

Berlin Seminar on Energy and Climate Policy (BSEC)

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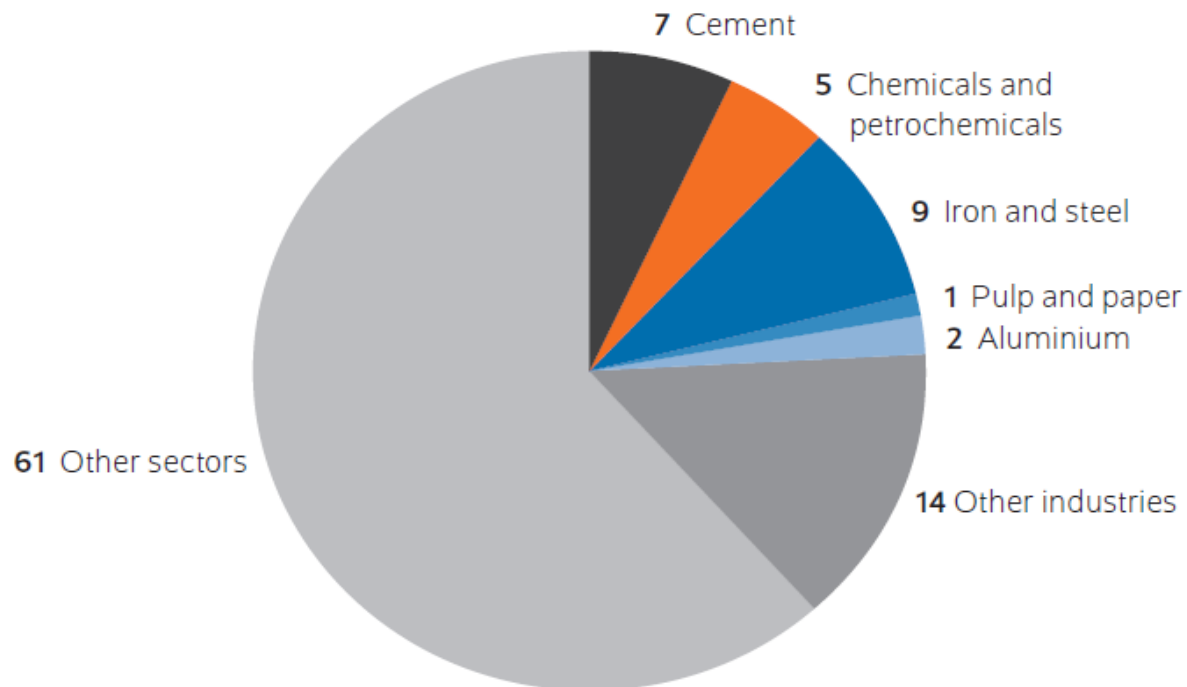
# Policies that create markets for a climate-friendly basic materials sector

Olga Chiappinelli, DIW Berlin  
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# 1

