

Cement and Concrete Industry: Multiplier Effect on the Economy and their Contribution to a Low Carbon Economy



Le
BIPE

A study by Le BIPE for The Concrete Initiative



November 19th, 2015



BIPE

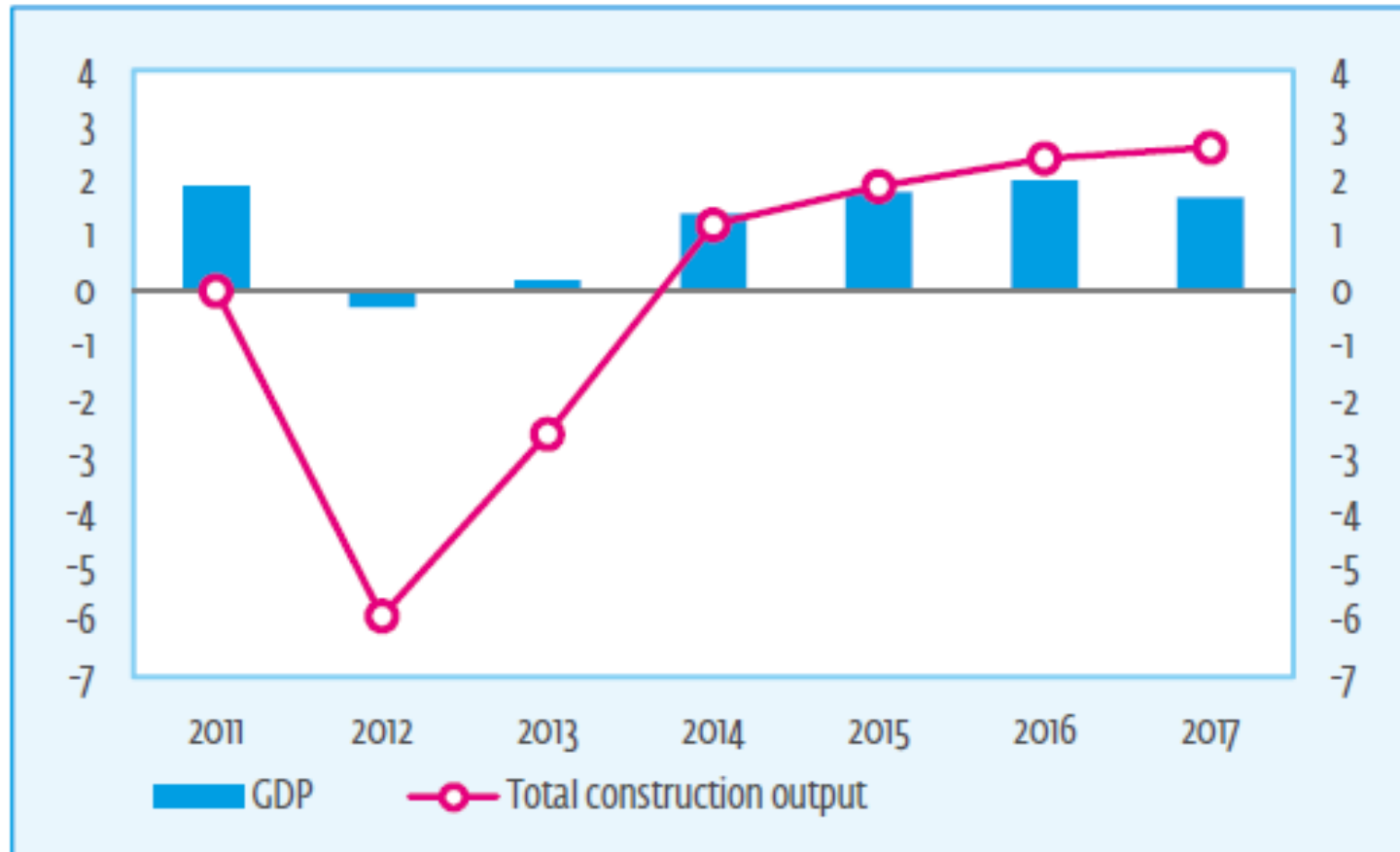


1 = 2.8

Construction industry: severe crisis, now slowly recovering and bound for growth

GDP and Total Construction Output from 2011 to 2017

year to year change in %

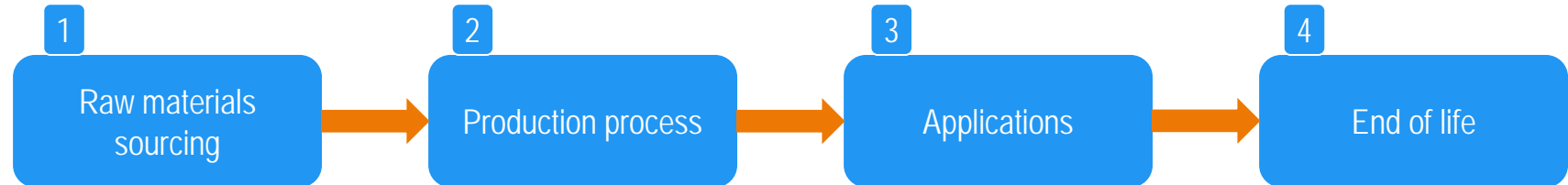


Source: EUROCONSTRUCT (79th conference)



