



CENTER FOR  
Climate Action



# Net-Zero Challenge: The Supply Chain Opportunity



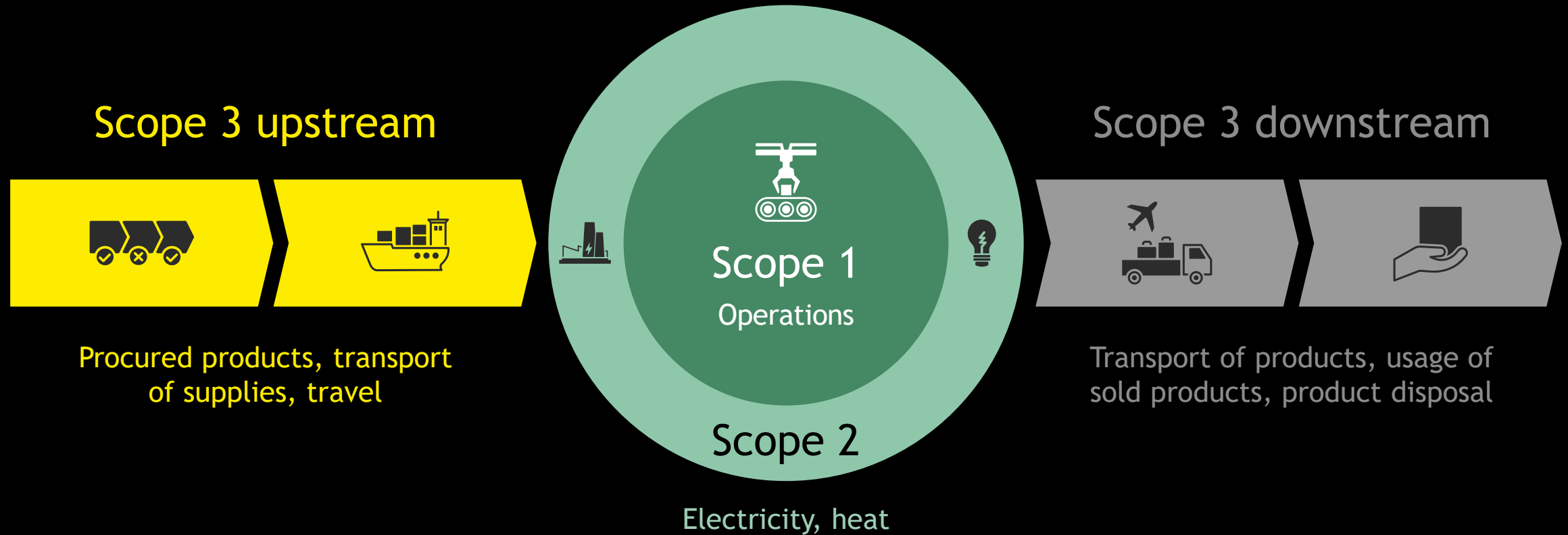
# Post-COVID, the world needs accelerated climate action

Global net CO<sub>2</sub>e emissions and pathways (Gigatons per year)