Basic materials = 25% of global CO2 emissions

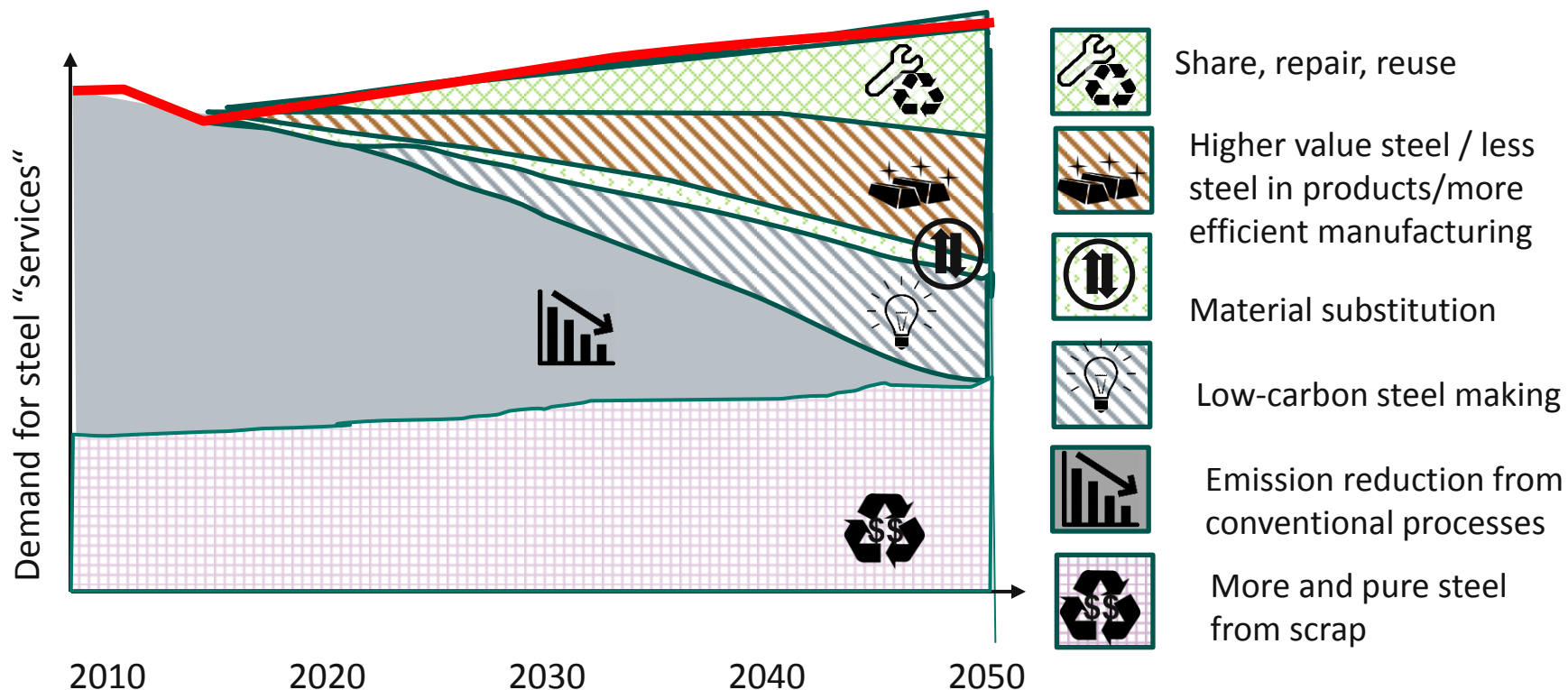
## Percentage contribution of various basic materials in global CO2 emissions (2014)



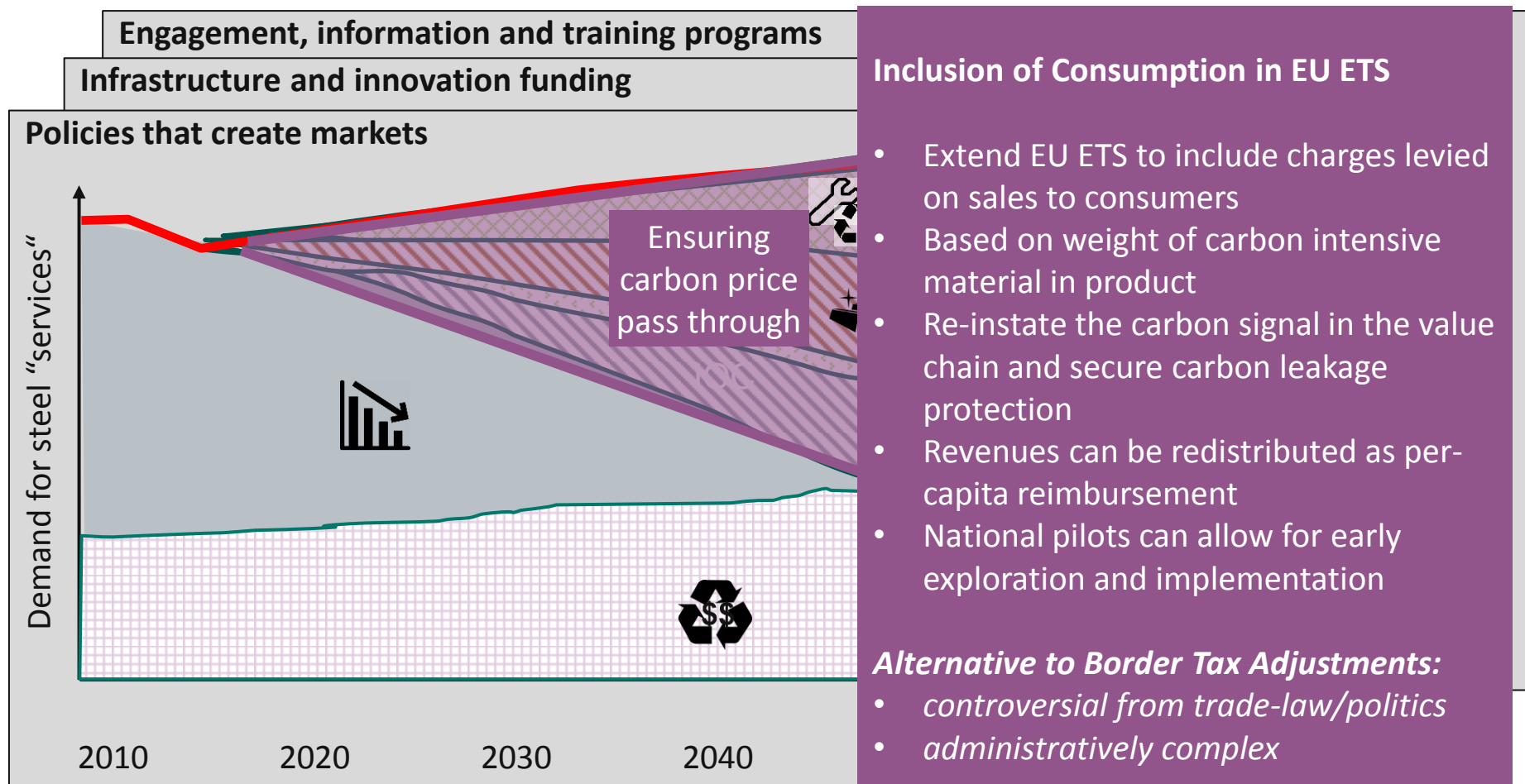
Source: DIW calculations based on IEA ETP 2017

