

Kritische Rohstoffe im Fokus: Bedeutung erkennen, Abhängigkeiten managen

Master Class Procurement Summit Hamburg

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Dr. Moritz Nill, Thomas Janvier (ctrl+s)

24. Juni 2026





Link to Slido

Who in your organization is primarily responsible for managing critical raw material supply risk?

"critical raw material" refers to any material or input that is essential to your operations and where supply disruption or cost volatility would have significant business impact

Impact on production loss from unexpected supply chain issues



15 days / year
per facility in average



~4 % of capacity loss
from annual capacity



44 Bln \$
global cost across markets



Temporary versus permanent impact?
What do we expect to come 2026 and beyond?

The challenges of missing chips for industry does not only lay in missing chip production facilities



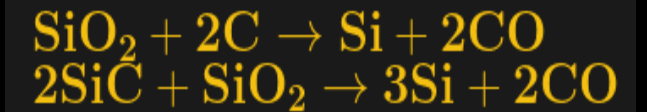
Infineon officially opens chip factory in Austria

Austrian Chancellor hails official opening of Villach plant.



HARD AS ROCK

The raw material for most silicon production is the mineral quartzite (SiO₂)



Elemental silicon is very rare, though, and so getting appreciable amounts of the metalloid that's pure enough to be useful requires some pretty energy- and resource-intensive mining and refining operations.

Refinement requires massive amounts of electricity to maintain the 2,000°C melting temperature needed, so silicon refineries are often located where electricity is cheap and plentiful.

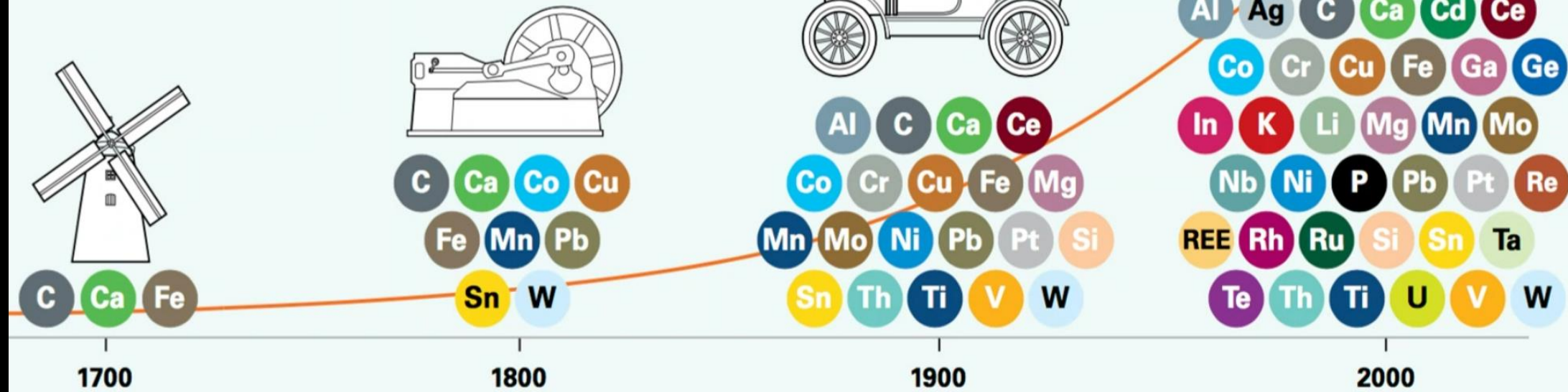
Critical Materials & Minerals - Technology Aspects

