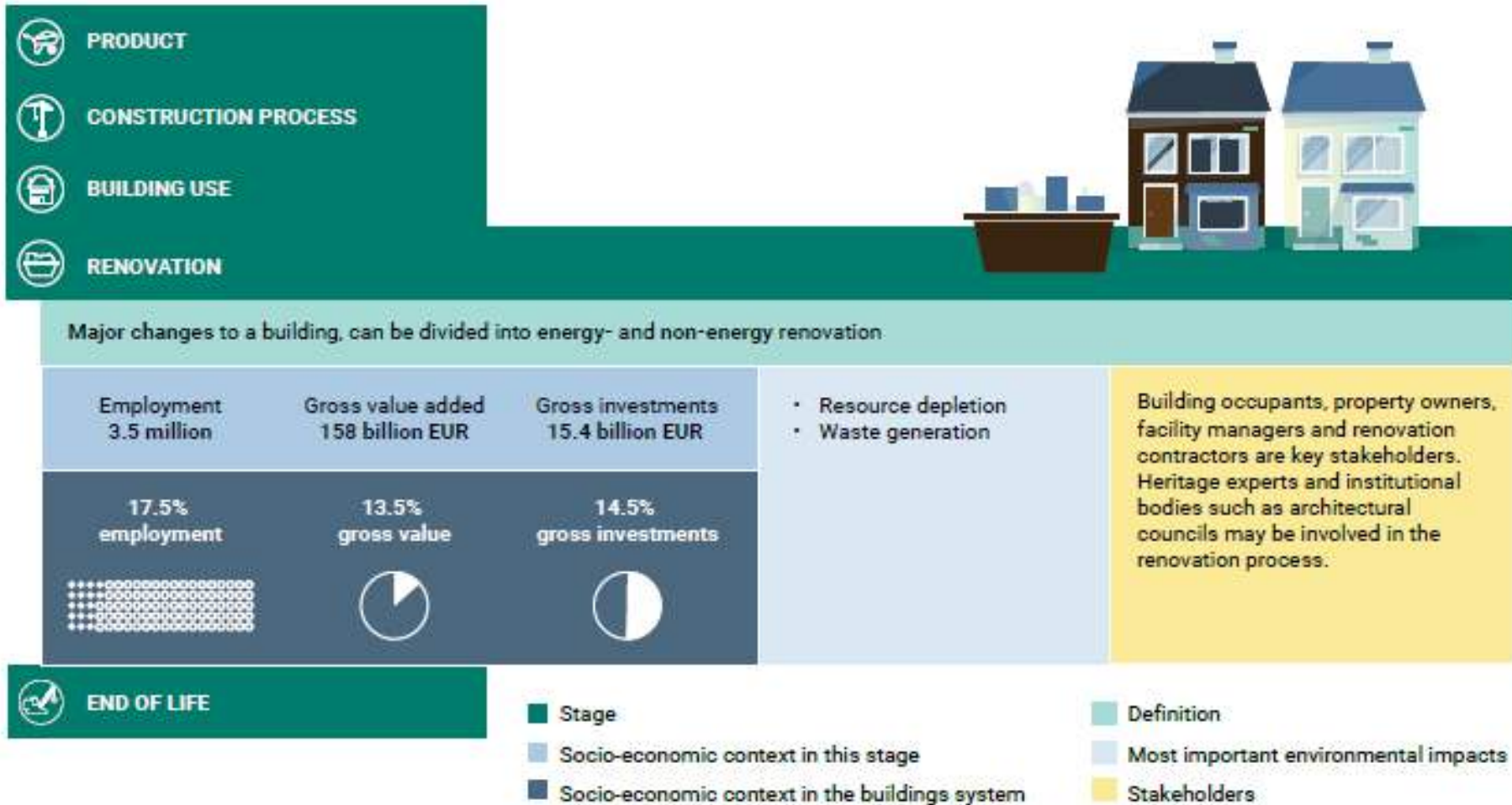
Hotspots in buildings' life cycle - use



› A lot of **GHG** during use

