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INSTITUTE FOR SUSTAINABILITY LEADERSHIP

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Creating markets for climate neutral materials and the role of EU industrial policy

High-level virtual conference
11 May 2021

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Welcome

Eliot Whittington

Director, CLG Europe

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Agenda

10.15 Welcome and Setting the scene: 'Tomorrow's markets today'	**Eliot Whittington**, Director, CLG Europe **Dr. Patrick Graichen**, Executive Director, Agora Energiewende
10.40 Keynote speech	**Elisabeth Winkelmeier-Becker**, Parliamentary State Secretary, Federal Ministry for Economic Affairs and Energy, Germany
10:55 Business reflections	**Peter ter Kulve**, President of Home Care, Health & Wellbeing, Unilever **Magali Anderson**, Chief Sustainability and Innovation Officer, LafargeHolcim **Thomas Ingenlath**, Chief Executive Officer, Polestar (recorded statement)
11:10 High-level discussion	**Elisabeth Winkelmeier-Becker**, Parliamentary State Secretary, Federal Ministry for Economic Affairs and Energy, Germany **Peter ter Kulve**, President of Home Care, Health & Wellbeing, Unilever **Magali Anderson**, Chief Sustainability and Innovation Officer, LafargeHolcim **Dr. Patrick Graichen**, Executive Director, Agora Energiewende

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Agenda

11.30 Opening remarks	**Diederik Samsom**, Head of Cabinet for First Vice-President of the European Commission, Frans Timmermans **Maria Spyraki**, Member of the European Parliament
11.45 Panel discussion	**Lars Völkel**, Executive Vice President, Wood Products Division, Stora Enso **Dr. Oliver Sartor**, Senior Advisor, Agora Energiewende **Peter ter Kulve**, President of Home Care, Health & Wellbeing, Unilever **Magali Anderson**, Chief Sustainability and Innovation Officer, LafargeHolcim **Diederik Samsom**, Head of Cabinet for First Vice-President of the European Commission, Frans Timmermans **Maria Spyraki**, Member of the European Parliament Chaired by **Dr. Martin Porter**, Executive Chair in Brussels for CISL
12.05 Final thoughts	**Claire O'Neill**, Managing Director Climate and Energy, WBCSD
12:10 Closing remarks	**Eliot Whittington**, Director, CLG Europe

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Presentation of the report

Tomorrow's markets today: Scaling up demand for climate neutral basic materials and products

Dr. Patrick Graichen

Executive Director, Agora Energiewende

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Tomorrow's markets today: Scaling up demand for climate neutral basic materials and products

Report Launch Event 11/05/2021

Dr. Patrick Graichen, Executive Director,
Agora Energiewende

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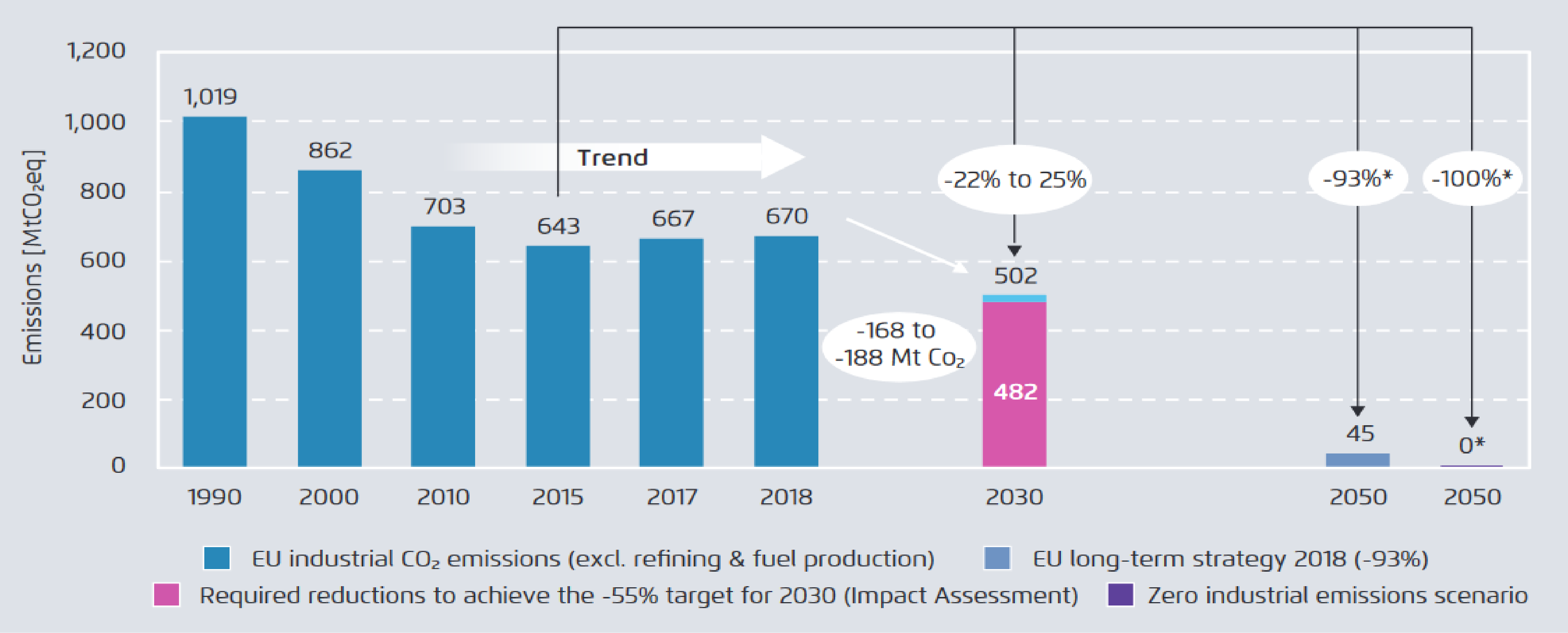
1. Project Context