A whole life cycle approach

$$\text{Multiplier Effect} = \frac{\text{Direct} + \text{Indirect} + \text{Induced Impacts}}{\text{Direct impact}}$$



Indirect impact

Direct impact

Catalytic effect

Induced impact

Multiplier effect of the concrete and cement industry (EU28)



€
Value added

20
bn€

45
bn€

56
bn€

Direct
impact

Direct and
Indirect impact

Direct, Indirect
and Induced
impact

x 2.8



Jobs

384
Thousand

848
Thousand

1.08
Million

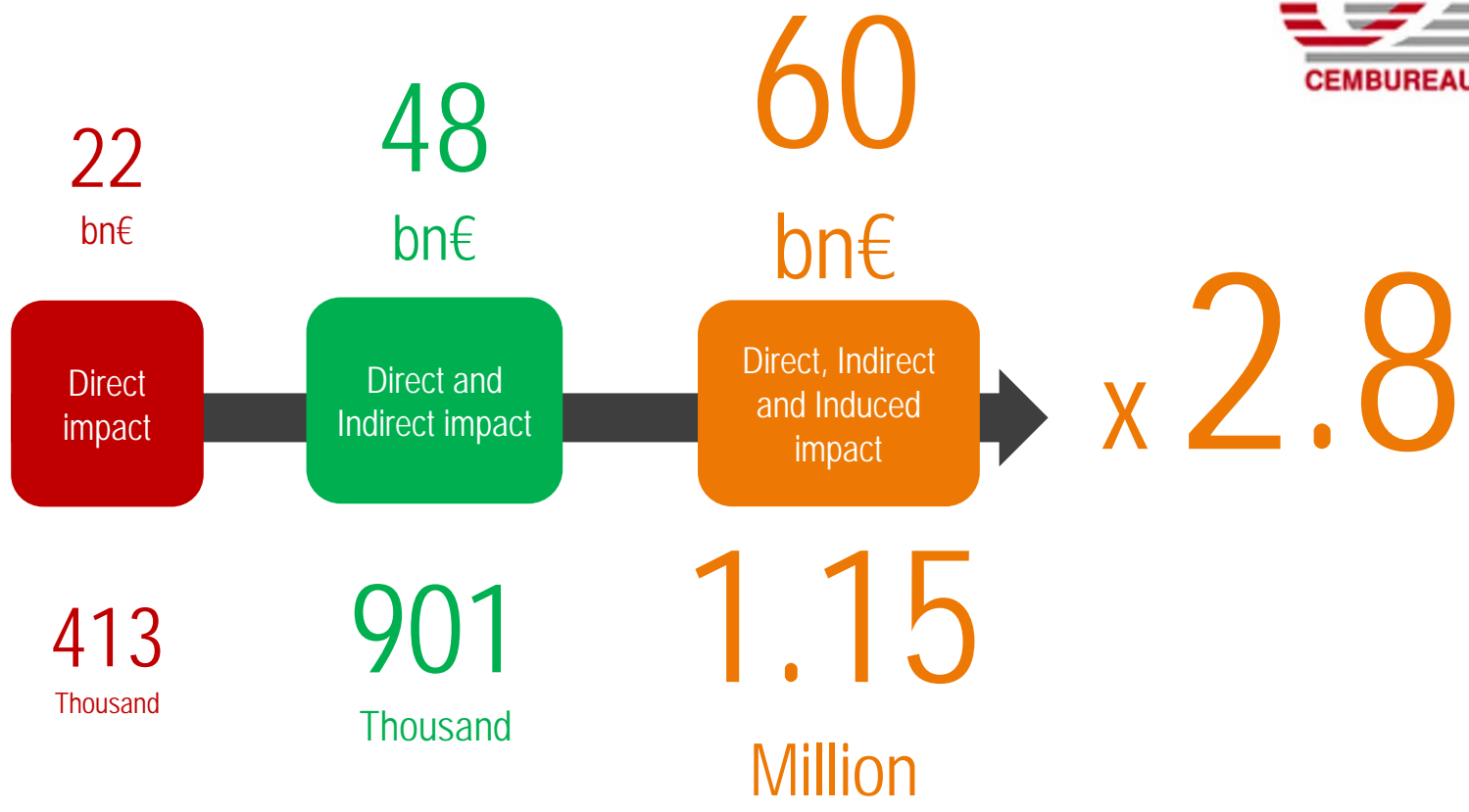


Multiplier effect of the concrete and cement industry (CEMBUREAU Region)