› Energy efficiency

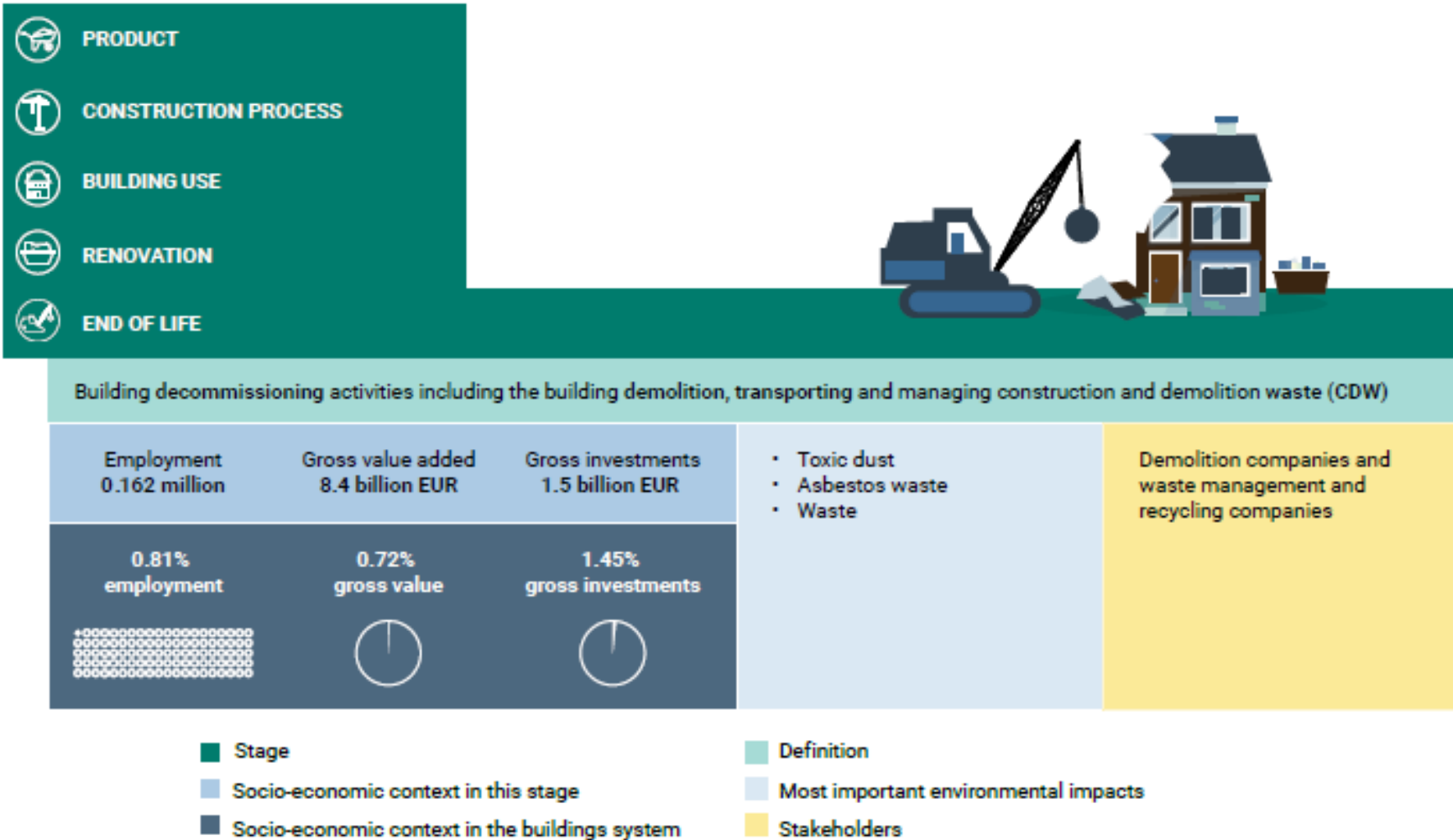
Hotspots in buildings' life cycle – renovation