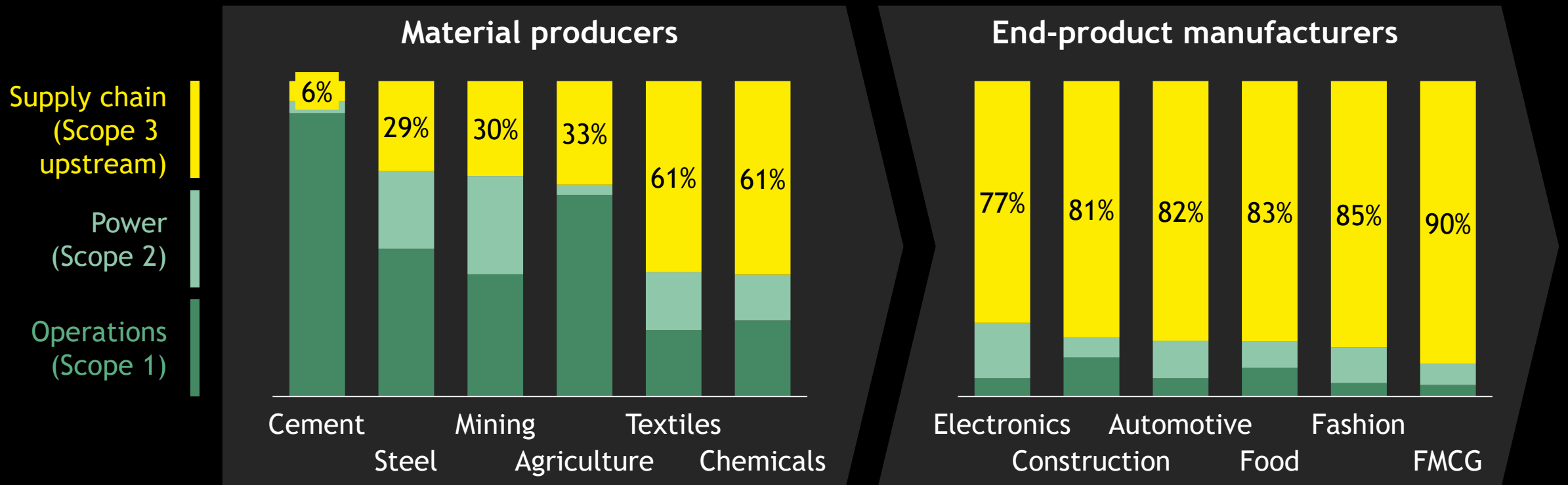
Note: Current pledges assume countries decarbonize further at same annual rate required to achieve NDCs between 2020 and 2030; Newly announced path reflects high-level net-zero ambitions communicated by China, EU, Japan, South Korea, Argentina; 2.0°C path and 1.5°C path based on emission reductions required by respective 2018 average IPCC scenarios  
Source: EEA, EDGAR 5.0, EC, IEA, FAO, PRIMAP-hist v2.1, Global Carbon Project, IPCC, UNEP Emissions Gap Report, WRI, Nature (May 2020), BCG

# Tackling supply chain emissions could provide a solution



# End-product manufacturers can have huge impact

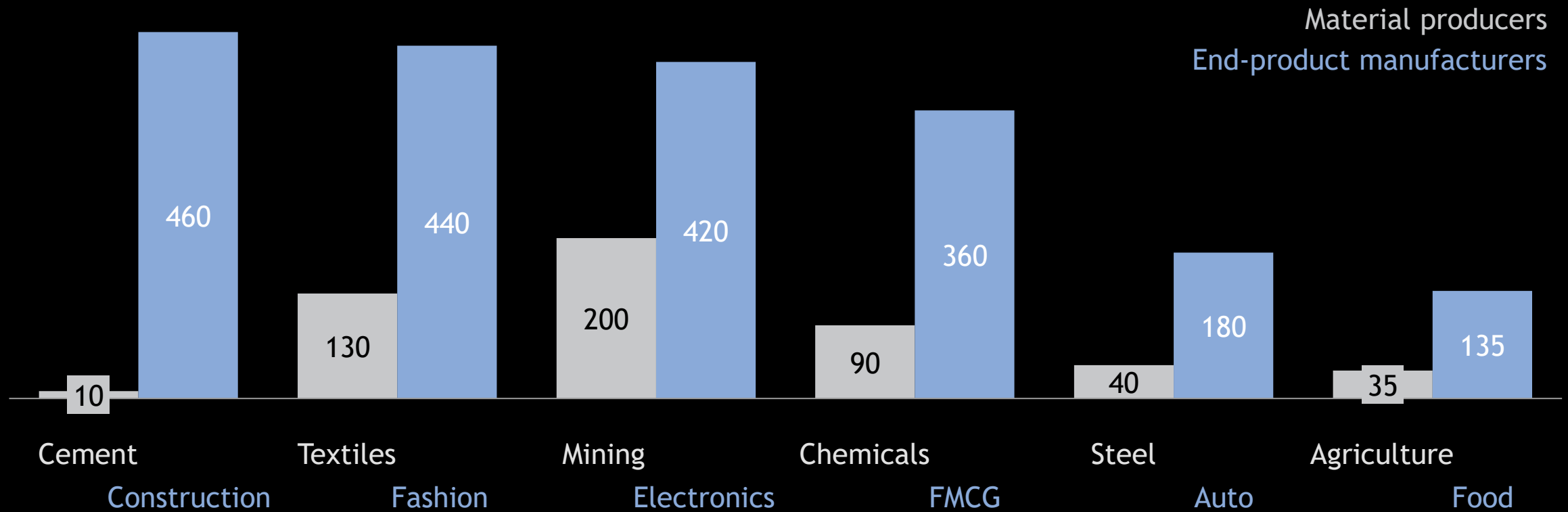
Emissions split (CO<sub>2</sub>e, 2019)