At 16% of annual CO_2 emissions, industry is an urgent priority for the EU climate policy



Agora Energiewende, 2021, based on data from Eurostat, 2017, European Commission, 2020b & EEA, 2021

The European Council has called for the Commission to…

"***propose measures*** *that enable energy-intensive industries to* ***develop and deploy*** *new climate neutral technologies while* ***maintaining*** *their* ***industrial competitiveness****.*"

- European Council Conclusions, 10-11 December 2020

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2. Project Aims and Scope

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Industry transition must address the full value chain – but *market demand* for climate neutral, material efficient & circular solutions is a crucial, still missing, policy component

Upstream

→ Availability of clean energy, CO_2 infrastructure & clean feed-stocks

Midstream

→ Competitiveness of climate neutral process technologies and energy inputs

Downstream

→ **Market demand** for climate neutral materials, material-efficiency and circular materials

Enhanced recycling and re-use of materials

Industry transition must address the full value chain – but *market demand* for climate neutral, material efficient & circular solutions is a crucial, still missing, policy component

Upstream

→ Availability of clean energy,

H2 Strategy,
Renewable Energy Directive 3.0

Midstream

→ Competitiveness of climate

Carbon Contracts for Difference, ETS reform, Carbon leakage protection

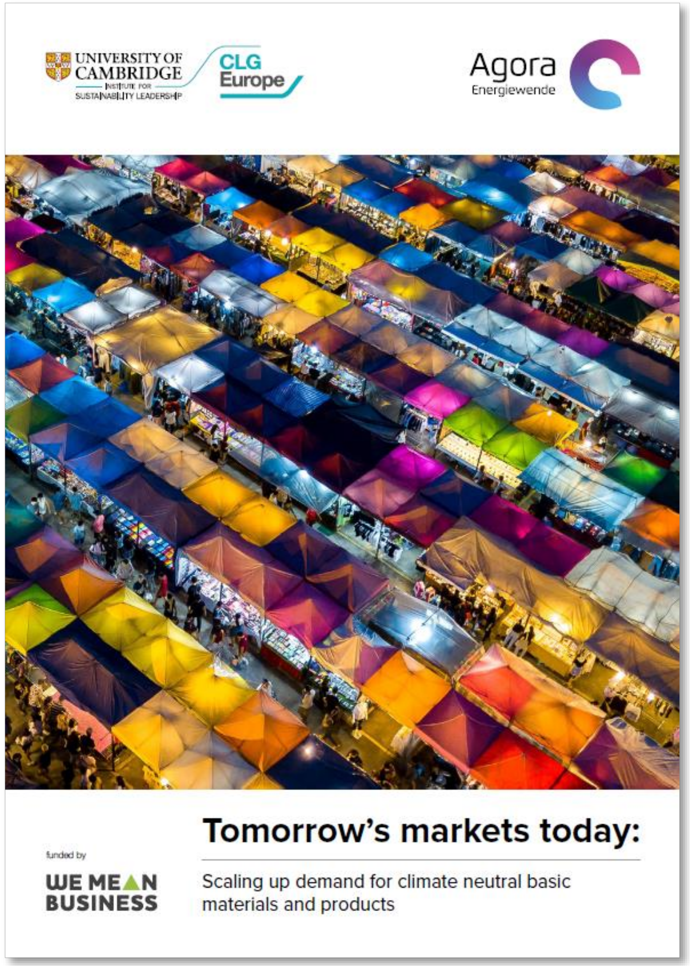
Downstream

→ **Market demand** for climate

??

Enhanced recycling and re-use of materials

Circular Economy Action Plan 2.0



Aims of the study:

→ Explore role of "demand-side policies" in the transition to climate neutral industry

→ Understand needs of progressive European industrial companies

→ Identify specific options for policy makers under EU Green Deal

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3. Business leadership, barriers faced and the role of EU policy

Basic material and final product producers are looking to develop climate neutral solutions and supply chains

- Examples:

HYBRIT
FOSSIL-FREE STEEL

Carbon2Chem®

Tree to Textile

tkH2Steel

weWood' Community

ECOPact
The Green Concrete

Unilever
The Carbon Rainbow

COCA-COLA SETS AMBITIOUS NEW SUSTAINABLE PACKAGING GOALS FOR WESTERN EUROPE

Volvo Cars aims for 25% recycled plastics in cars from 2025

However, despite impressive voluntary efforts, companies report barriers to scaling up and aiming for CO2 neutrality

1. **Missing business case to scale up climate neutral technologies**
   - Suppliers need a broader willingness-to-pay from downstream to scale up deployment
2. **Non-cost barriers to purchasing climate neutral materials, e.g.**
   - A lack of comparable data from suppliers on embedded CO_2
   - Conservatism and risk aversion towards new materials (e.g. construction sector)
   - Outdated product regulations limiting market entry (e.g. concrete standards)
3. **Missing incentives to unlock a full set of decarbonisation levers along the value chain, e.g.**
   - Material efficient design and manufacture
   - Increased material circularity
   - Use of innovative materials
   - Etc

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   - Outdated prod… …e standards)
3. **Missing incentives … …ng the value chain, e.g.**
   - Material efficie…
   - Increased mate…
   - Use of innovative materials
   - Etc

Important:

A higher carbon price does not address many of these barriers.

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4. Policy priorities and options