€
Value added

Jobs

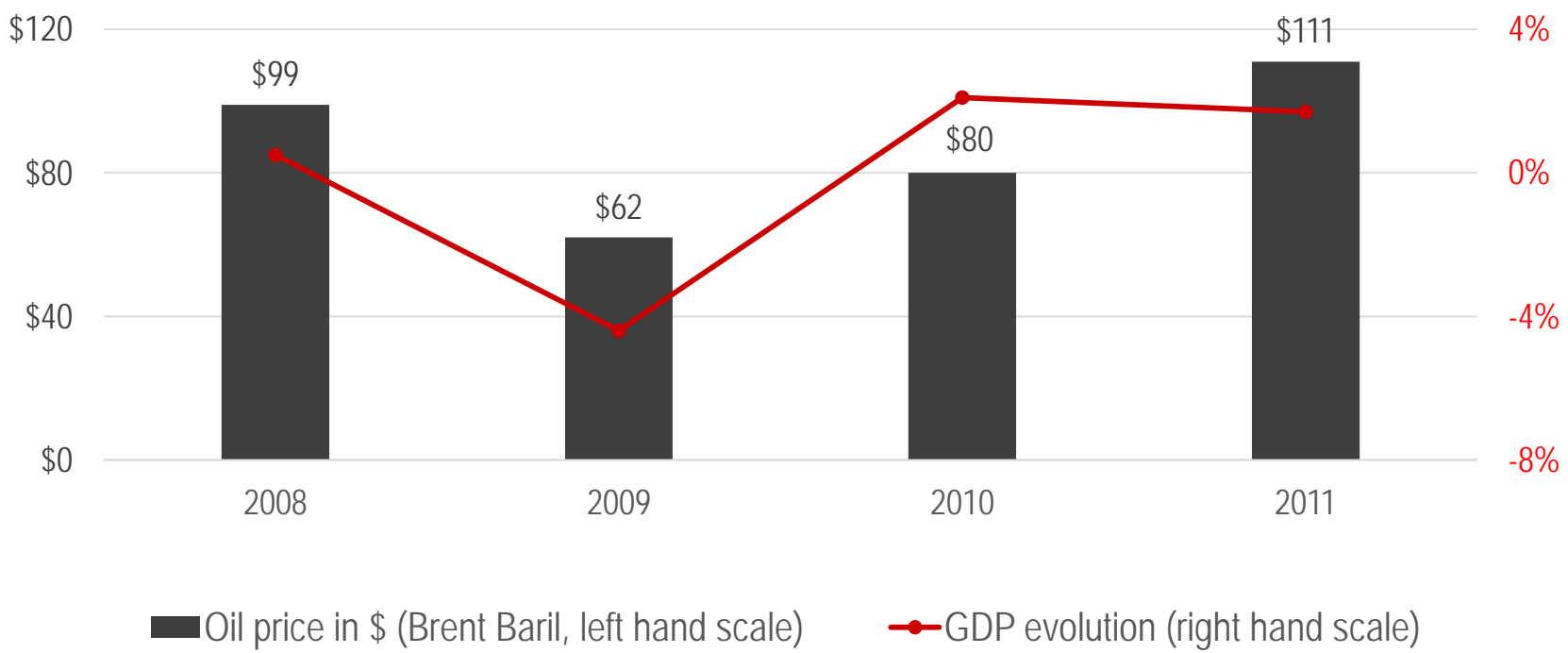




Independent from the macroeconomic context

Multiplier effect

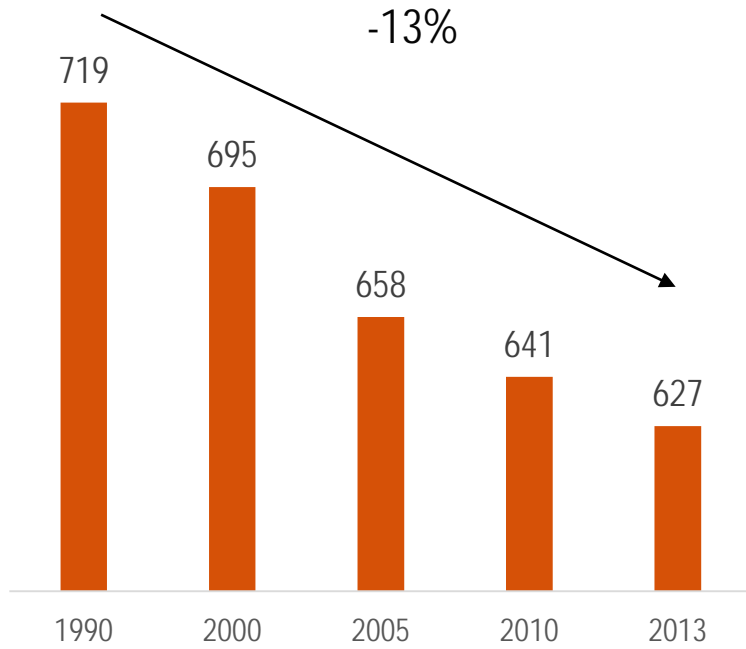
2.8 → 2.9 → 2.8 → 2.7



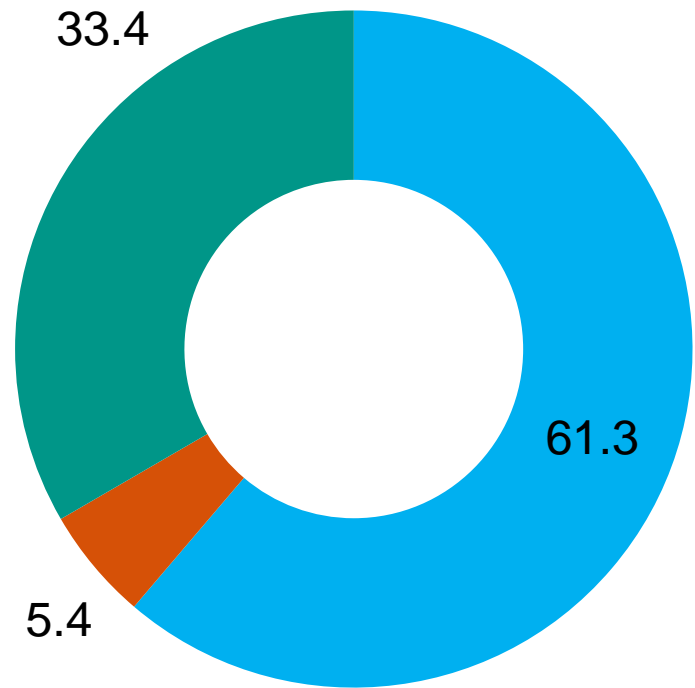


Reduction of CO₂ emissions

Production of cement



Evolution of CO₂ emissions per ton of cement produced in EU28 (kg CO₂/ton Grey and white cementitious*)