Climate neutrality by 2050 can only be achieved with the materials sector.

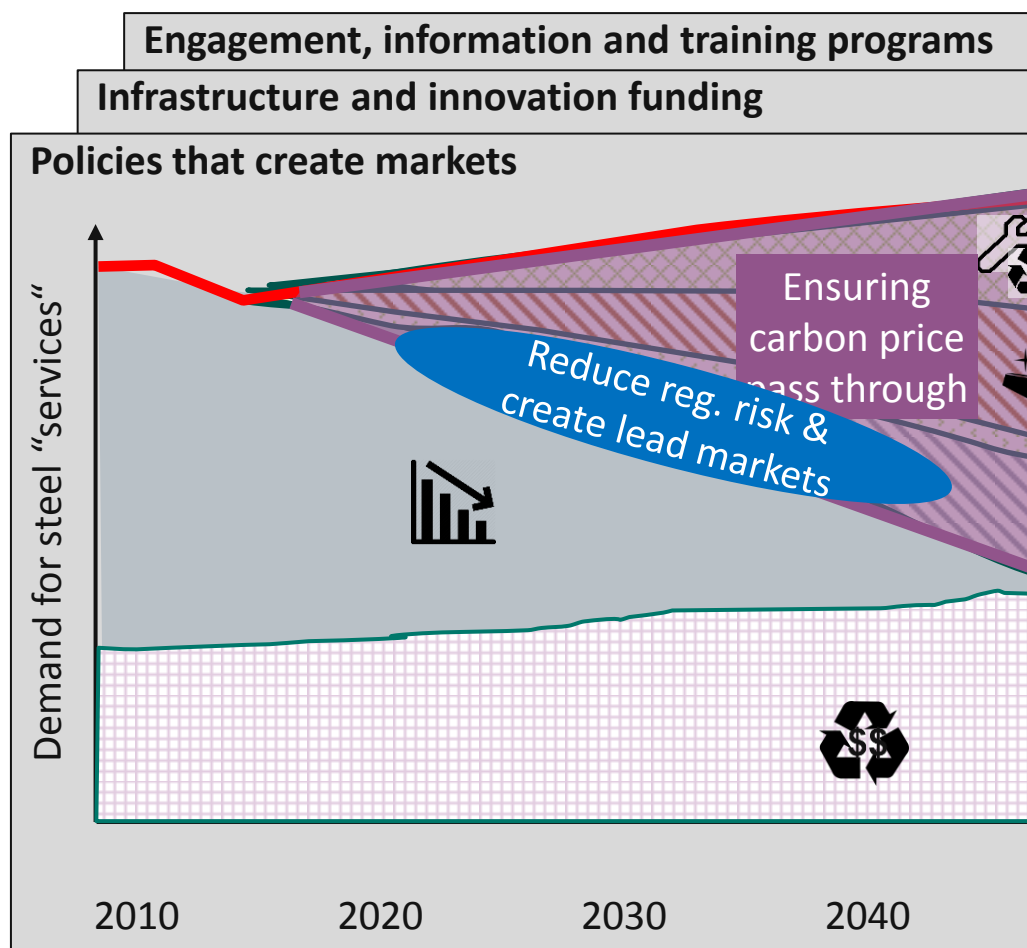
## Illustration for European steel sector (no numerical simulation)