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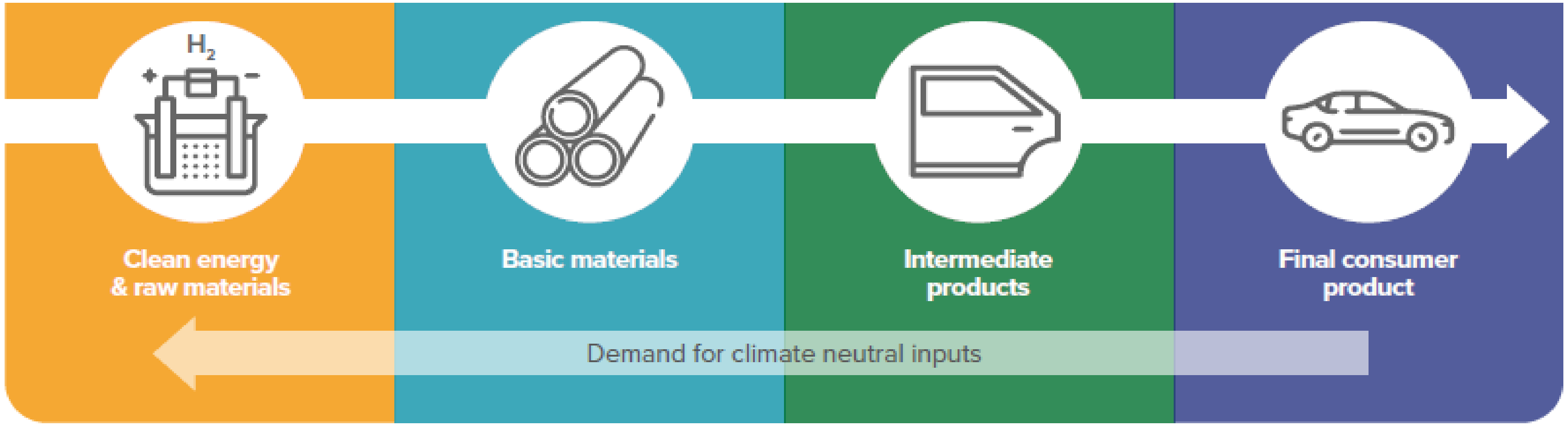
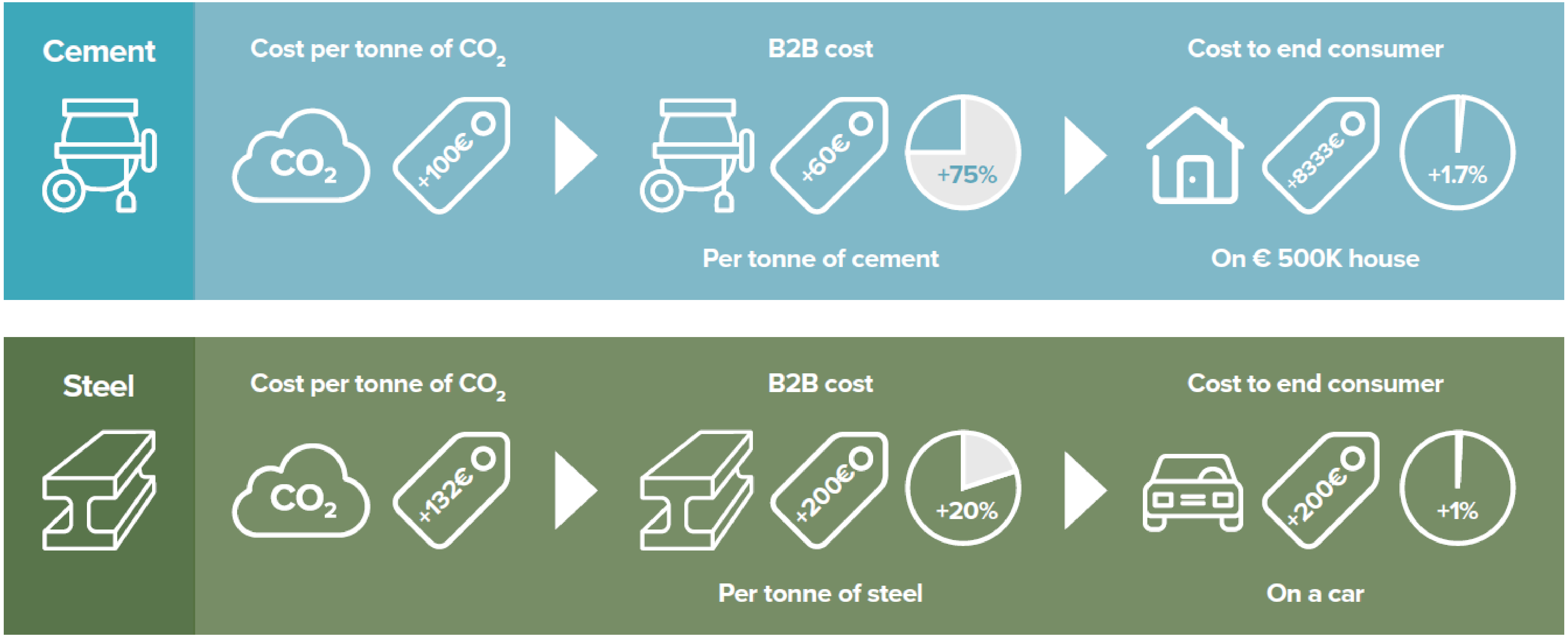
Three policy priorities to address three key barriers…

→ *Priority 1.* Put limits on embedded life cycle emissions in material-intensive final products and reduce over time..