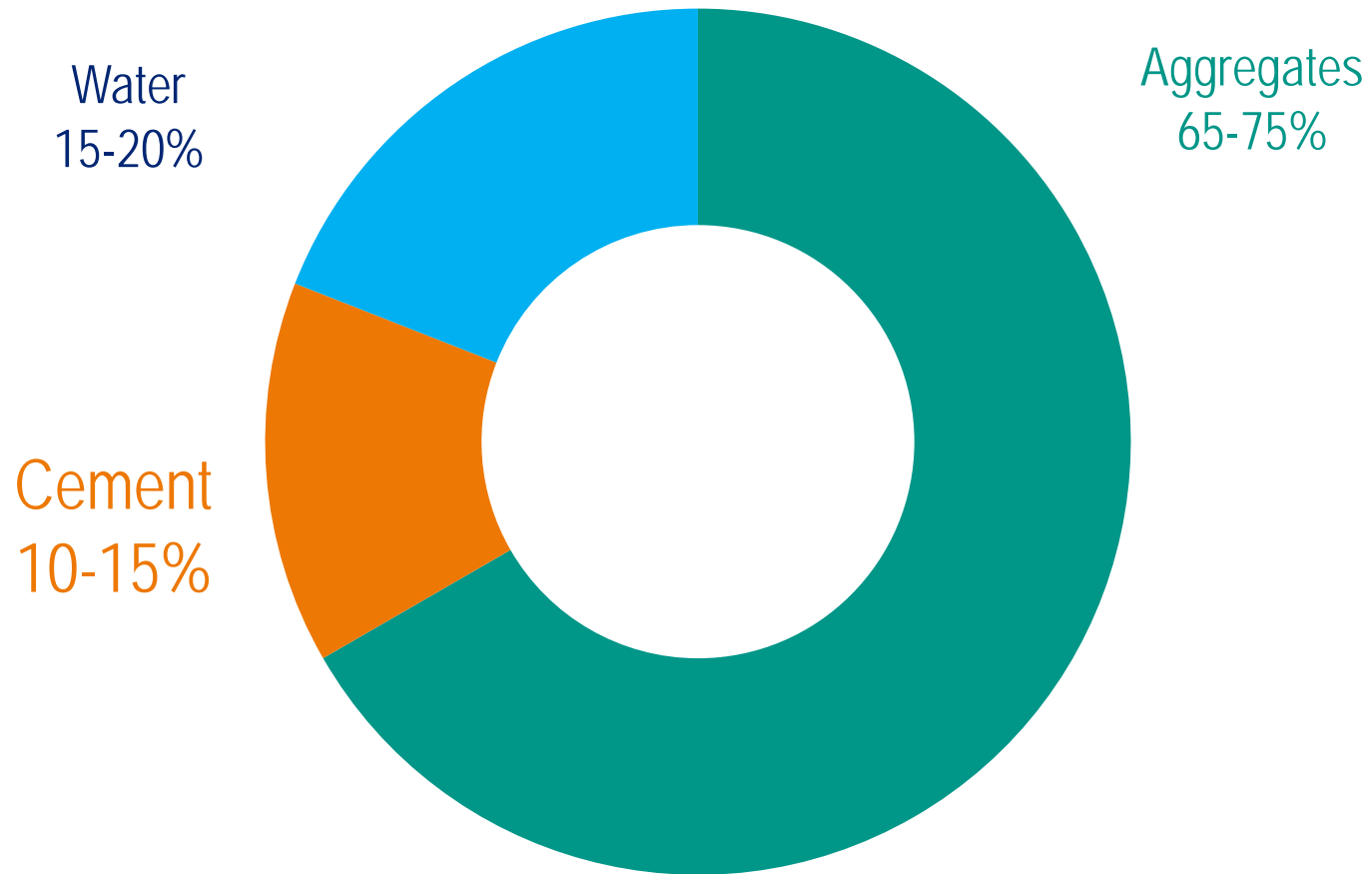


- Conventional fossil fuels
- Biomass
- Alternative fossil fuels



Concrete: a low carbon product

Composition of concrete by volume





Concrete and construction sector essential to EU objectives



Reducing the ecological impact

- ✓ Key to the **circular economy** thanks to its recyclability
- ✓ **Waste used as a resource** in cement manufacturing
- ✓ Less recourse to primary raw materials
- ✓ Sustainable answer to increases in mobility needs