Source: DIW's illustration. See [Neuhoff et al. \(2018\)](#) "Filling gaps in the policy package to decarbonize production and use of materials"



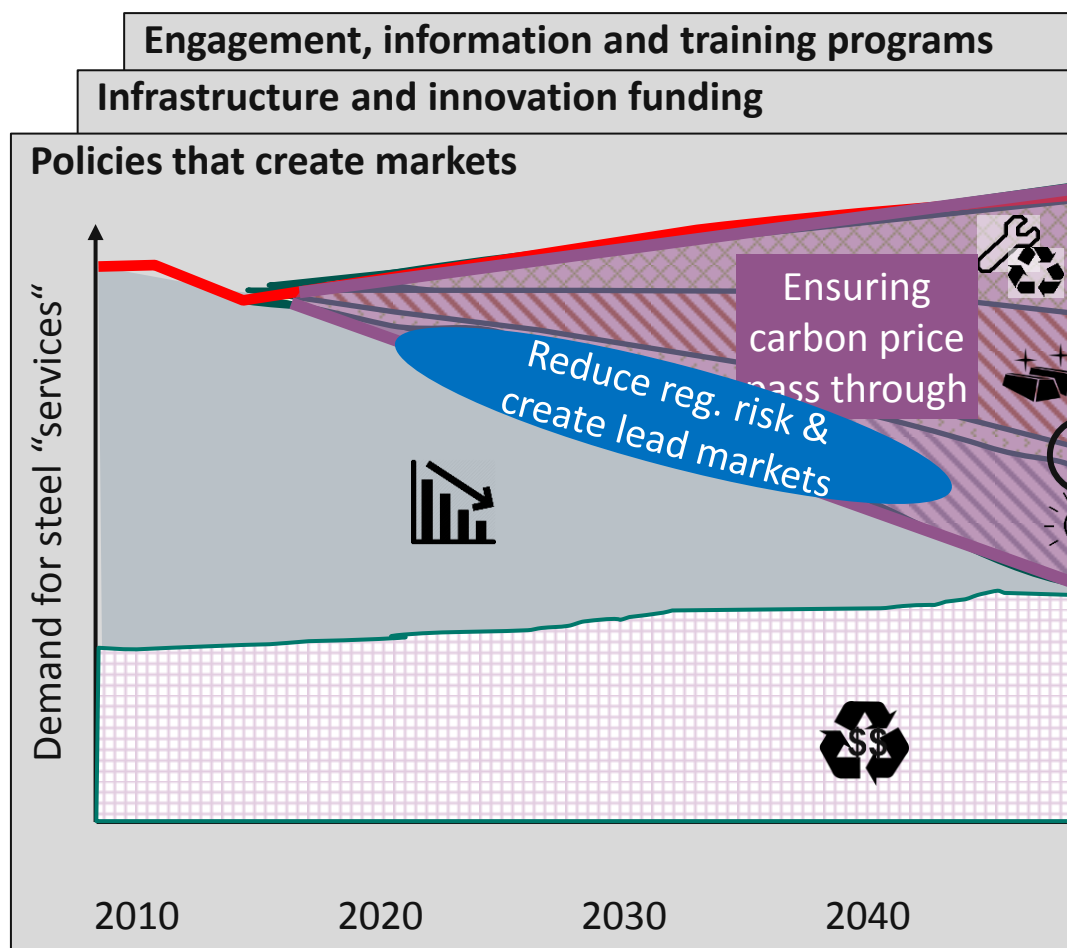
Source: Neuhoff et al. (2018) "Filling gaps in the policy package to decarbonize production and use of materials"



### Project-based Carbon Contracts for Differences (CCfDs)

- Contracts between a national government and a company developing an innovative low-carbon project
- Pay out the difference between EUAs price and agreed "strike" price
- Stabilize revenue streams and reduce financing cost of low-carbon projects
- Help cover the incremental cost of low-carbon innovation, so that commercialization becomes viable
- Allows government create lead-markets for low-carbon processes and materials
- Address regulatory risk