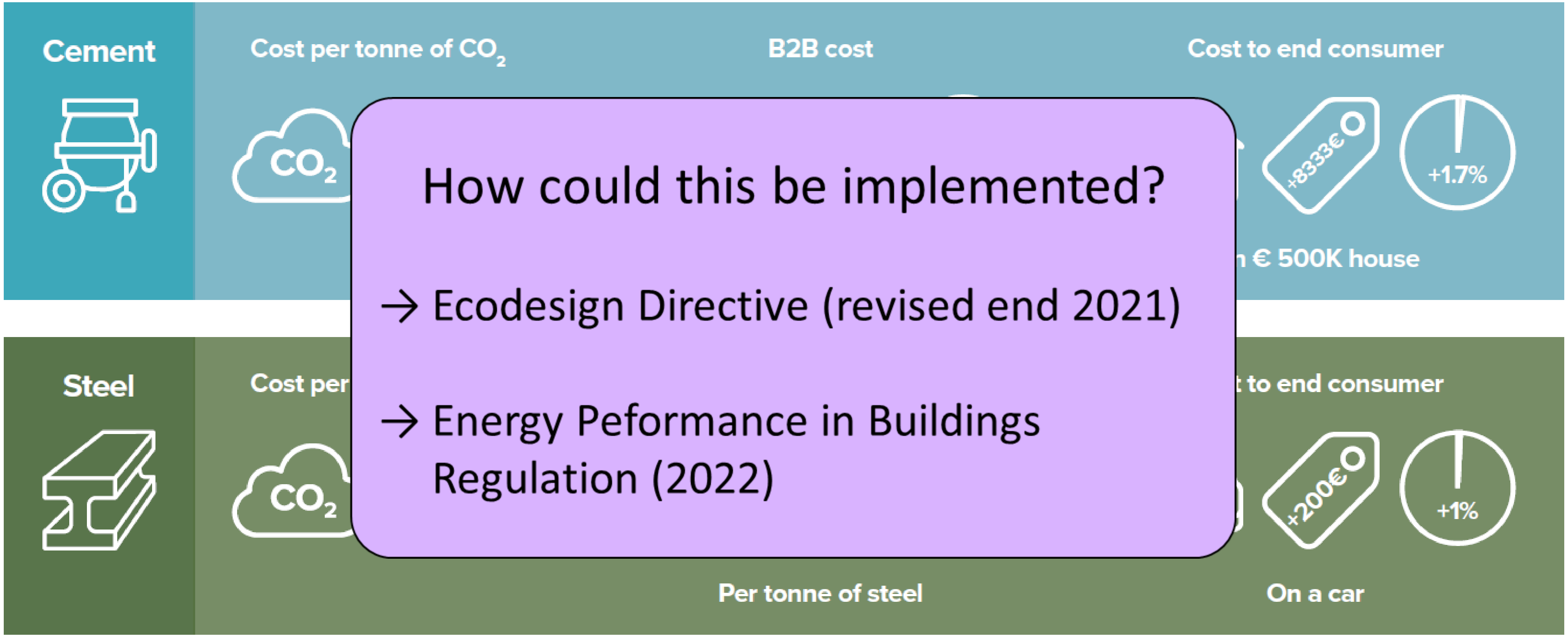


→ Justification: unlocks demand for full set of decarbonization options (material efficient design, circular and low-CO2 virgin materials) without distortions of intermediate product markets.

Priority 1 (cont.) Cost of climate-neutral materials would be a small fraction of final product prices for consumers, but pays upstream green premium



Priority 1 (cont.) Cost of climate-neutral materials would be a small fraction of final product prices for consumers, but pays upstream green premium



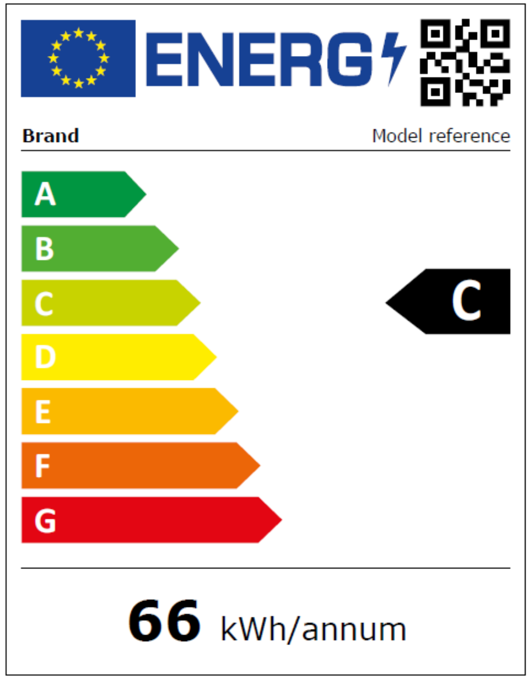
How could this be implemented?