Energy efficiency of buildings

- ✓ Thermal mass optimization
- ✓ **Energy consumption reduced**

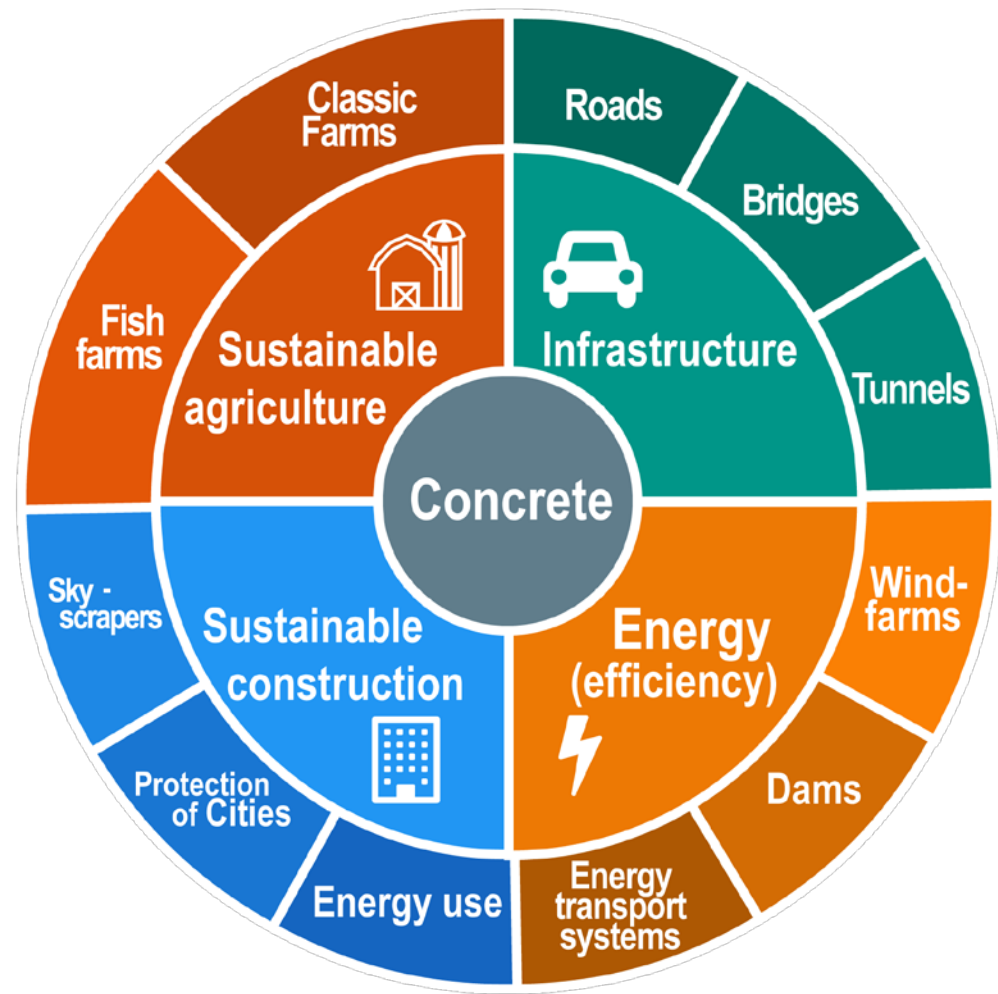


