

# Roadmap for climate transition of the building and construction industry

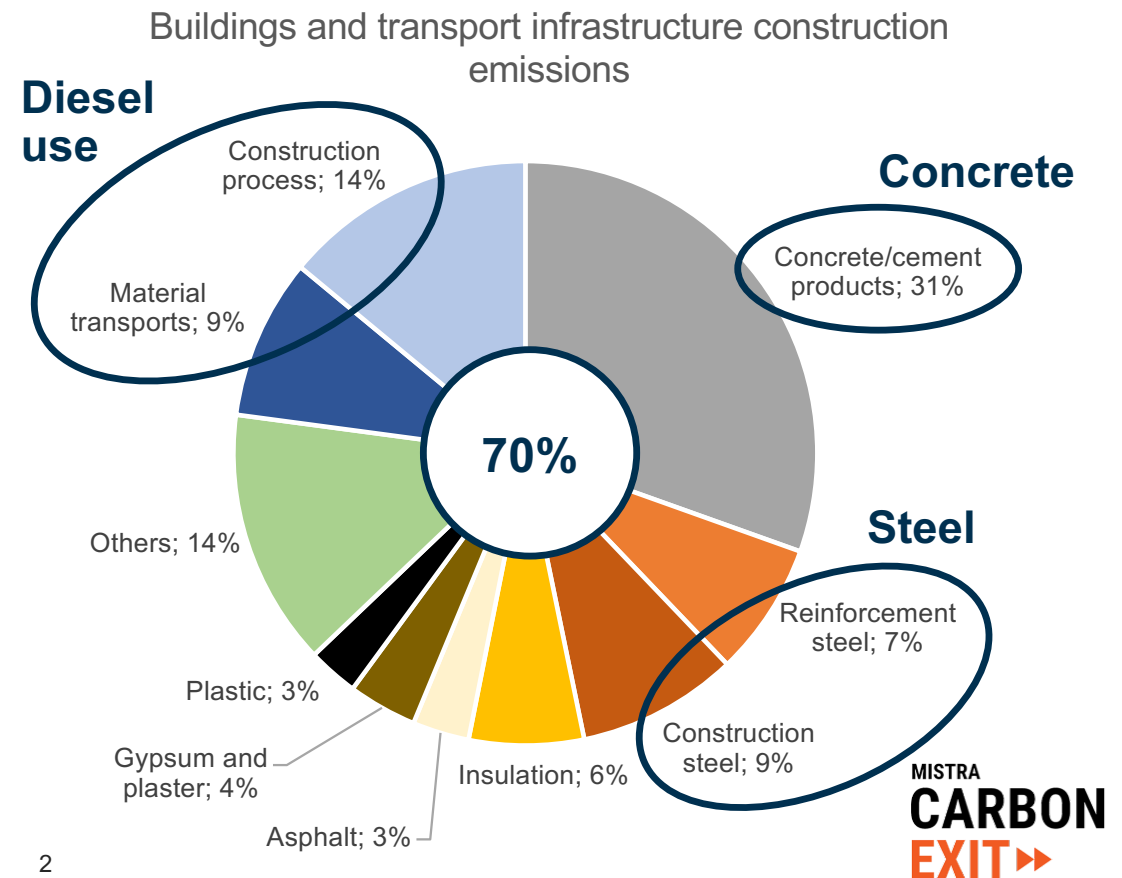
A supply chain analysis including primary production of steel and cement

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# Construction 20% of Swedish CO<sub>2</sub> emissions

- Material and energy flow analysis
- Literature review on abatement options of key materials and activities
- Analysis of current and future abatement potential – Up until 2045
- Scenarios to test critical aspects
- Vetted with experts along construction industry supply chain



# Examples of main abatement options

## Concrete/cement products

Cement clinker substitution  
Concrete recipe optimisation  
Cement plant CCS/electrification

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## Construction process/ heavy transports