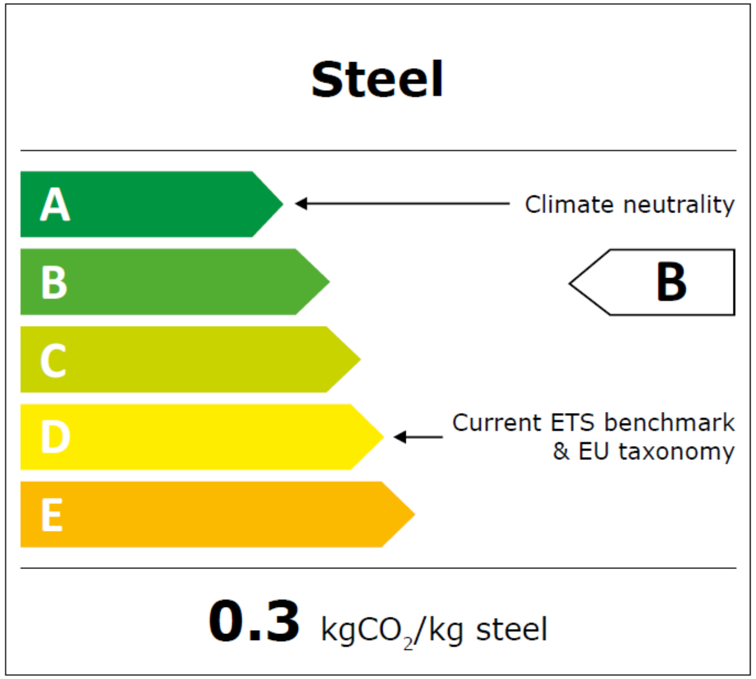
→ Ecodesign Directive (revised end 2021)

→ Energy Peformance in Buildings Regulation (2022)

Priority 2. Require reporting of embedded carbon data for key value chains and create standardised CO2-rating labels for basic materials

Figure 10: Copying the Energy Performance Rating Labels model (left) to make 'material CO_2 performance rating labels'