Safety of citizens

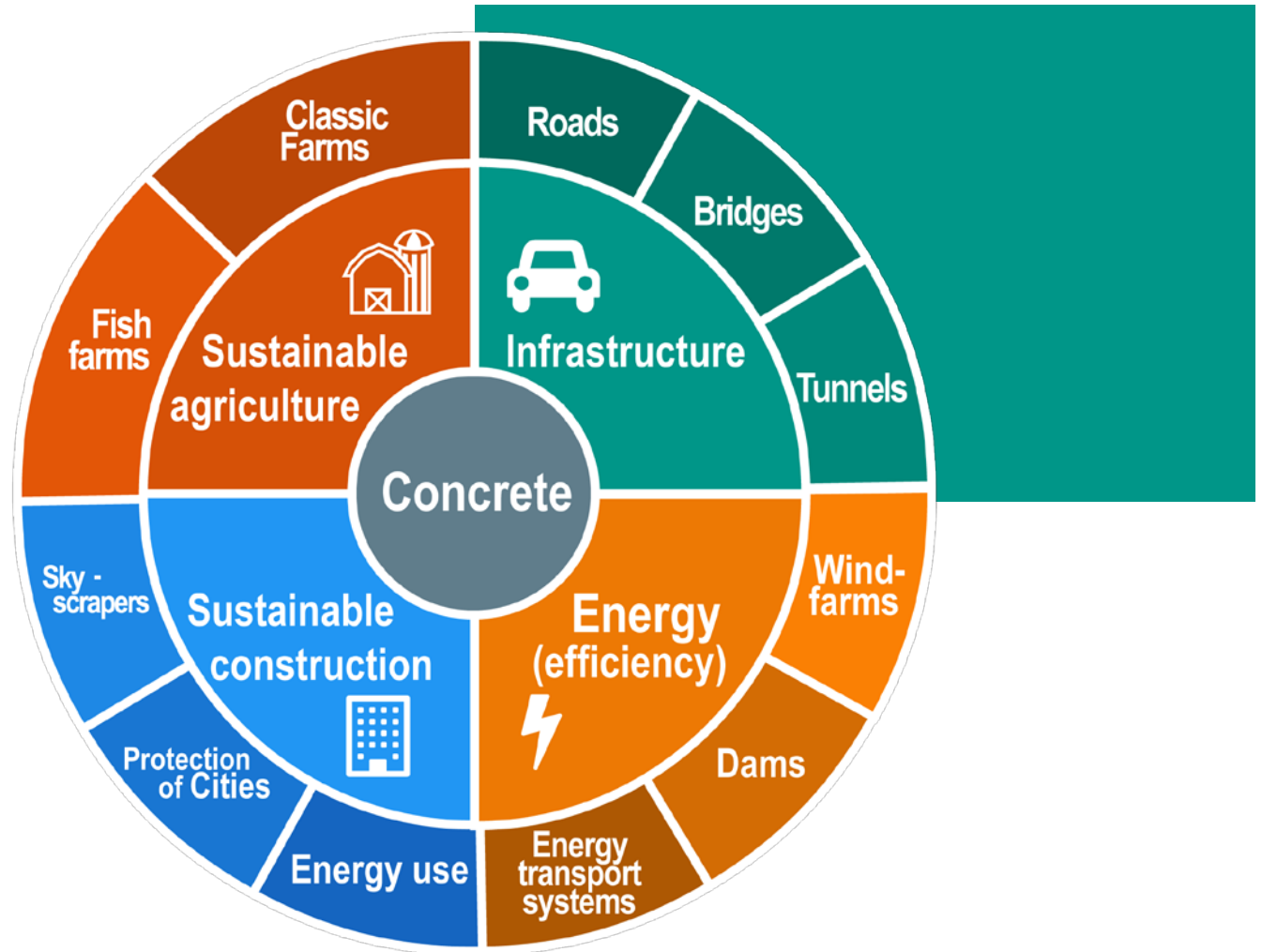
- ✓ Durable – lifespan of over 100 years
- ✓ Fire safety
- ✓ **Adaptation to climate change**



