

Introduction to Embodied Carbon

Embodied Carbon Trends

CIBSE HVAC Group – Embodied Carbon

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Agenda

- 01 What is a WLCA?
- 02 What is embodied carbon?
- 03 Whole Life Carbon modules
- 04 The increasing influence of embodied carbon
- 05 Embodied carbon trends
- 06 Key factors which influence MEP embodied carbon





What is a Whole Life-cycle Carbon Assessment (WLCA)?

Whole Life-Cycle Carbon (WLC) emissions are the carbon emissions resulting from the materials, construction and the use of a building over its entire life, including its demolition and disposal. A WLC assessment **provides a more complete picture of a building's carbon impact on the environment.**



What is Embodied Carbon?

Emissions associated with non-operation phase of a project:

Extraction

Manufacture

Transport

Construction

Maintenance

Refurbishment

Demolition

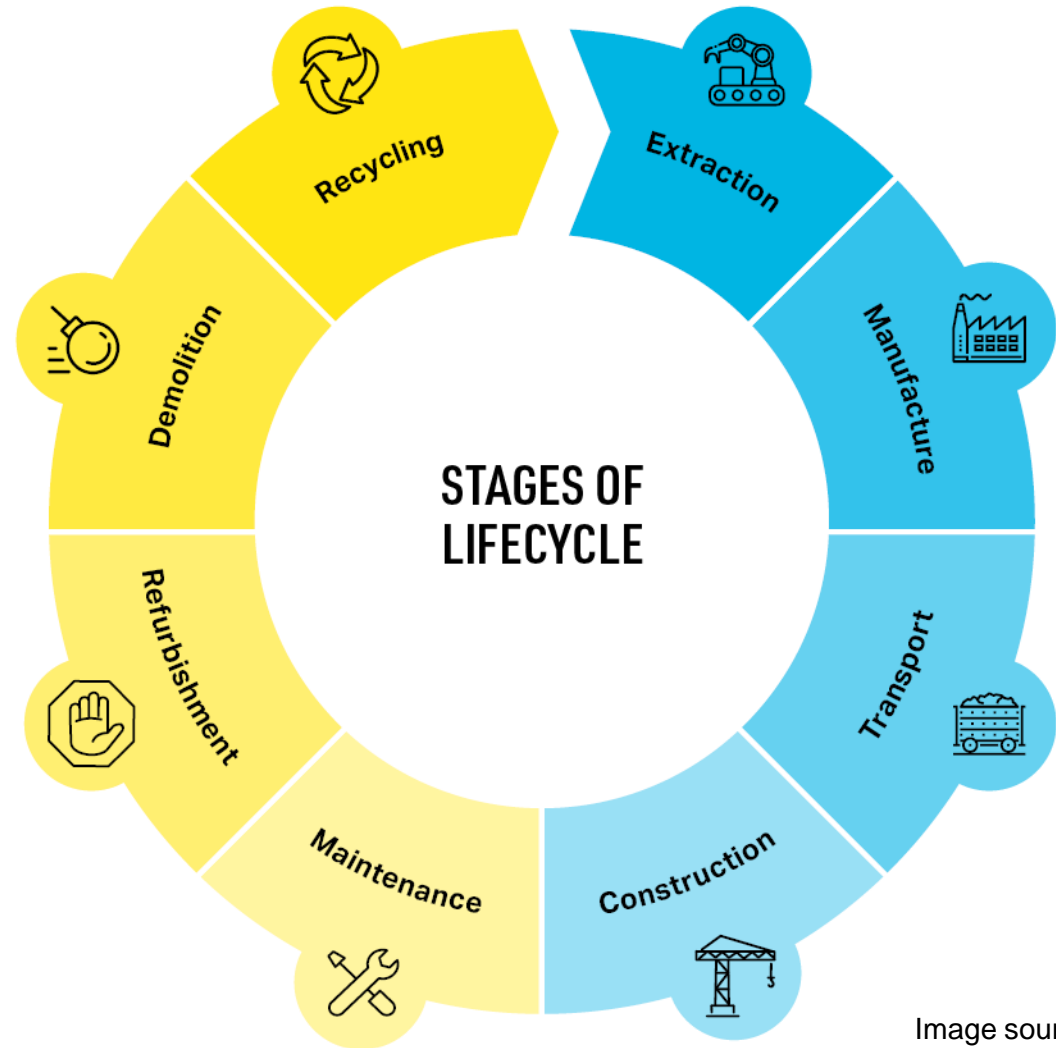


Image source: AECOM

Whole Life Carbon Modules

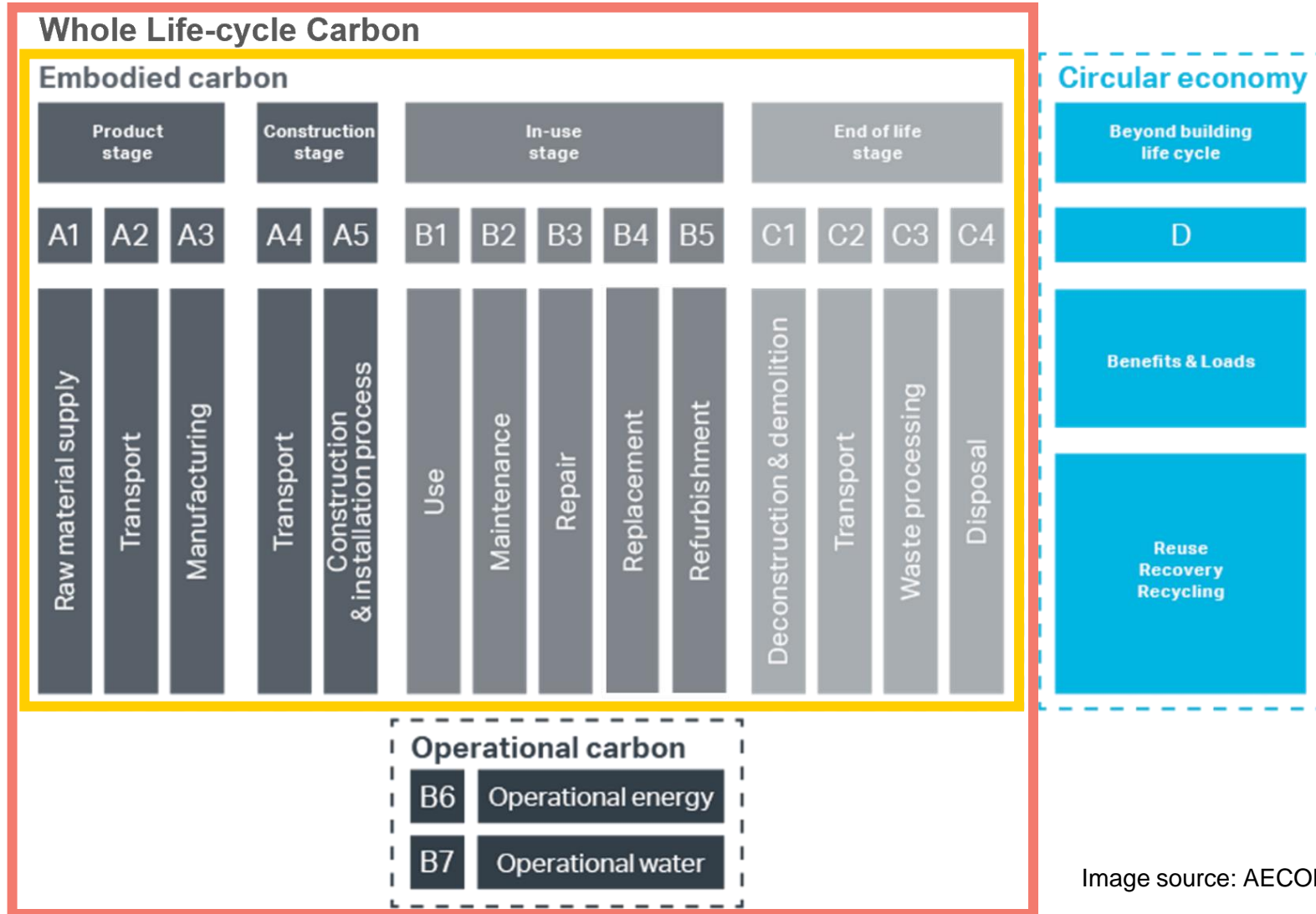


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The increasing influence of embodied carbon over time