Note: Companies selected based on no. of reported Scope 3 upstream categories; FMCG = Fast-moving consumer goods  
Source: CDP, BCG

# End-product manufacturers can pay more for abatement

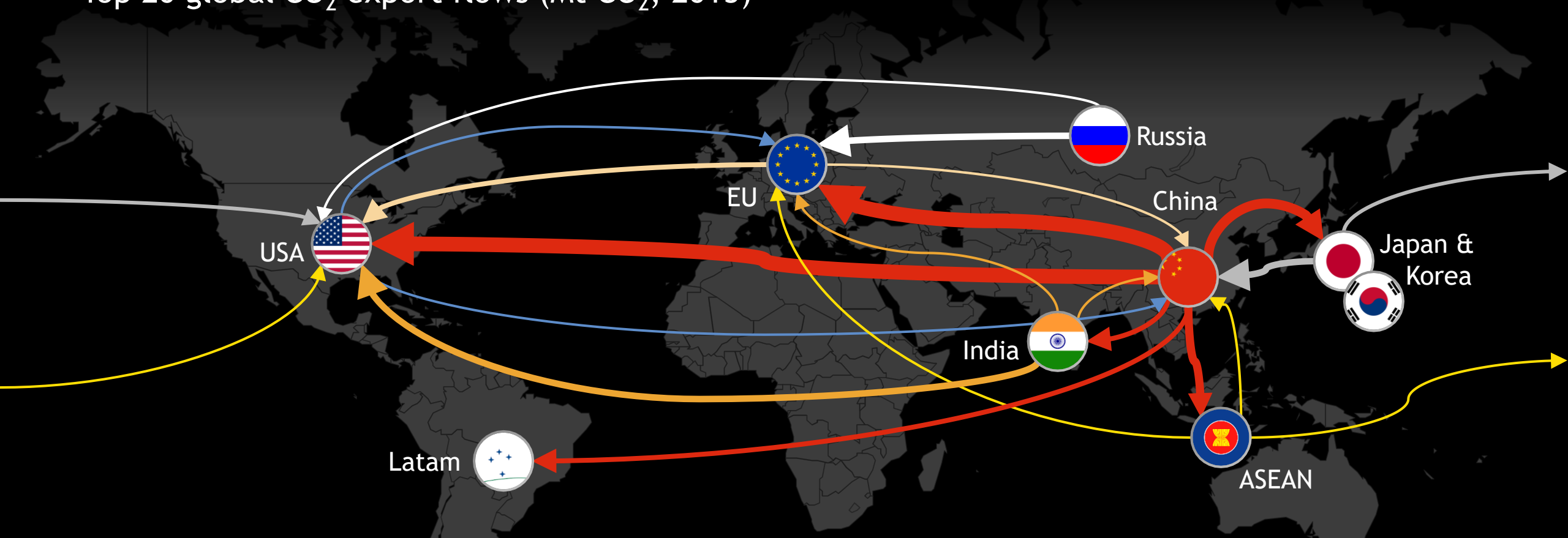
Net income per ton of emissions (€/t CO<sub>2</sub>e Scope 1+2+3 upstream, 2019)



Note: Analysis based on companies selected on number of reported Scope 3 upstream categories and industry fit; FMCG = fast-moving consumer goods  
Source: CDP, BCG