Concrete: relevant & necessary sustainable solutions



Concrete: relevant & necessary sustainable solutions





Concrete roads: optimizing fuel consumption



-4%

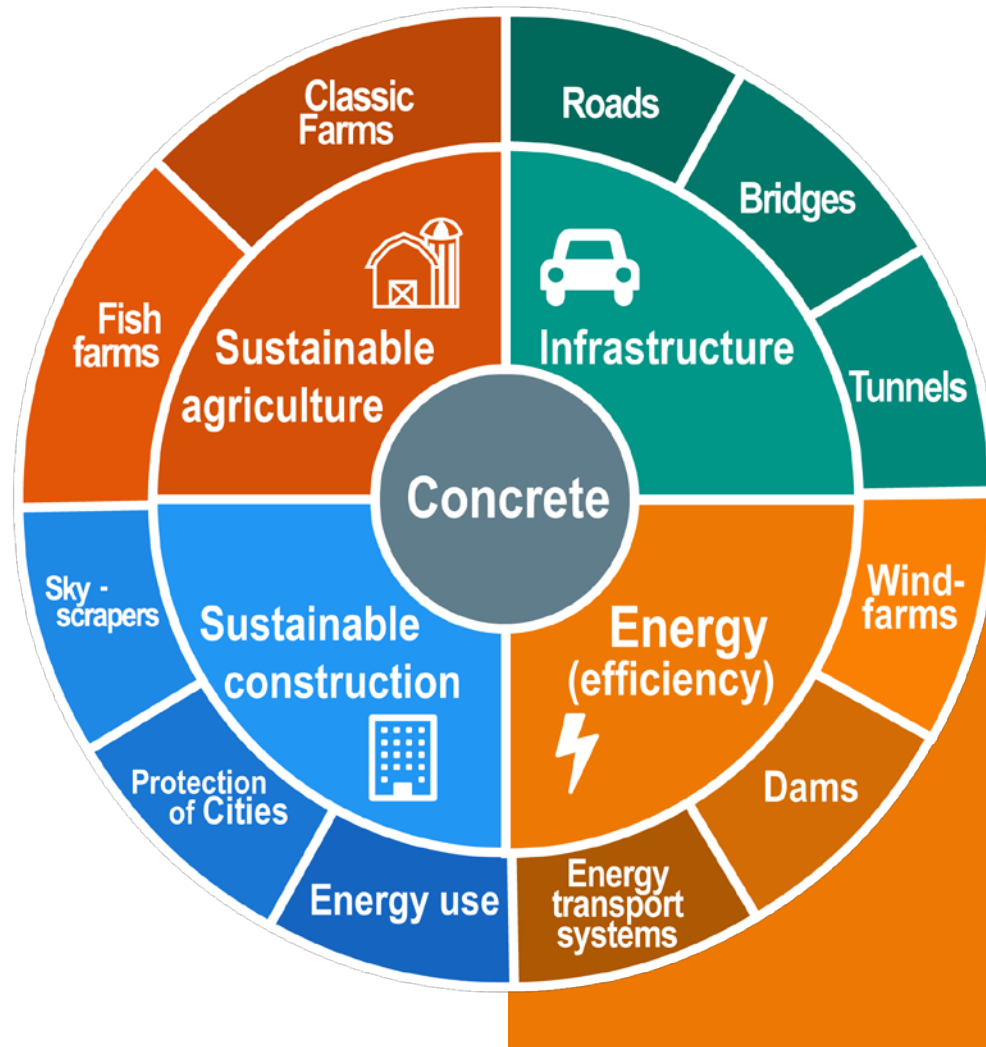


Concrete tunnels: High durability



120 years

Concrete: relevant & necessary sustainable solutions





Offshore wind farms & concrete foundations