Biofuel substitution  
Electrification/fuel-cells

## Steel

Biofuel substitution  
Electrification

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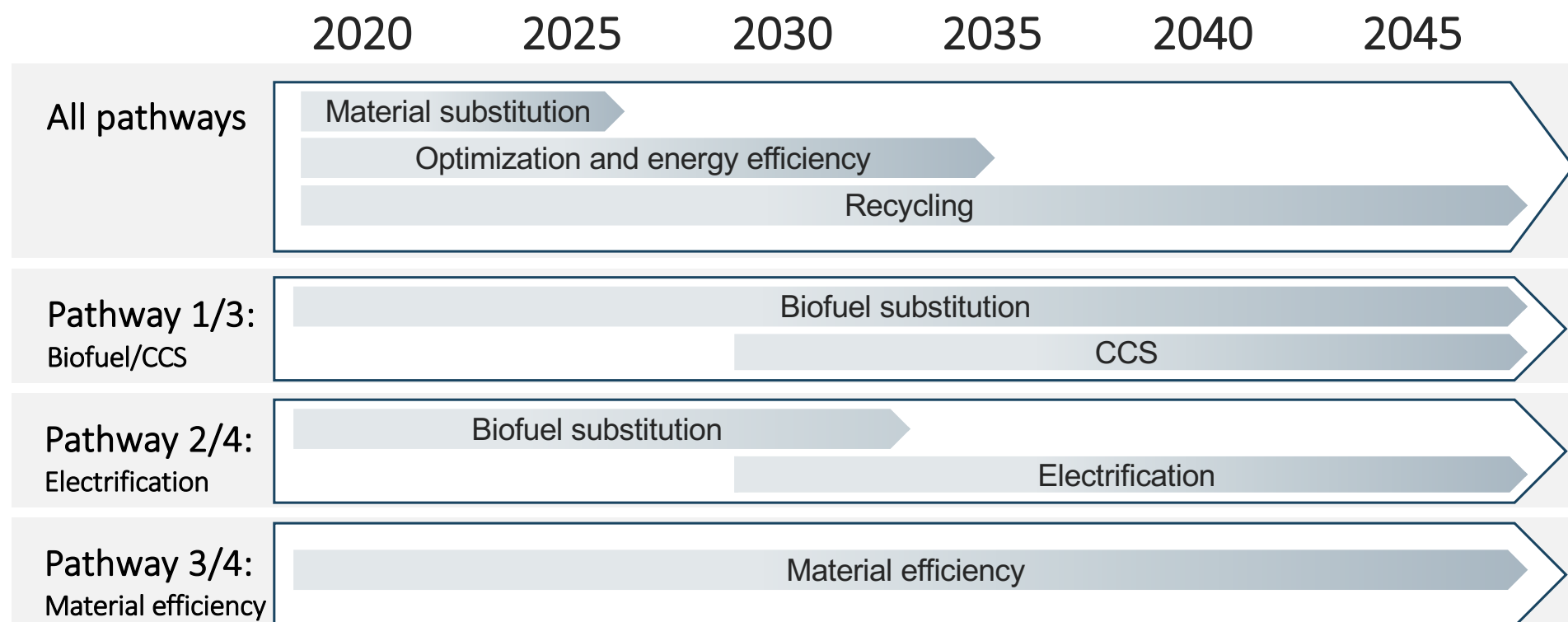
## Other materials

Material substitution  
Recycling  
Electrification (/CCS)

## Cross-industry measures

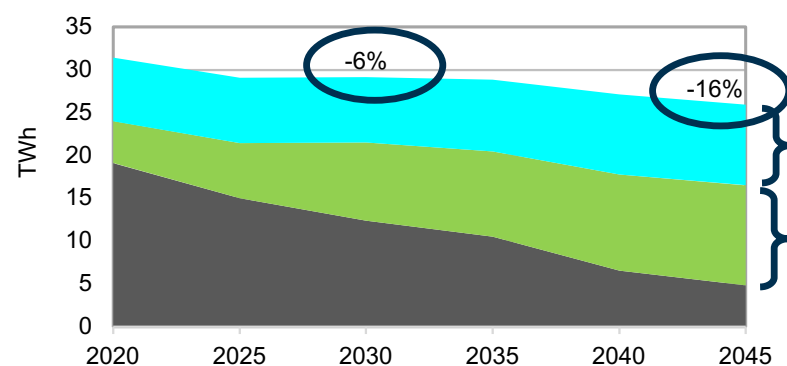
Electricity system decarbonisation  
Material efficiency