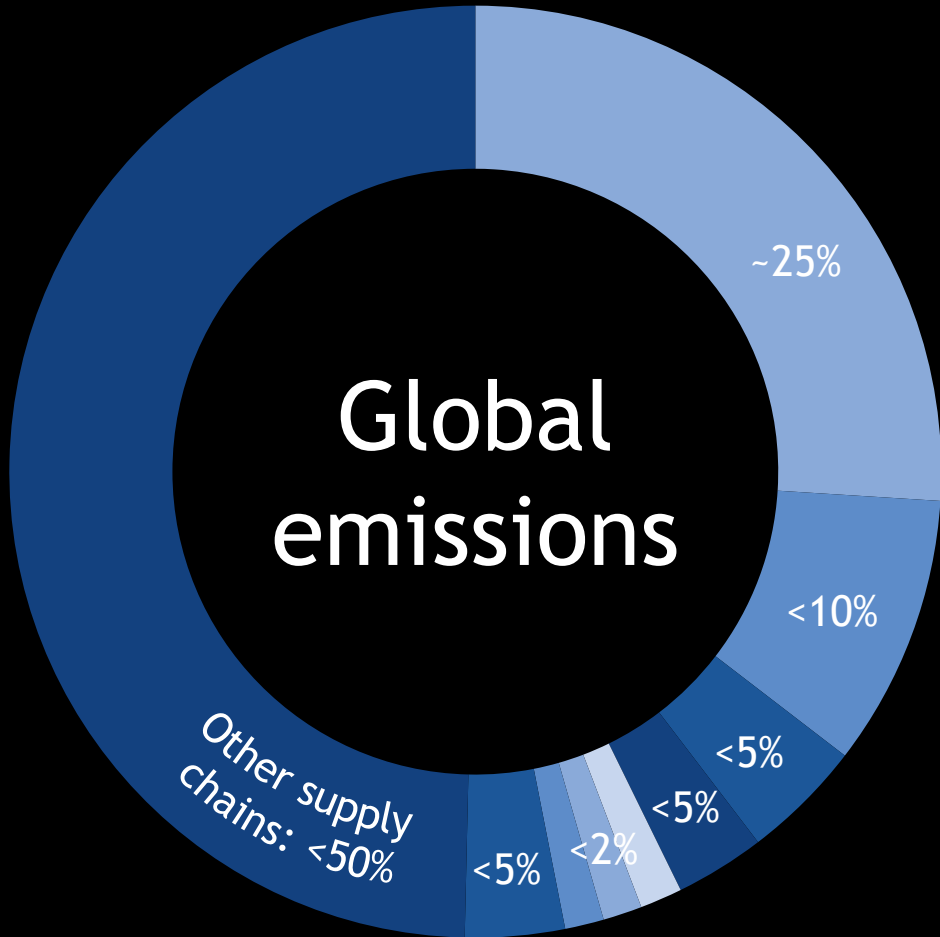
# Supply chain action also addresses 'imported emissions'

Top 20 global CO<sub>2</sub> export flows (Mt CO<sub>2</sub>, 2015)



Note: Excluding mining activities and services  
Source: OECD Trade in Embodied CO<sub>2</sub> Database (TECO2), BCG