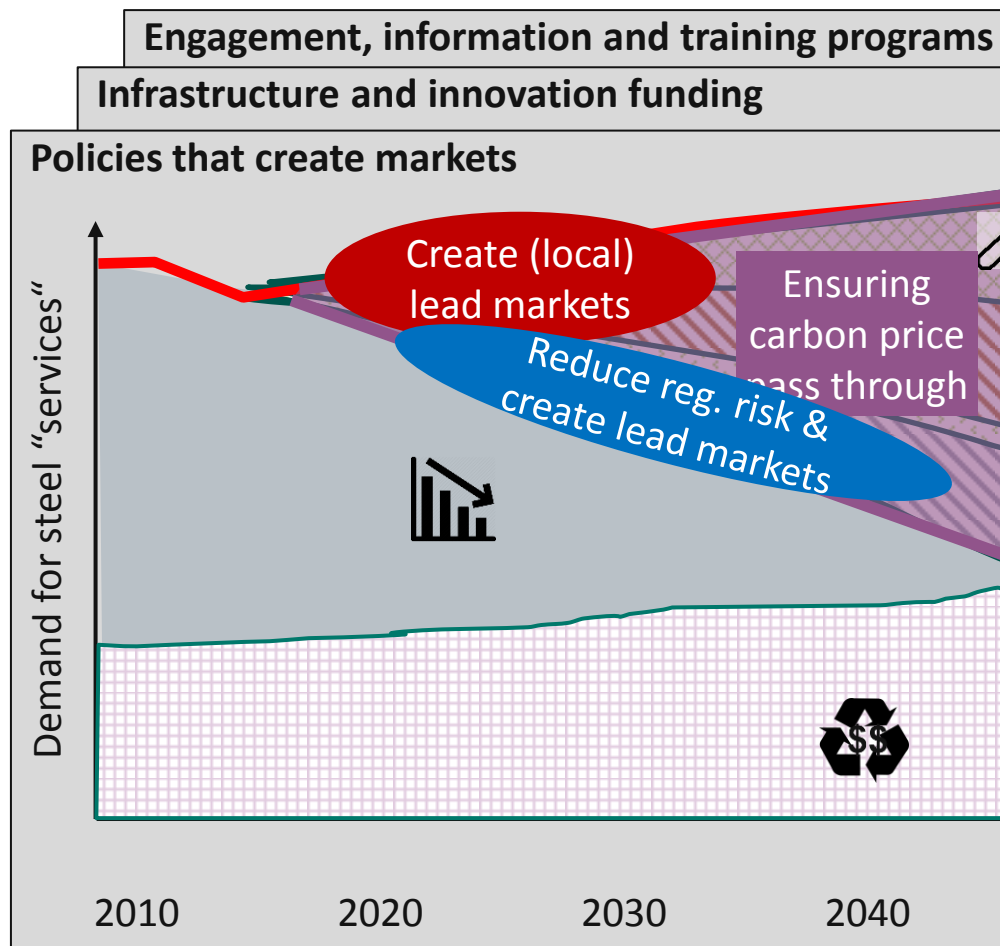
Source: [Neuhoff et al. \(2018\)](#) "Filling gaps in the policy package to decarbonize production and use of materials"



### Publicly guaranteed Contracts for Differences for Renewables (CfDs)

- Pay out the difference between wholesale electricity price and agreed strike price
- Hedge renewable energy investors against electricity price volatility, lowering financing costs
- Can provide cost-competitive supply of large volumes of low-carbon electricity