More materials become important for competing technologies



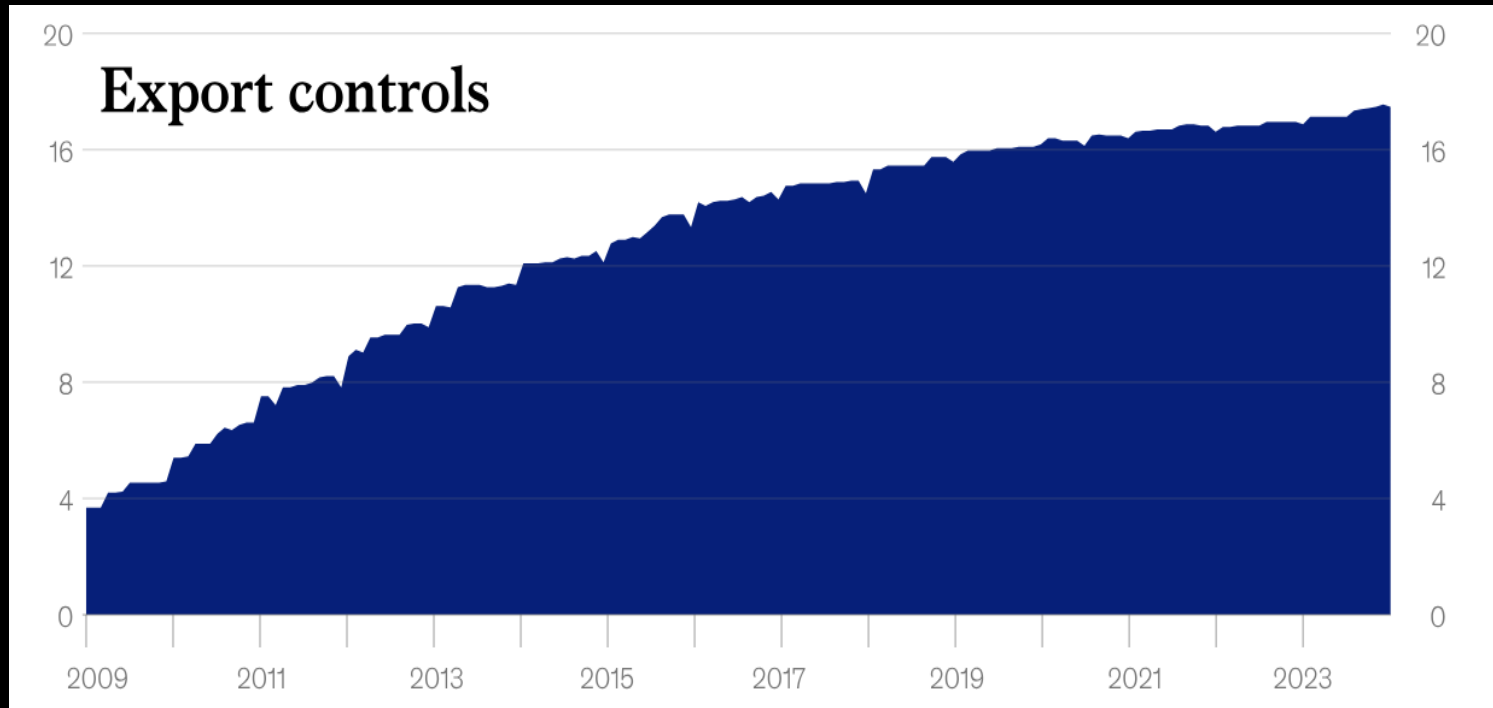
"Elements widely used in energy pathways", © Armin Reller, Volker Zepf, Materials critical to the energy industry – An introduction (2nd edition)