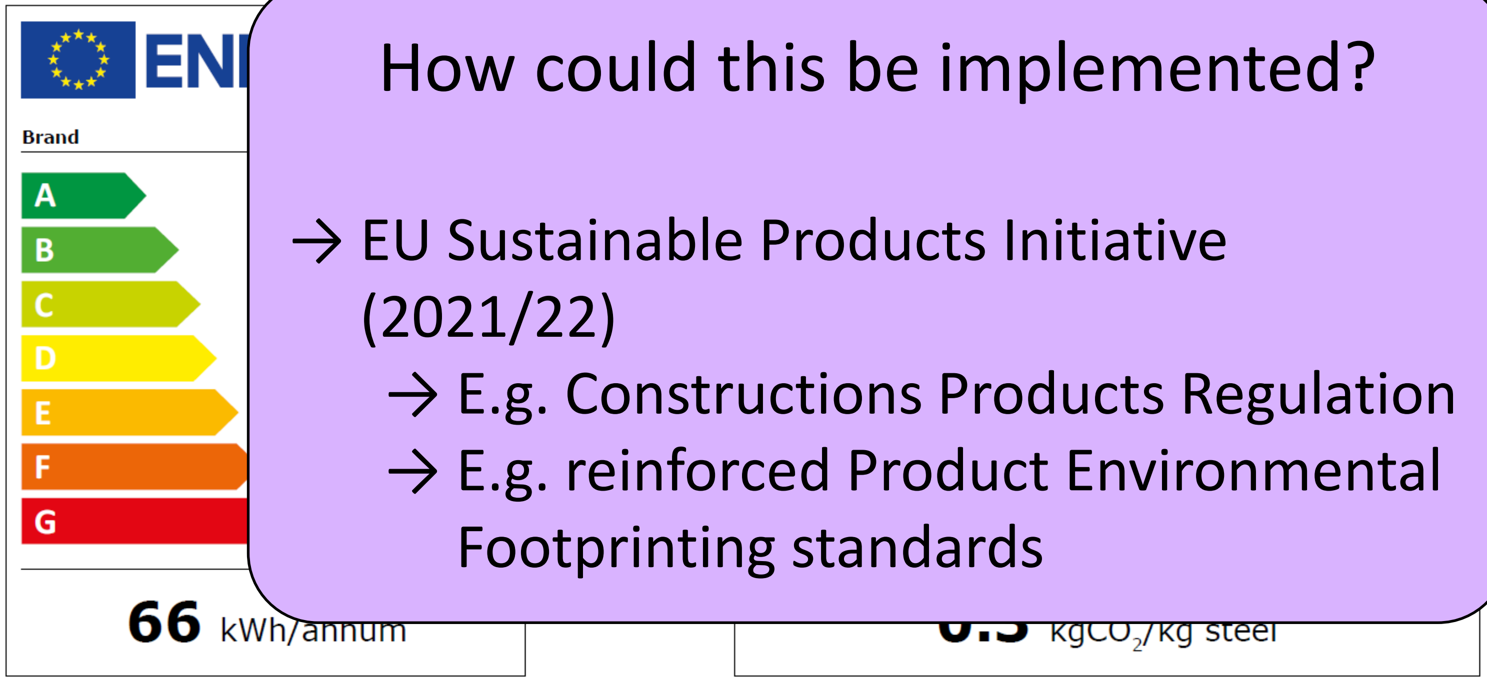


Source: European Commission[39] (left), authors' own example (right)

- Justification: For limits on embedded carbon to work, downstream purchasers must have transparent and comparable data

Priority 2. Require reporting of embedded carbon data for key value chains and create standardised CO2-rating labels for basic materials

Figure 10: Copying the Energy Performance Rating Labels model (left) to make 'material CO_2 performance rating labels'



Source: European Commission[39] (left), authors' own example (right)

How could this be implemented?

→ EU Sustainable Products Initiative (2021/22)
  → E.g. Constructions Products Regulation
  → E.g. reinforced Product Environmental Footprinting standards

- Justification: For limits on embedded carbon to work, downstream purchasers must have transparent and comparable data

Priority 3. Targeted policies to overcome specific barriers to market entry for innovative or circular solutions

- Justification: Effective competition between climate neutral and circular materials requires a portfolio of solutions.
- In some cases, targeted supply or demand side policies needed to overcome these barriers.
- Solutions can include Carbon Contracts for Difference, public procurement requirements or circular material quotas.
- Must be targeted, time-limited to avoid long-term distortions

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Priority 3. Targeted policies to overcome specific barriers to market entry for inno

- Justification: E circular materials requires a por
- In some cases o overcome these barriers
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- Must be targe