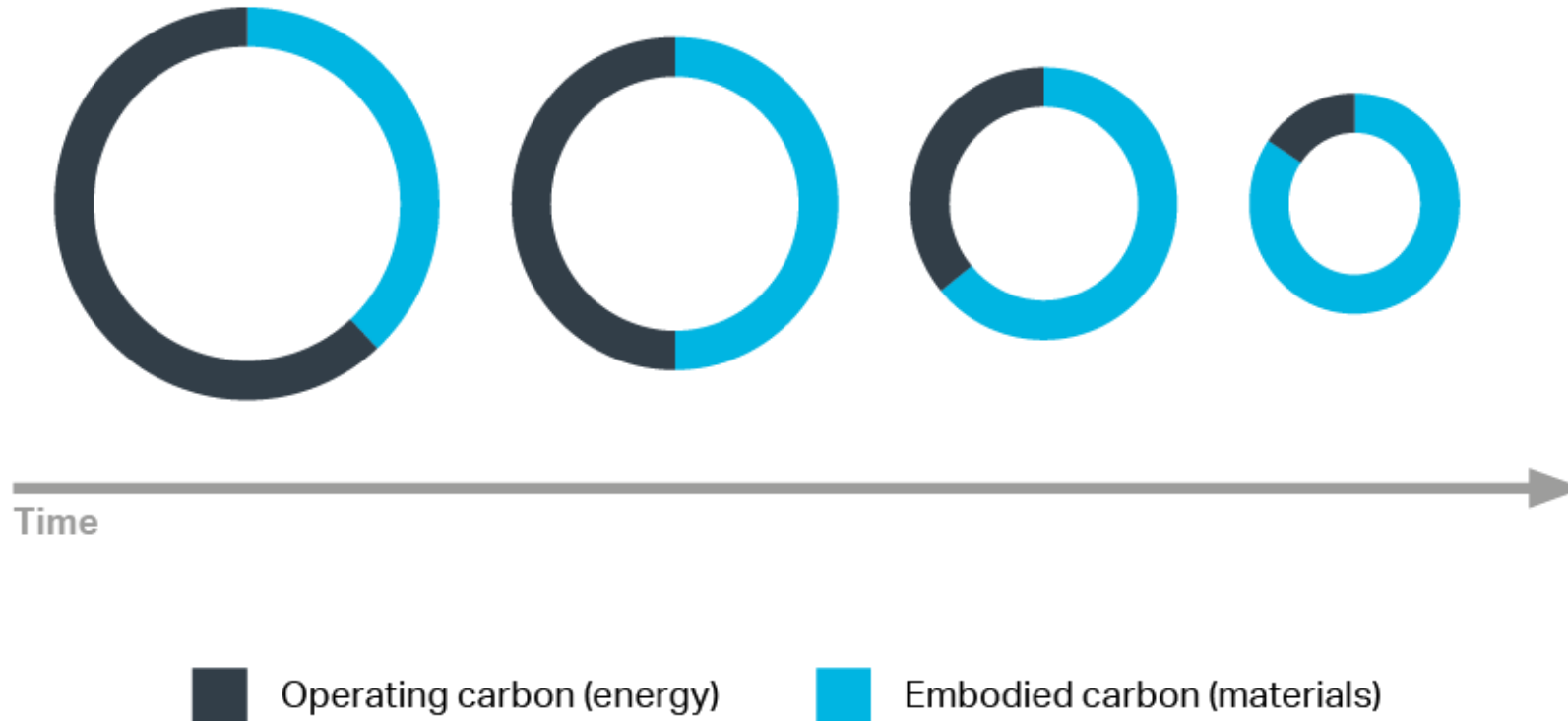
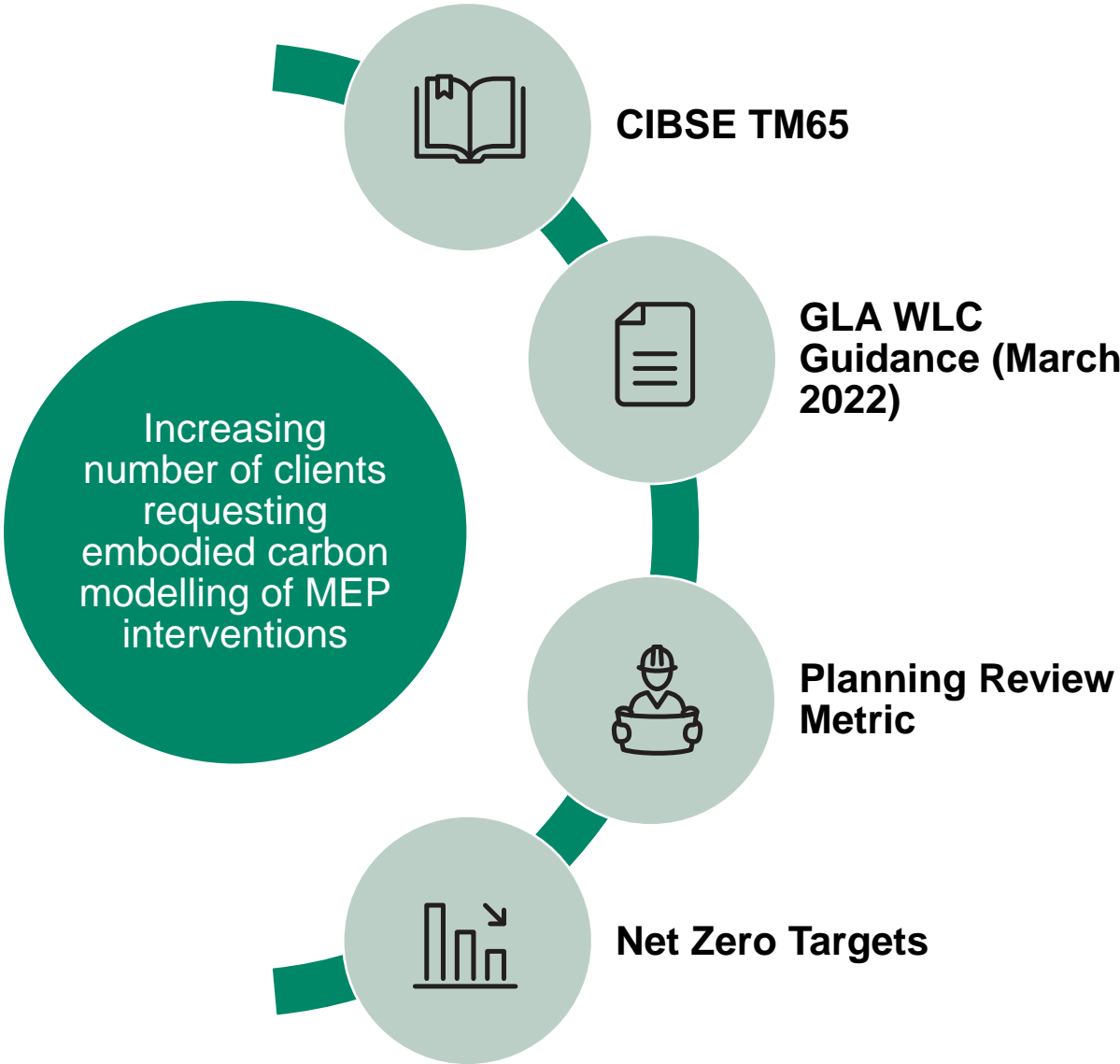