Prof. Dr. Armin Reller
Chair for Resource Strategies, Augsburg University

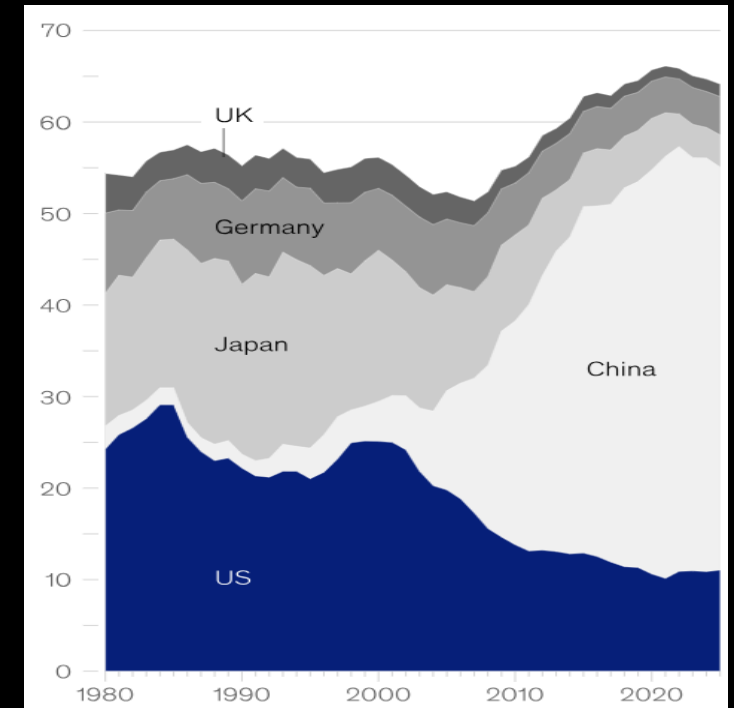


Governments increasingly use policy tools to gain economic and strategic advantages

Exported raw material products subject to export restriction measures
2009 – 2023 in thousands



Selected economies' share of
global manufacturing gross-output %



We need to rethink our sourcing strategies

How about you?