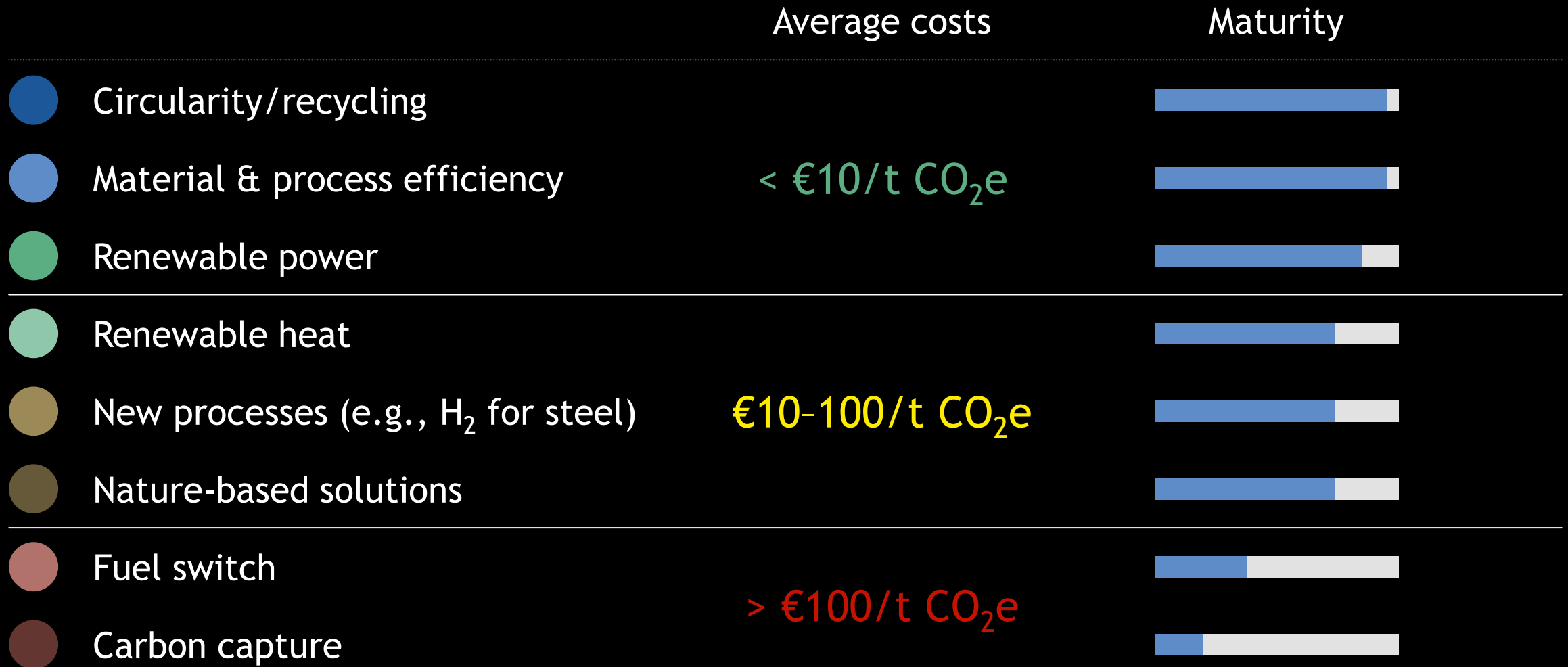
# 8 supply chains are responsible for >50% of global emissions



Food	Agriculture, ...	Freight	Manufacturing	
Construction	Cement, steel, ...	Frt.	Mfg.	
Fashion	Textiles, garments, ...	Frt.	Mfg.	
FMCG	Chemicals, ...	Frt.	Mfg.	
Electronics	Mined metals,...	Frt.	Mfg.	
Auto	Aluminum, batteries,...	Frt.	Mfg.	
Prof. services	Travel	Offices		
Other freight	Heavy road	Shipping	Rail	Aviation

Note: Only selected value chain steps shown here, value chain steps not shown at scale; FMCG = fast-moving consumer goods