# Exemplification of timeline

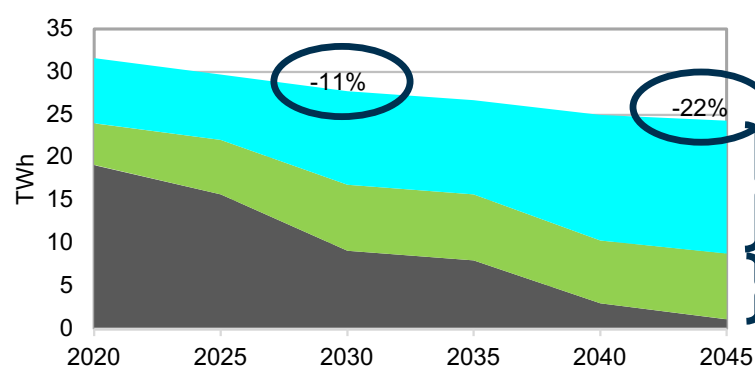


# Results on energy use over time

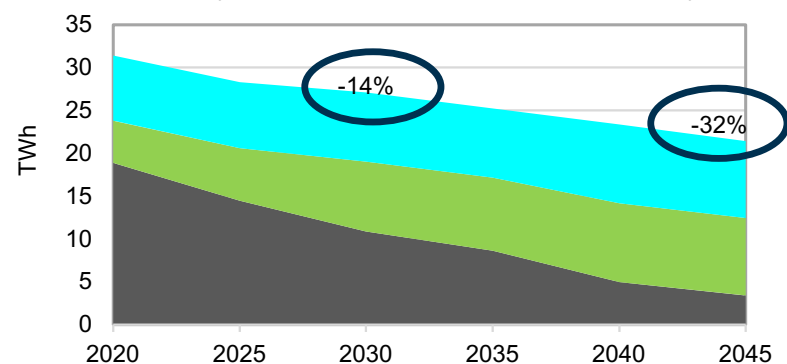
Pathway 1: Biofuels and CCS



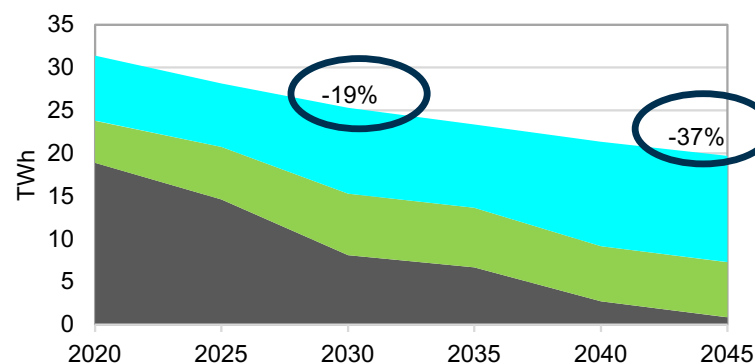
Pathway 2: Electrification



Pathway 3: Biofuels, CCS, Material efficiency



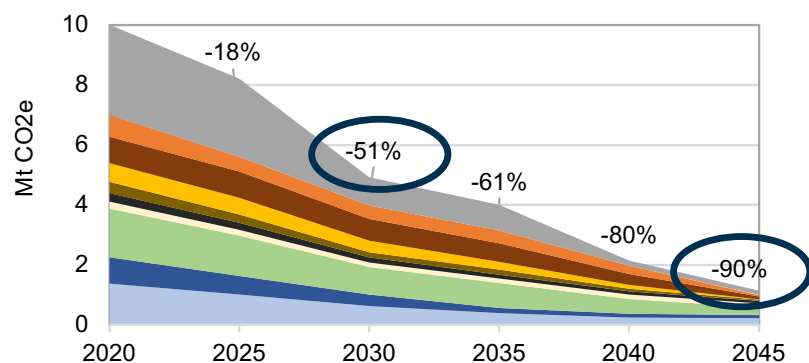
Pathway 4: Electrification and material efficiency