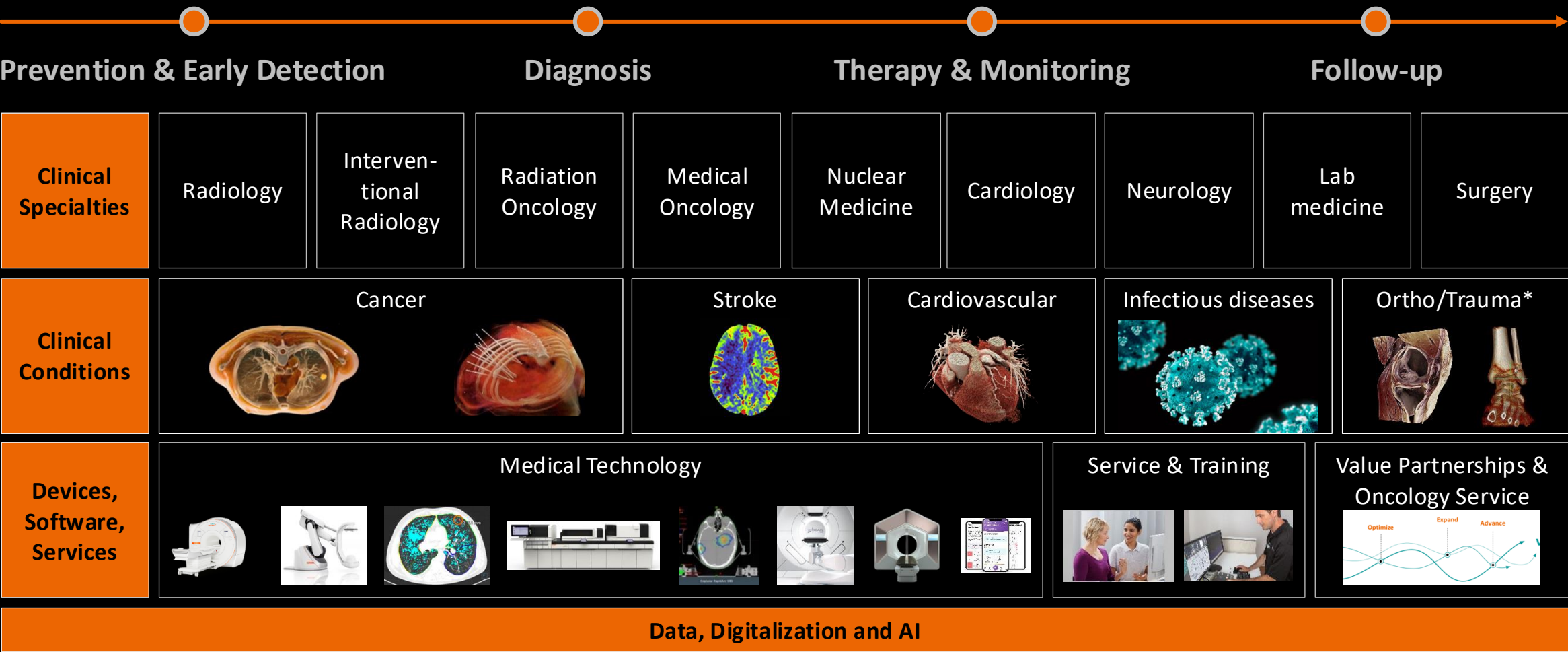


What is currently your biggest risk when securing critical raw material supply?

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Siemens Healthineers - Our Portfolio