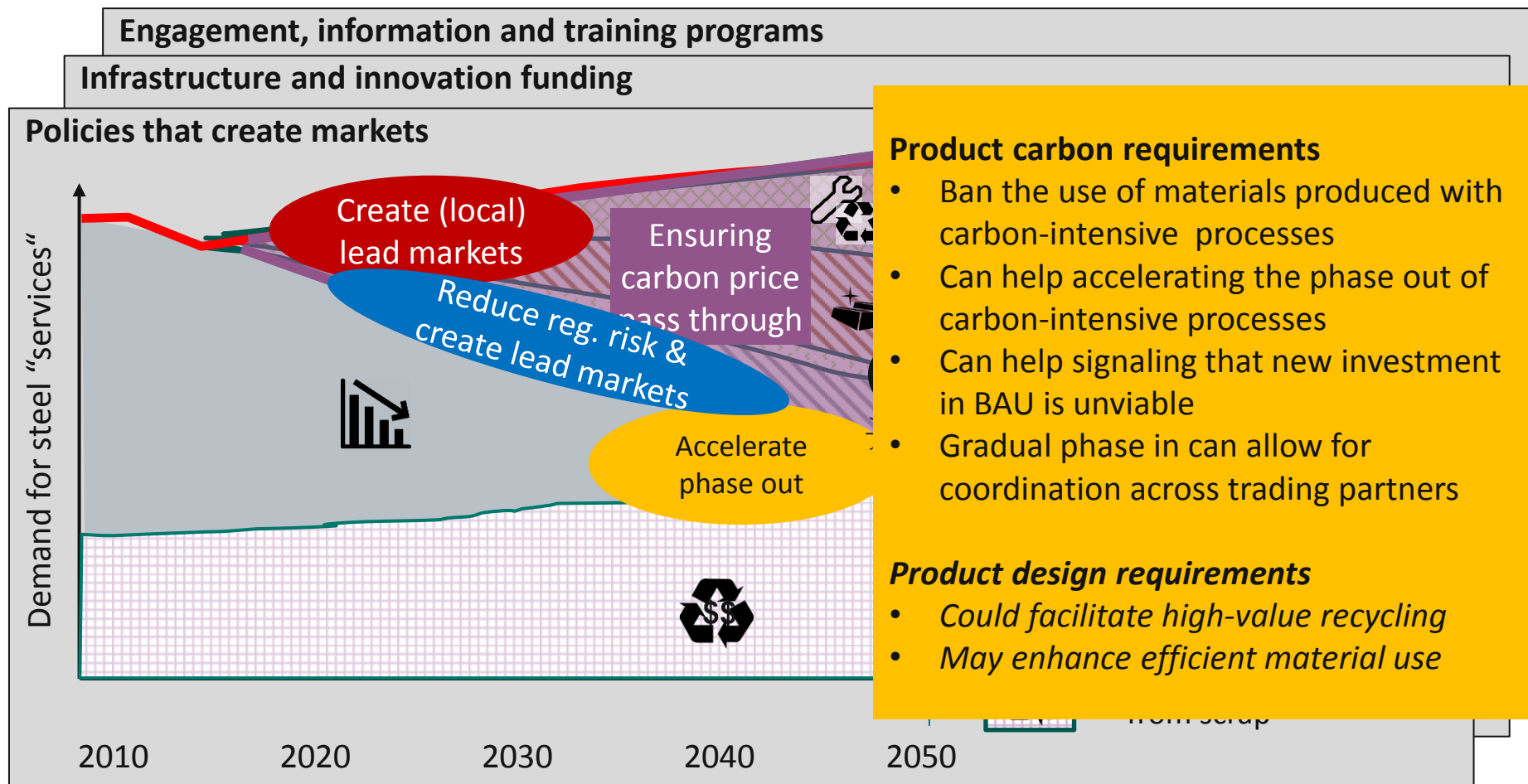
Source: [Neuhoff et al. \(2018\)](#) "Filling gaps in the policy package to decarbonize production and use of materials"



### Green Public Procurement

- Accounts for the environmental quality in the award of public contracts
- Includes shadow carbon price (> ETS), functional carbon or technical requirements
- National/local authorities can create lead markets for climate-friendly product design, material choice and usage patterns
- Allows governments to respond to local initiatives and national and European emission reduction targets
- Local authorities need to receive financial support for incremental cost and capacity building

Source: Neuhoff et al. (2018) "Filling gaps in the policy package to decarbonize production and use of materials"



Source: Neuhoff et al. (2018) "Filling gaps in the policy package to decarbonize production and use of materials"



- A set of policy instruments can jointly create markets for climate-neutral production and use of materials
  - Complement push with pull policies
  - Targeted on different actors and support different mitigation options
  - Provide financial hedging and regulatory commitment
  - Some instruments can provide resources for instruments that need them
- Public and private governance frameworks needed to translate long-term decarbonization objectives in tangible implementation of policies
  - EU 2030 governance structure
  - National climate change laws
  - EU circular economy strategy
  - Sustainable finance framework

Thank you for your attention!

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**DIW Berlin — Deutsches Institut  
für Wirtschaftsforschung e.V.**  
Mohrenstraße 58, 10117 Berlin  
[www.diw.de](http://www.diw.de)

Olga Chiappinelli  
[ochiappinelli@diw.de](mailto:ochiappinelli@diw.de)

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