› Impacts **similar** to construction

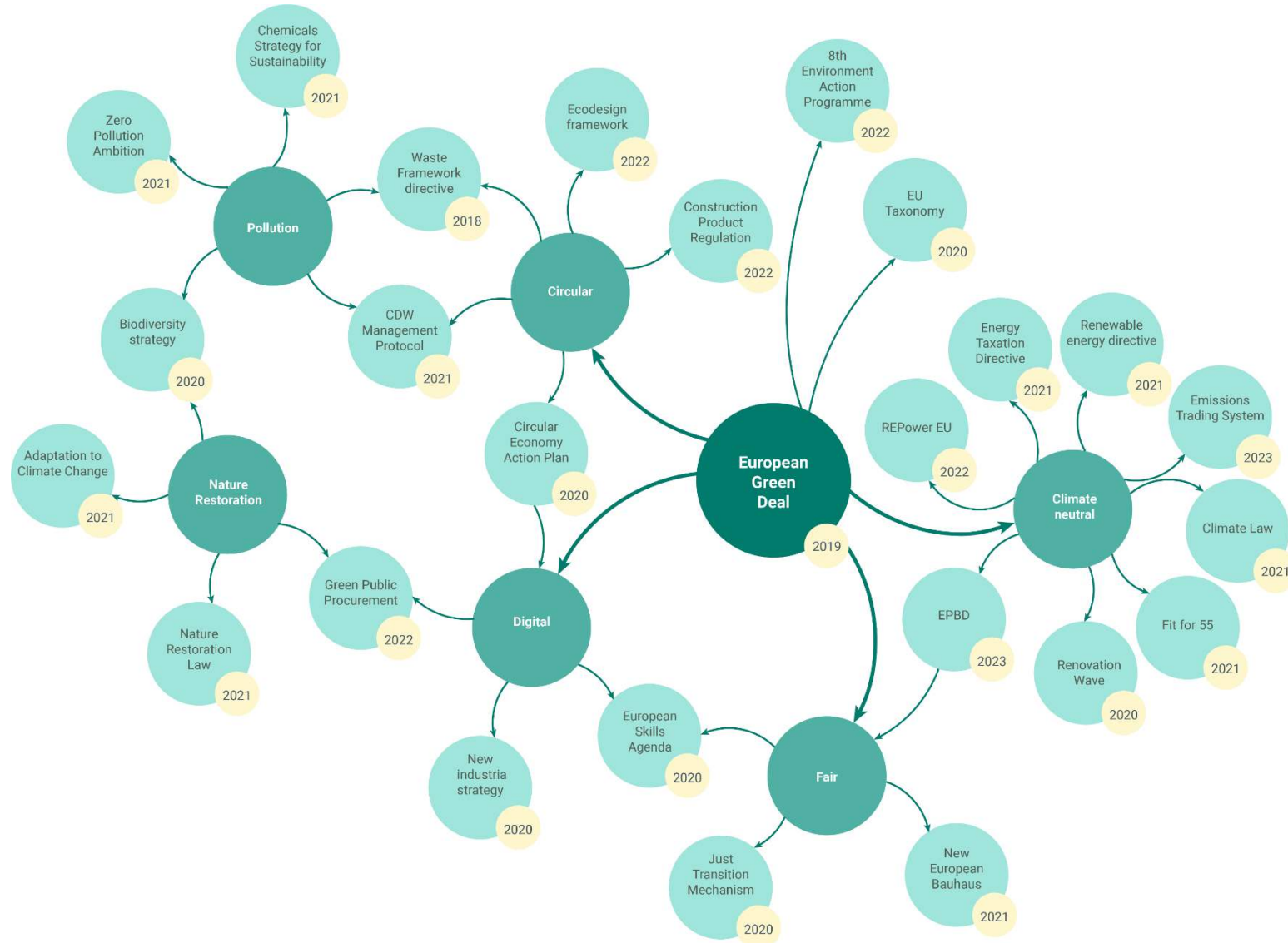
› **Opportunities**

Hotspots in buildings' life cycle – end-of-life



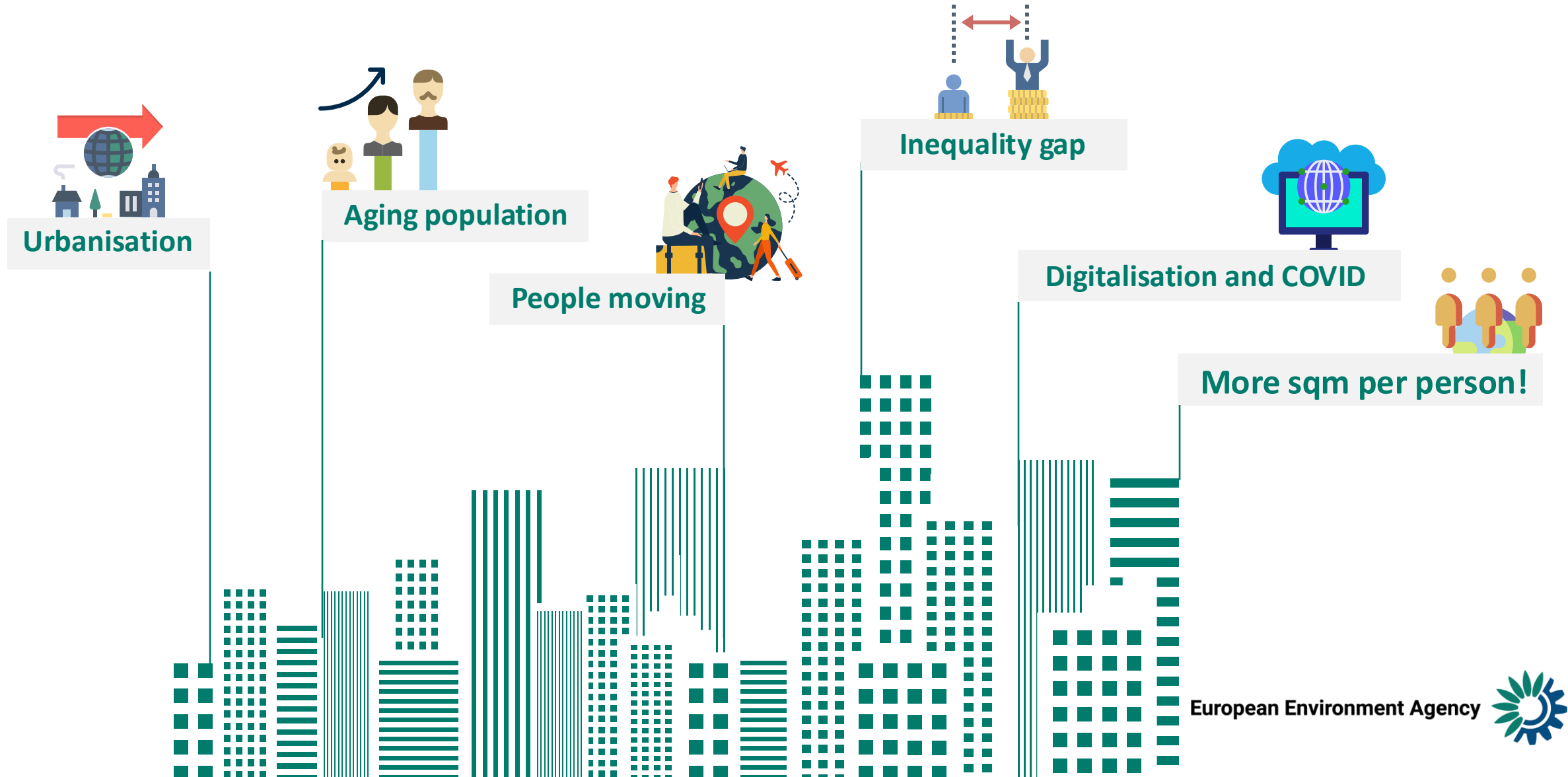
- › **Hazardous** waste, big quantities
- › Small economic value

Where are we going? – Policy trends



- › A lot of legislation – many objectives, **mostly in line** with each other
- › **No overarching strategy**

Where are we going? – Socioeconomic trends



What can we do?