# Eight levers to implement across supply chains

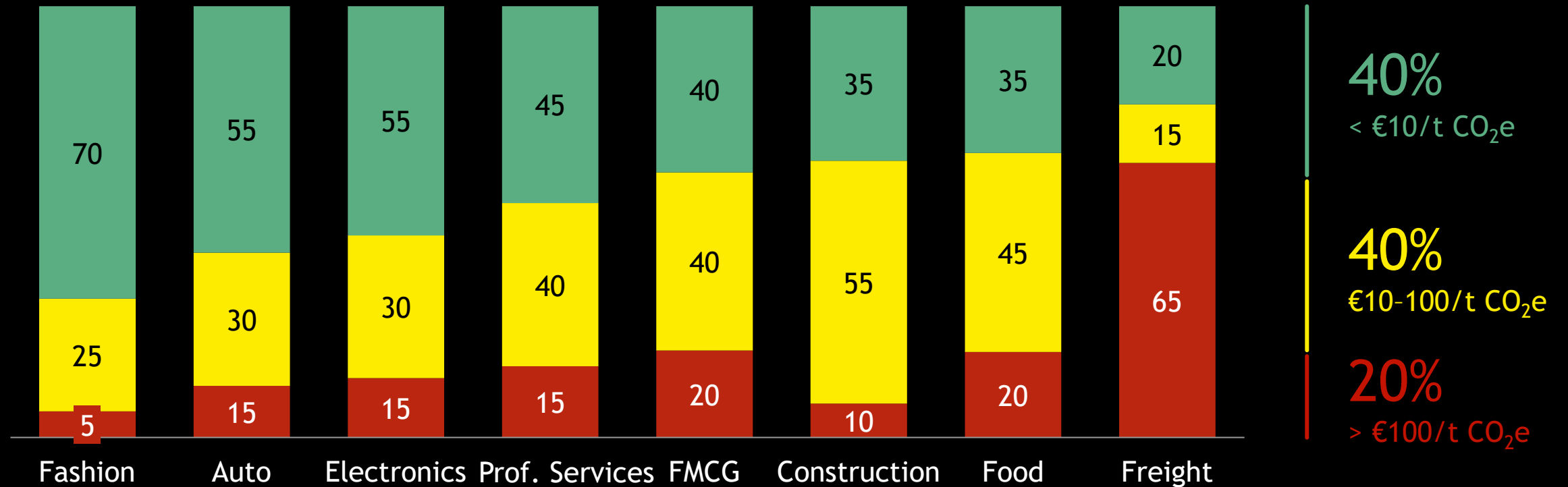


Note: Costs are indicative and refer to average values in 2030



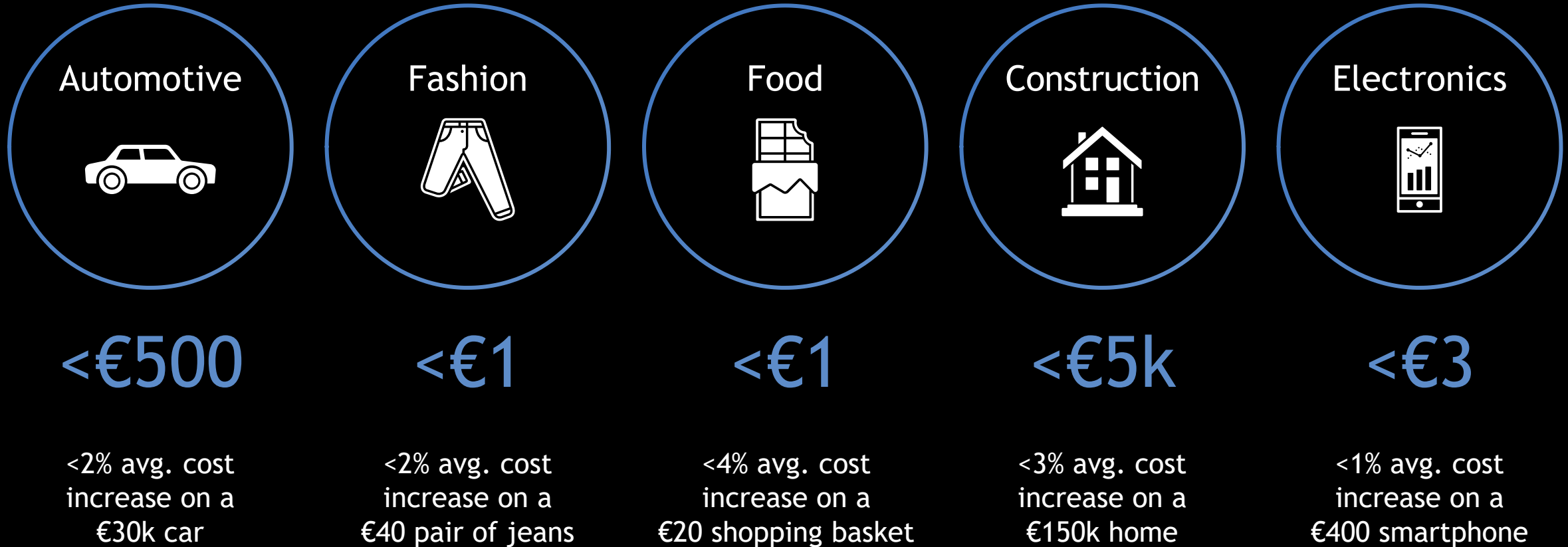
# We can abate ~40% emissions at **very low cost**