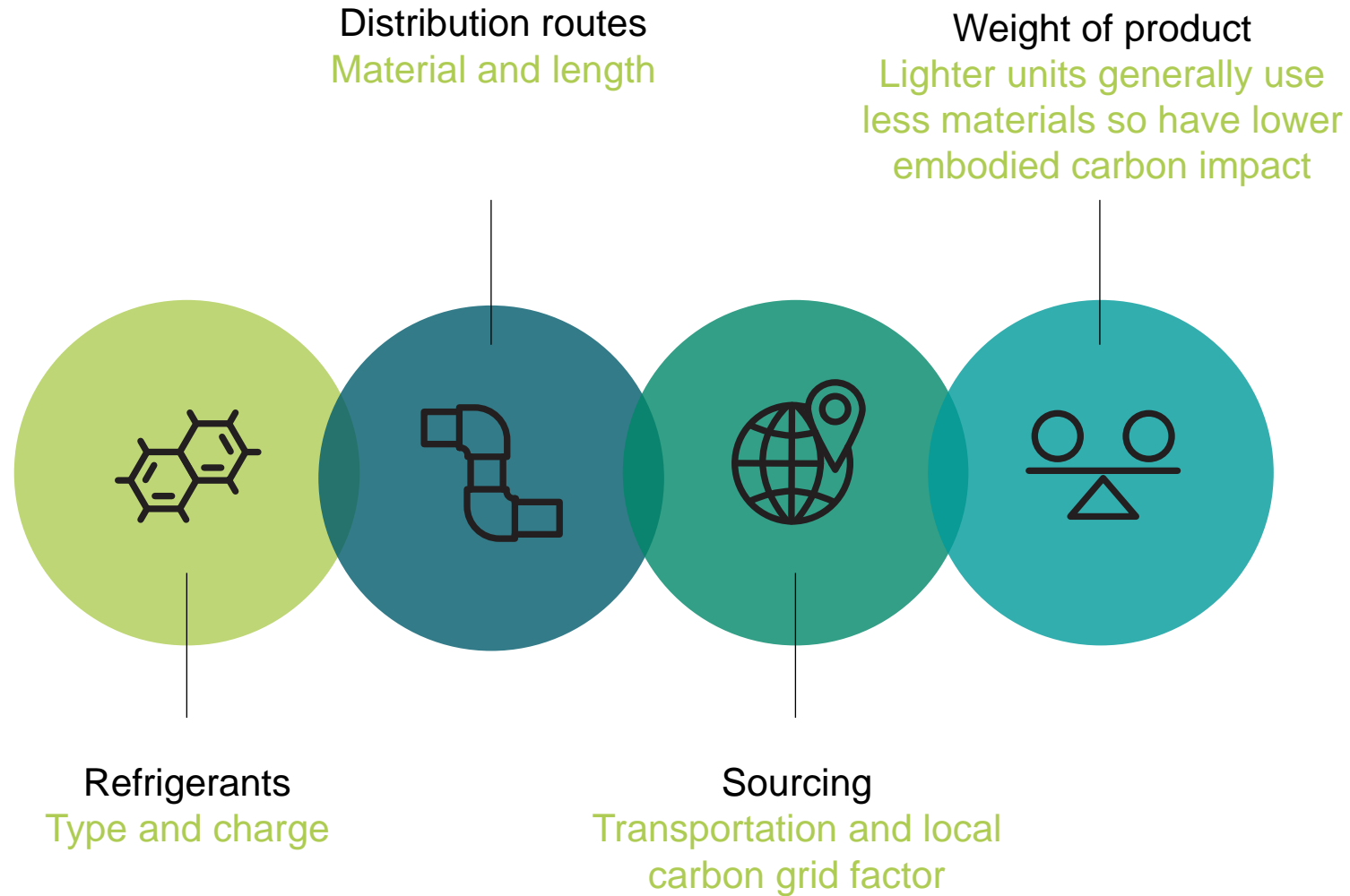


Image source: AECOM

Embodied Carbon Trends



Top factors which contribute to the embodied carbon of MEP systems



Thank you!

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