→ Prioritise renovation



→ Use of low impact products

→ Energy efficiency

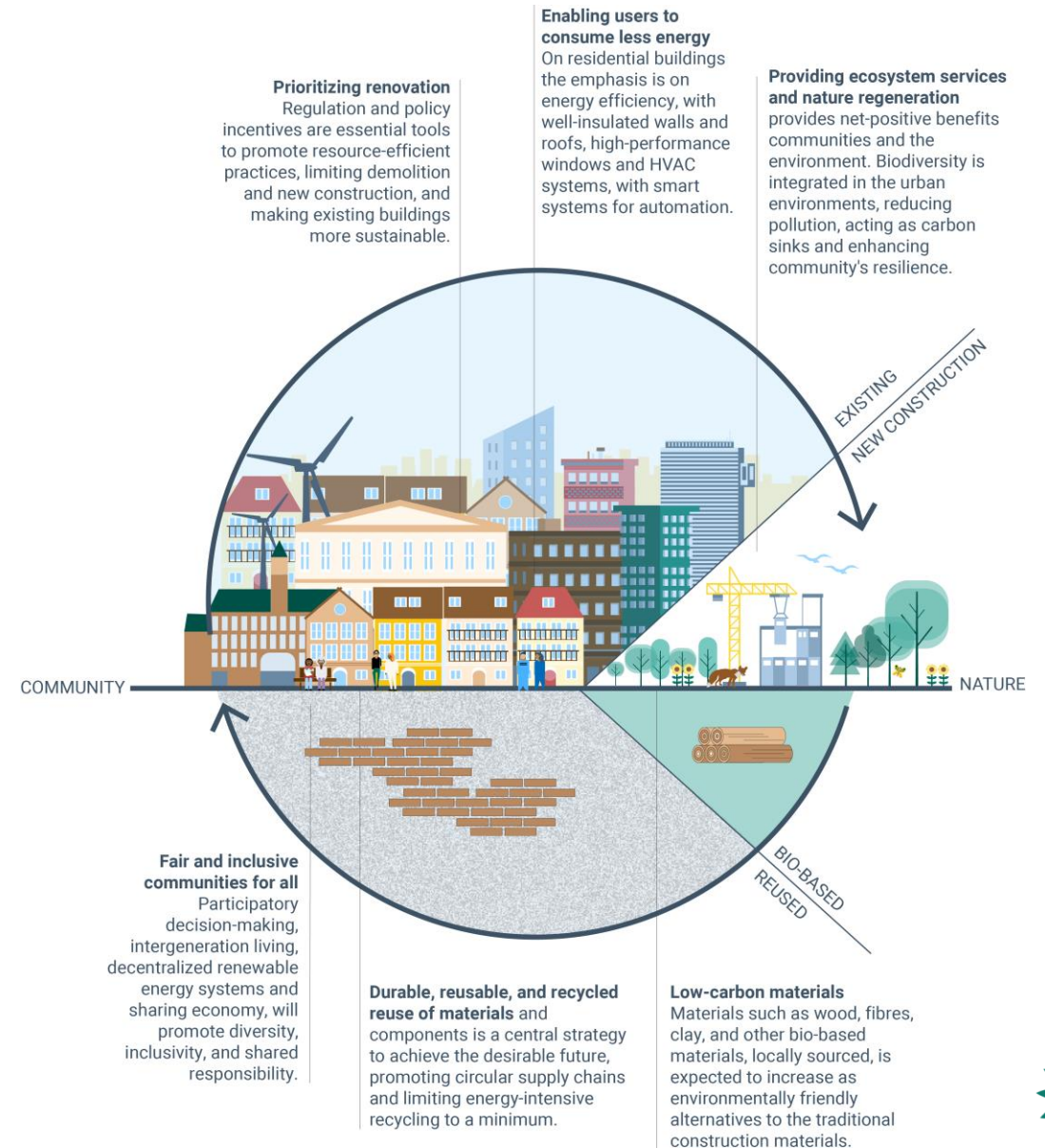


→ Climate resilience, ecosystem services

→ Circular design



→ Fair and inclusive transition



Thank you!



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