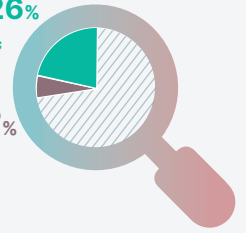


# REDUCING EMBODIED CARBON FROM NEW BUILDING CONSTRUCTION

GLOBAL CO<sub>2</sub> EMISSIONS TODAY

9.7 GtCO<sub>2</sub> 26% emissions from buildings energy use

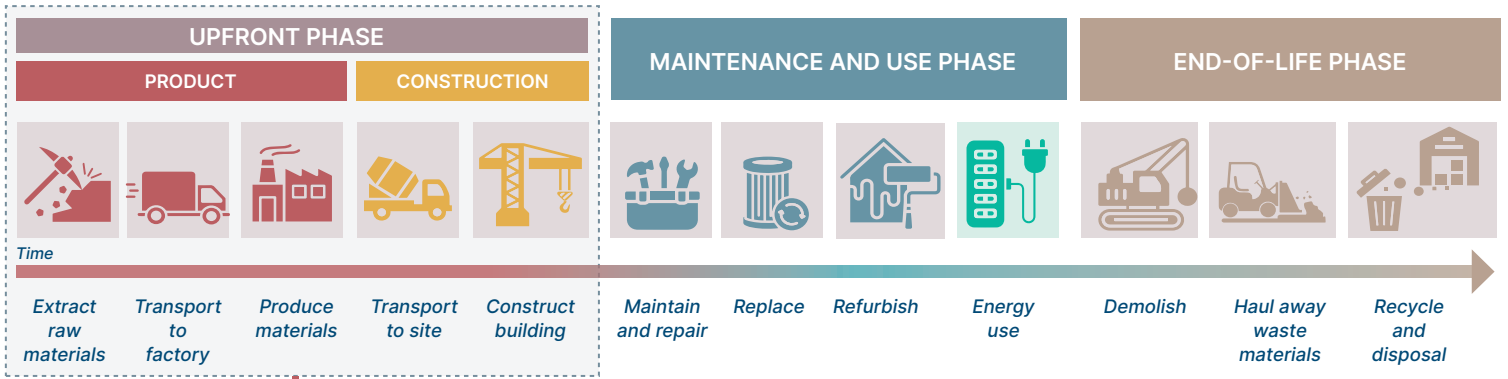
2.6 GtCO<sub>2</sub> 7% embodied carbon from new buildings



## Embodied carbon: what is it?

### STAGES OF A BUILDING LIFECYCLE

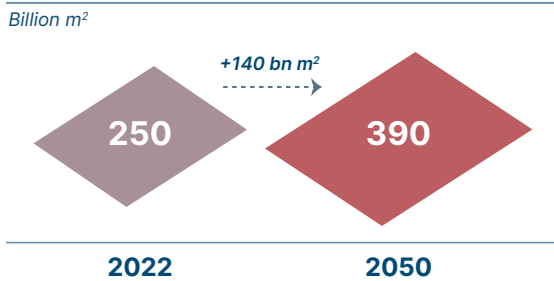
Type of building emissions: ■ Embodied ■ Operational (heating, cooling, cooking, lighting, appliances)



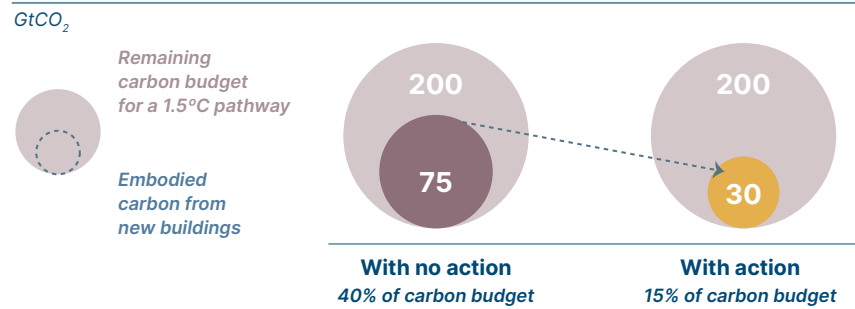
Priority: Reduce use of high-carbon steel, cement and concrete

## Reducing emissions from the construction of new buildings is critical

GLOBAL FLOOR AREA IS SET TO EXPAND BY 50%

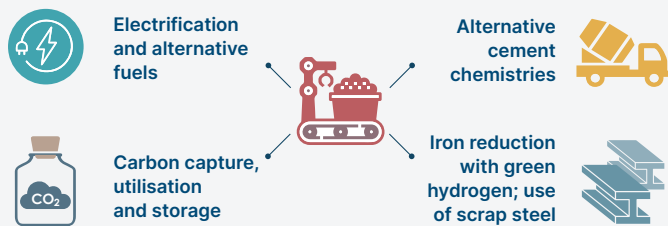


WITH NO ACTION, NEW FLOOR AREA COULD PRODUCE 75 GtCO<sub>2</sub>



## What action is needed?

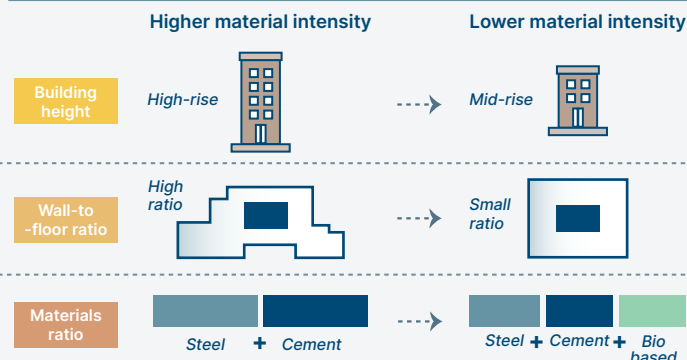
### DECARBONISE STEEL AND CEMENT/CONCRETE



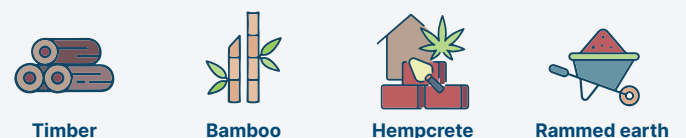
### BUILD LESS & BE MORE EFFICIENT IN CONSTRUCTION



### USE LESS CEMENT, CONCRETE AND STEEL



### USE ALTERNATIVE, LOW-CARBON MATERIALS



3 conditions for bio-based materials to have lower whole-life carbon:

- 1 **Sustainably sourced:** Harvested at the right time and replanted
- 2 **Store carbon while in building**
- 3 **Dealt with properly at end-of-life:** Recycled or burnt with carbon capture