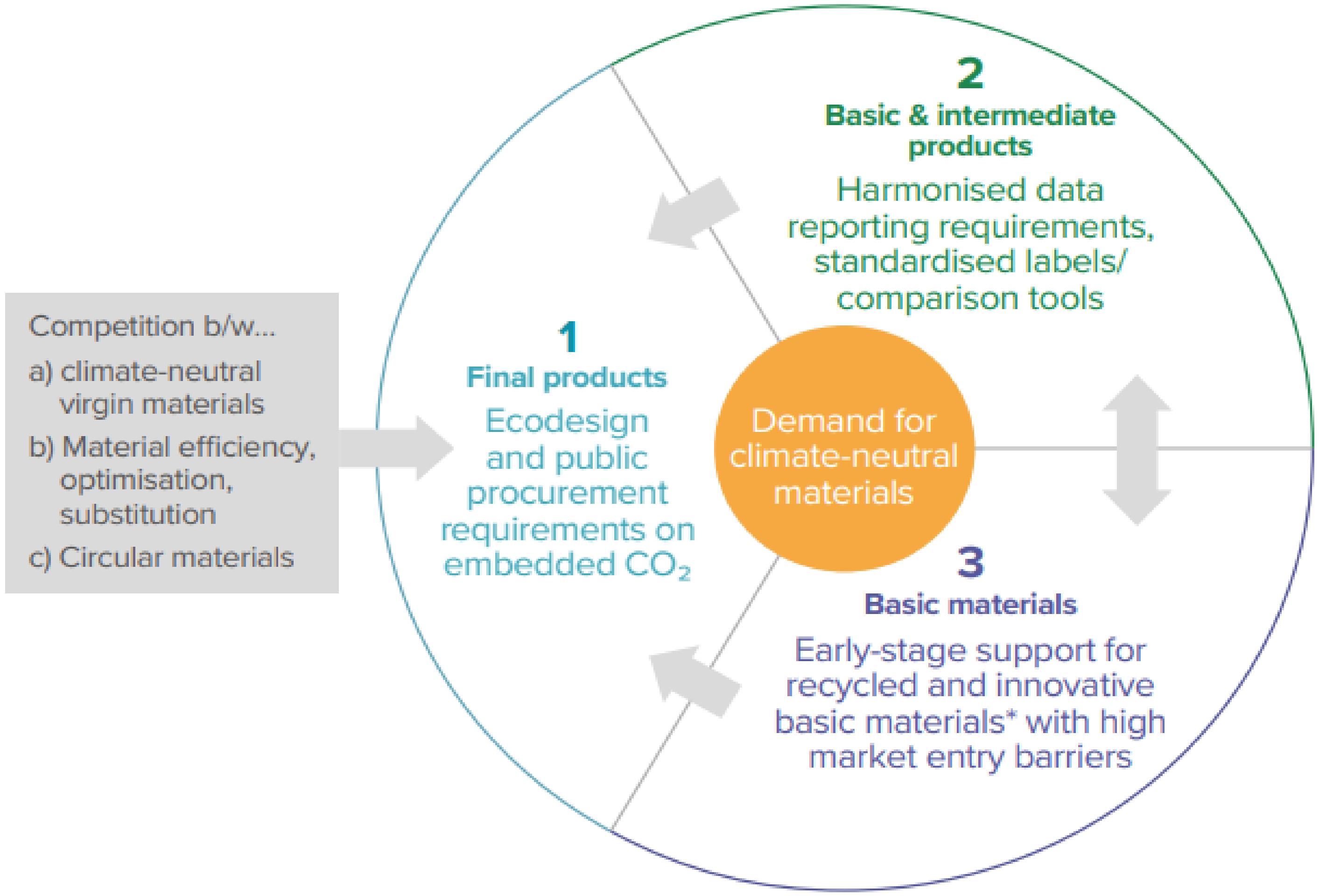
How could this be implemented?

→ CCfDs (reformed ETS Innovation Fund)

→ Recycled material quotas under waste legislation (Circular Economy Action Plan) (2021-23)

→ Public Procurement Requirements via relevant sectoral legislation.

Summary: three mutually reinforcing policy interventions



Source: Agora-Energiewende, CLG Europe & WBCSD (2021)

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4. A comment on the updated EU industrial strategy

The updated EU industrial strategy

- → The updated Strategy identifies a need for demand side policies to make a business case for scaling investment in climate neutral materials production.

- → However, the Strategy does not point to any concrete legislative measures to do so. It mentions supply side policies like EU-level CCfDs, etc. Good, but not sufficient…

- → The accompanying Steel Sector Analysis suggests that the Ecodesign and Construction Products Regulation could be revised to include embedded carbon standards for steel.

  - → But it is not clear if *regulatory limits* on embedded CO_2 emissions are intended, or simply reporting standards (i.e. better data). **We will need both.**

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Thank you for your attention

Dr. Patrick Graichen

Executive Director, Agora Energiewende

11/05/2021

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Keynote speech

Elisabeth Winkelmeier-Becker

Parliamentary State Secretary, Federal Ministry for Economic Affairs and Energy, Germany

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Business reflections

Peter ter Kulve

President of Home Care, Health & Wellbeing, Unilever

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Business reflections

Magali Anderson

Chief Sustainability and Innovation Officer, LafargeHolcim

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Business reflections

Thomas Ingenlath

Chief Executive Officer, Polestar

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High-level discussion

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Executive Director, Agora Energiewende

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Further reflections

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Opening the section 'Further reflections'

Dr. Martin Porter

Senior Strategic Adviser to CLG Europe and Executive Chair in Brussels for CISL

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Opening remarks

Diederik Samson

Head of Cabinet for First Vice-President of the European Commission, Frans Timmermans

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Opening remarks

Maria Spyraki

Member of the European Parliament

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Panel discussion

Lars Völkel

Executive Vice President, Wood Products Division, Stora Enso

Dr. Oliver Sartor

Senior Advisor, Agora Energiewende

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Panel discussion

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Final thoughts

Claire O'Neill

Managing Director, Climate & Energy, WBCSD

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Closing remarks

Eliot Whittington

Director, CLG Europe

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Thank you.