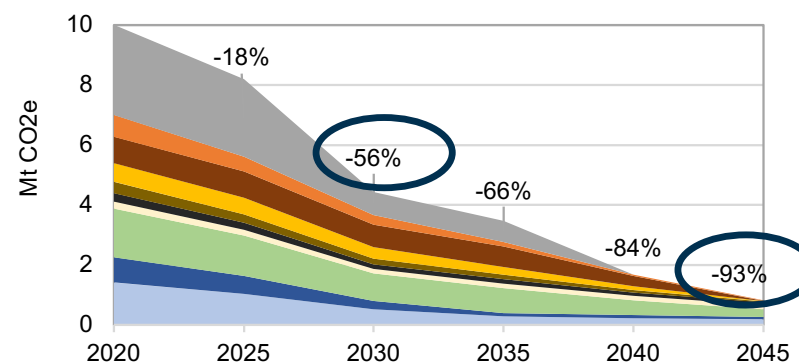
Electricity  
Biofuel  
Fossil fuel

# Results on emissions over time

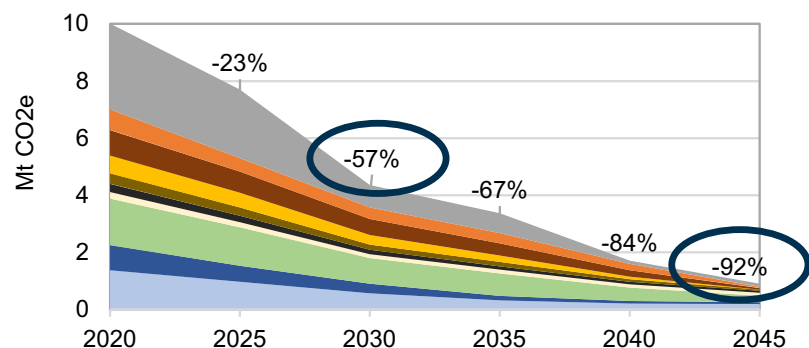
Pathway 1: Biofuels and CCS



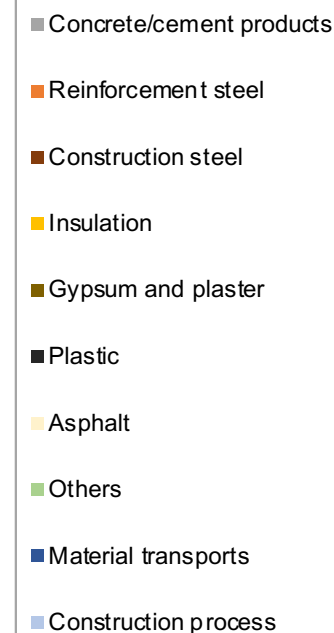
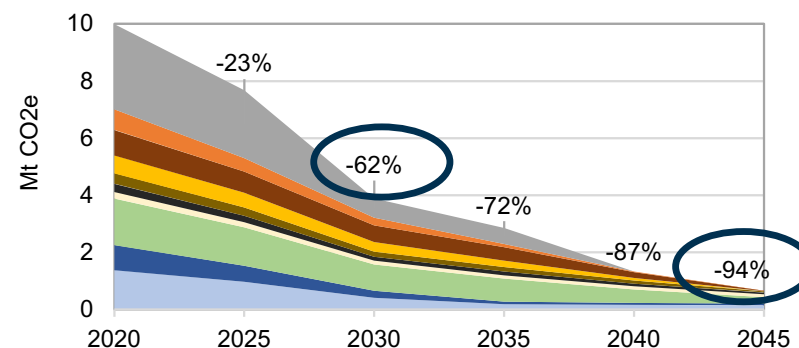
Pathway 2: Electrification