20%

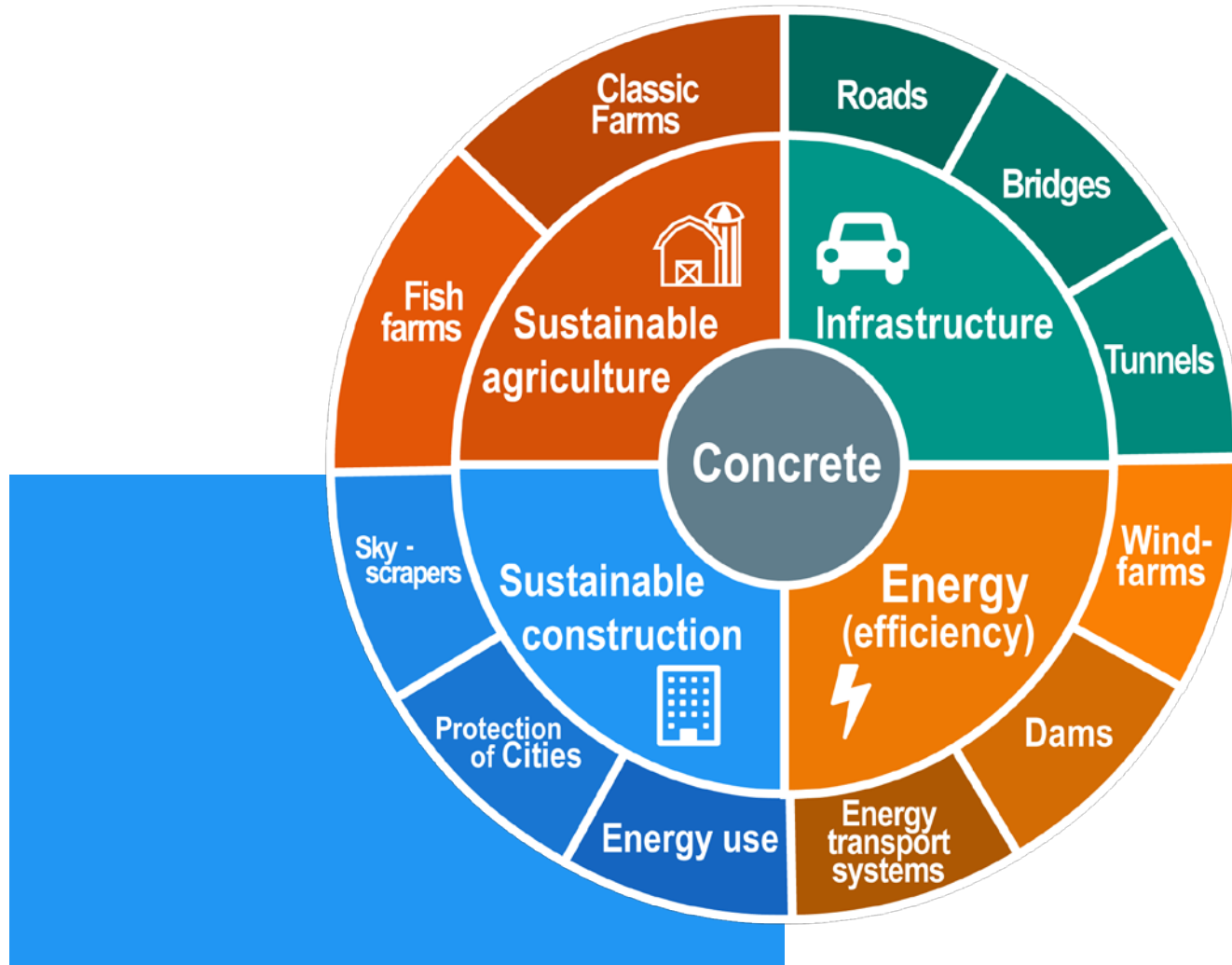


Hydroelectric dams



45%

Concrete: relevant & necessary sustainable solutions

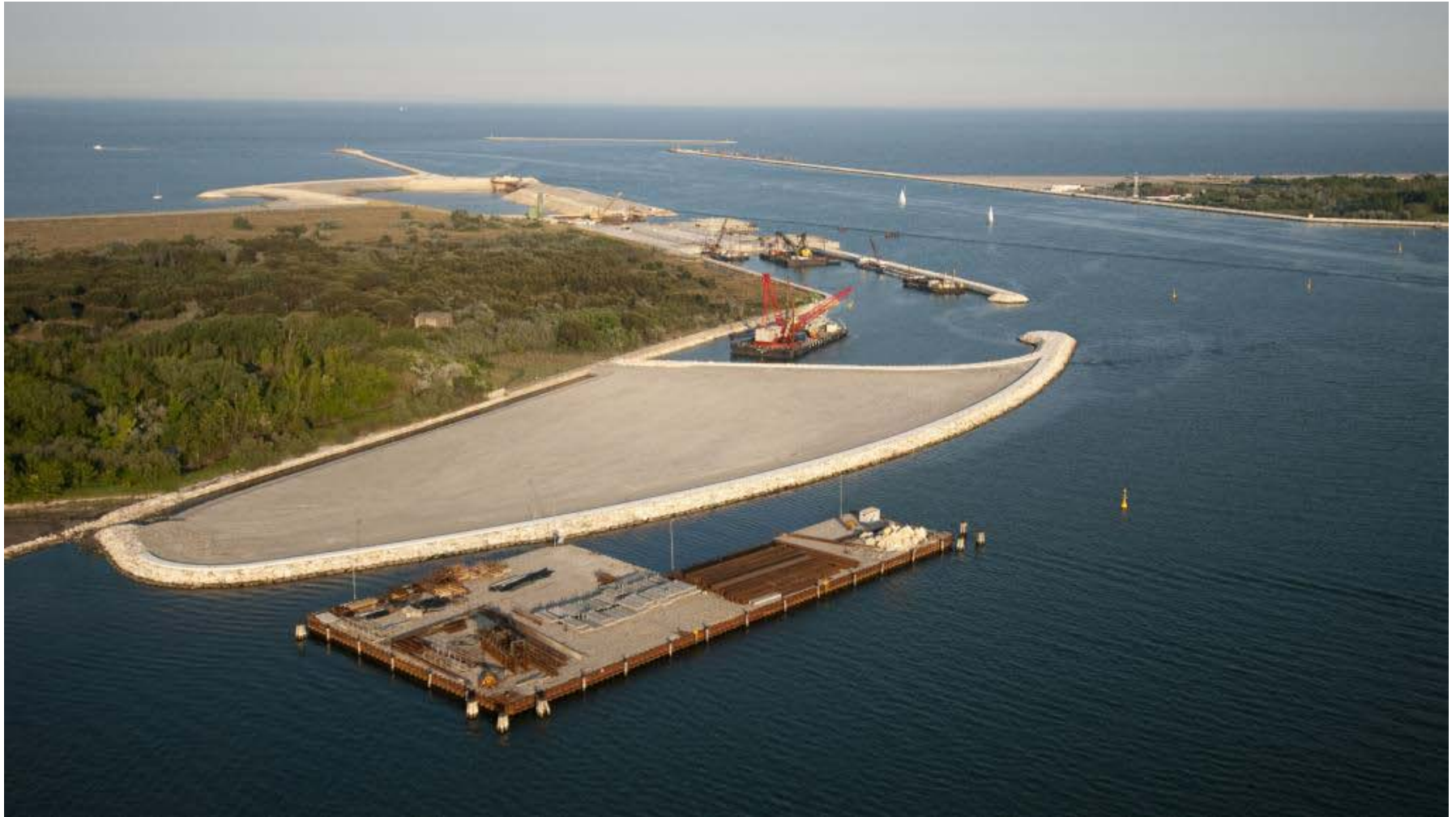


Energy use in buildings



-60%

Preserving cities



Multiplier effect

1 = 2.8



Thank you!



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