Share of abatement lever cost by value chain (%)



Note: Indicative shares for each value chain; FMCG = fast-moving consumer goods; Freight includes aviation, shipping and heavy road transport

# Full decarbonization has low impact on end price



Note: Prices are indicative for each product/ basket

# 9 steps to decarbonize supply chains



# 9 steps to decarbonize supply chains

## CREATE TRANSPARENCY

- 1 Build emissions baseline, share data with suppliers
- 2 Set targets on Scopes 1-3 and report progress

## OPTIMIZE FOR CO<sub>2</sub>

- 3 Re-design products for sustainability
- 4 Design sourcing strategy for sustainability

## ENGAGE SUPPLIERS

- 5 Impose standards and track performance
- 6 Work with suppliers to address their emissions

## PUSH THE ECOSYSTEM

- 7 Join 'buying groups' to scale green demand
- 8 Engage with peers, gov't, investors & customers

## ENABLE YOUR ORGANIZATION

- 9 Introduce a low-carbon governance to align internal incentives and empower your organization

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Carlsberg uses supplier-specific data for an accurate view on emissions

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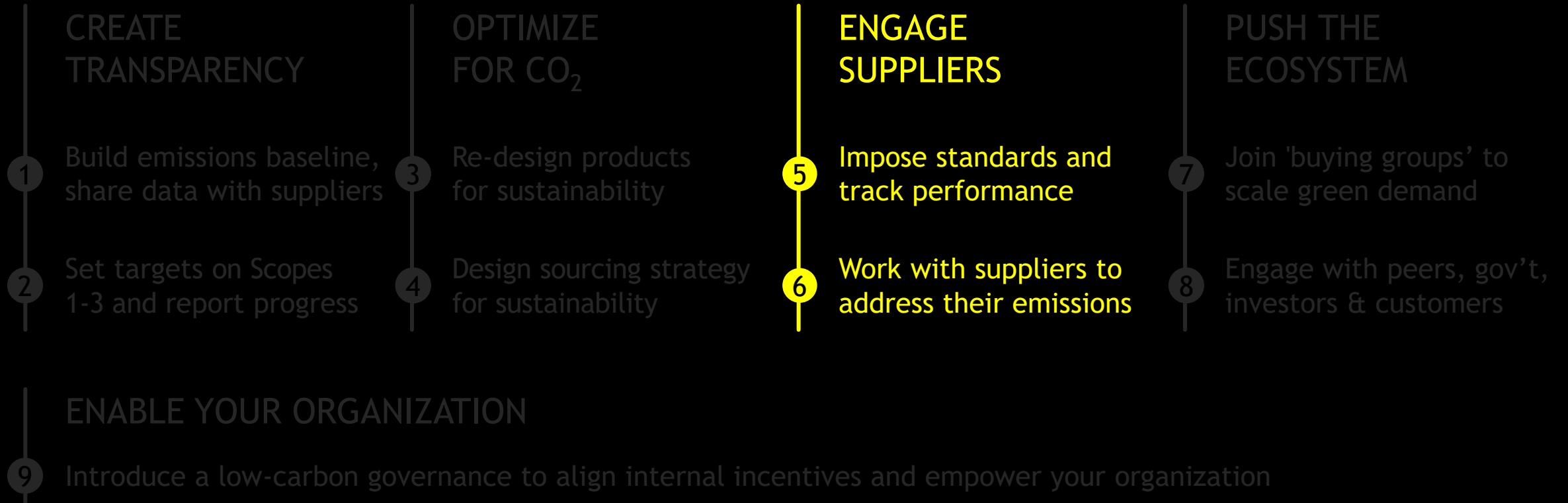
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3  Tesla re-designed cars to save weight and extend battery reach

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DSM pushes for renewable power among suppliers and educates via webinars

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Maersk advocates for ambitious sector-level target at International Maritime Organization (IMO)

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Dell introduced 'Sustainability Champions' to procurement mgrs. to engage on supplier accountability



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# Thank you

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the full report:



[www.weforum.org/reports/  
net-zero-challenge-  
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opportunity](https://www.weforum.org/reports/net-zero-challenge-the-supply-chain-opportunity)