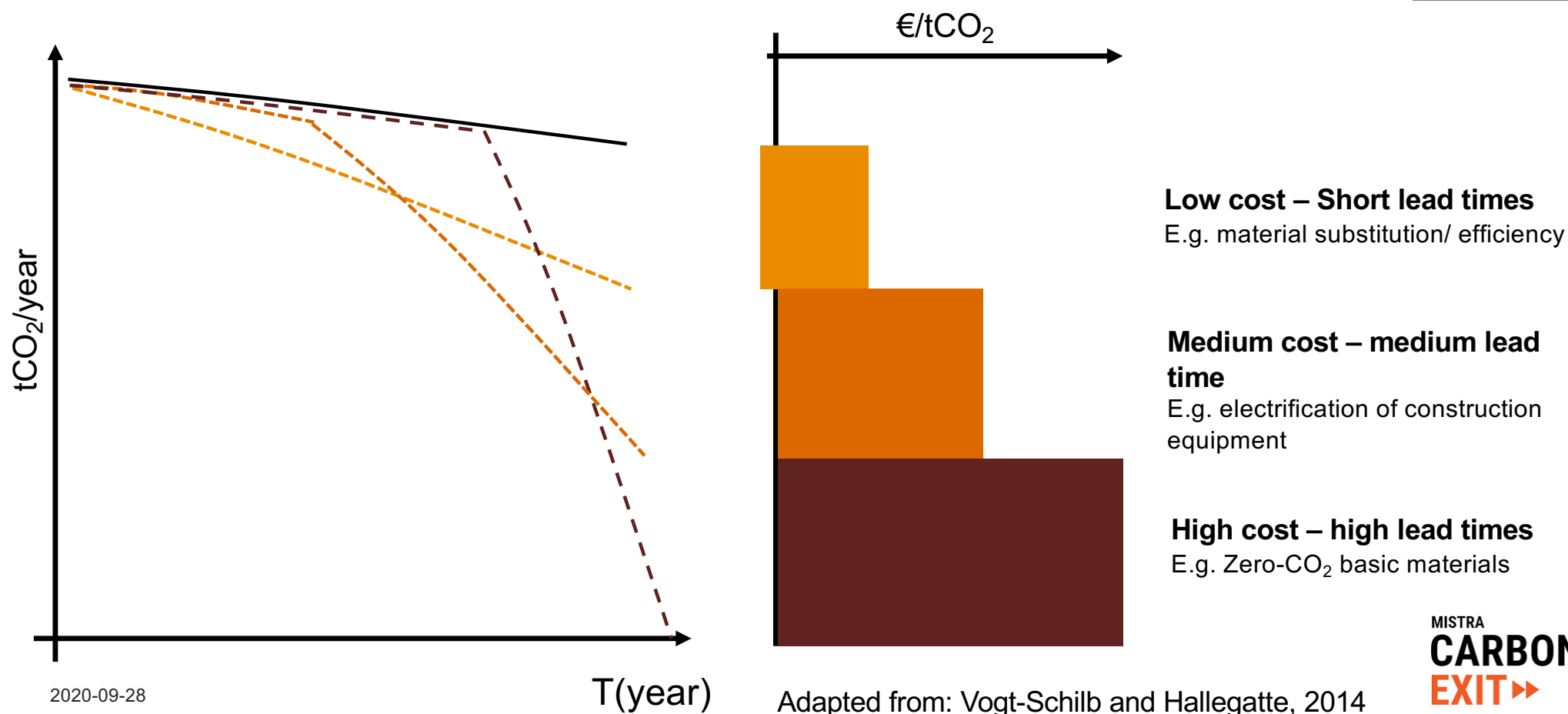
Pathway 3: Biofuels, CCS and material efficiency



Pathway 4: Electrification and material efficiency



# Discussion – Simultaneous action



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# Thank you!

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