Helping people across the planet to fight major diseases

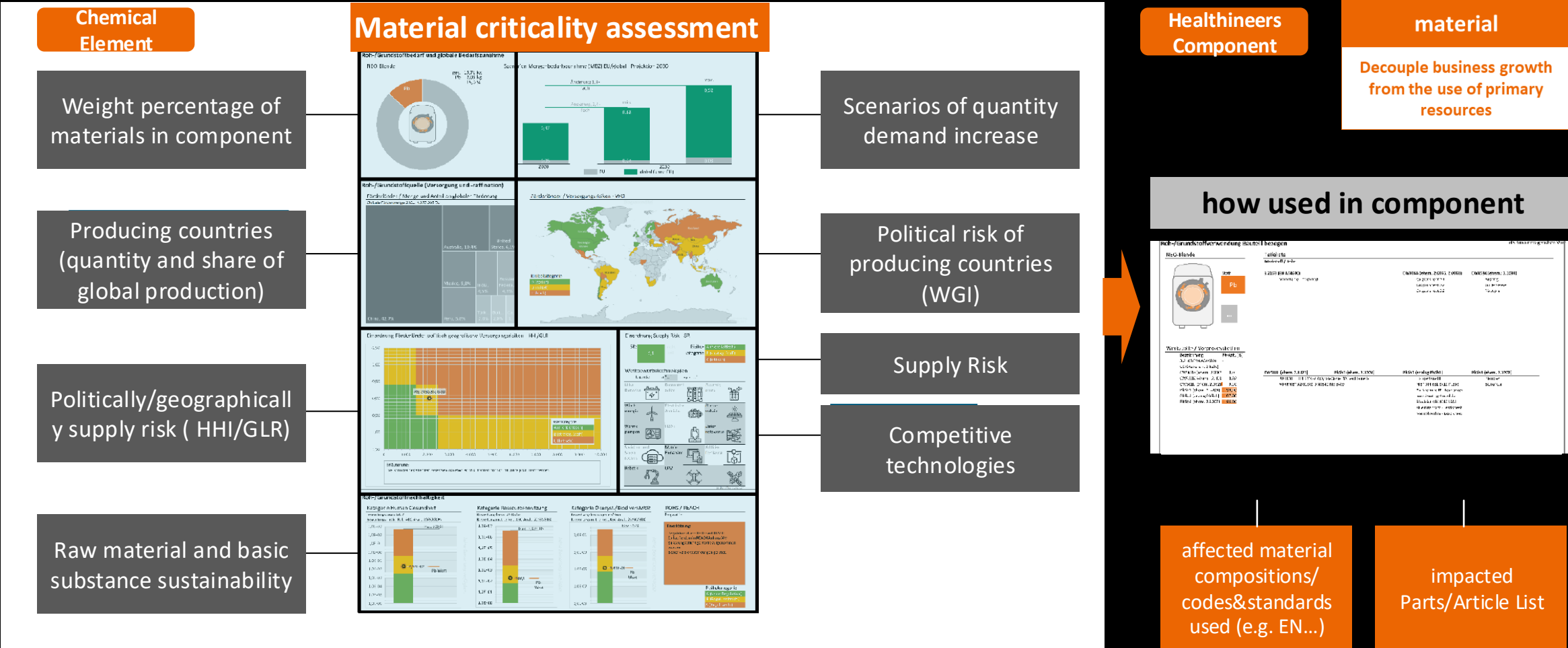


The products/features (mentioned herein) are not commercially available in all countries. Their future availability cannot be guaranteed.
*Orthopedic and trauma surgery

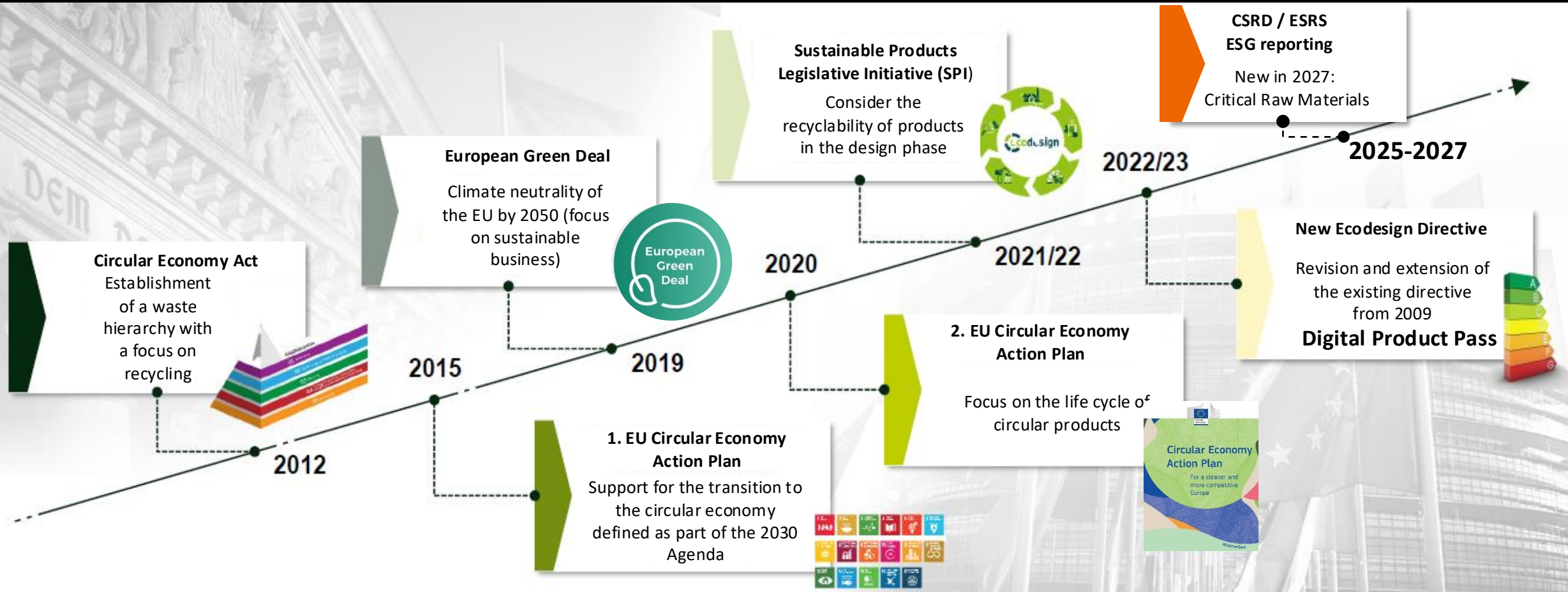
Our productions are highly dependent on the availability of finite resources – more imports mean more dependence



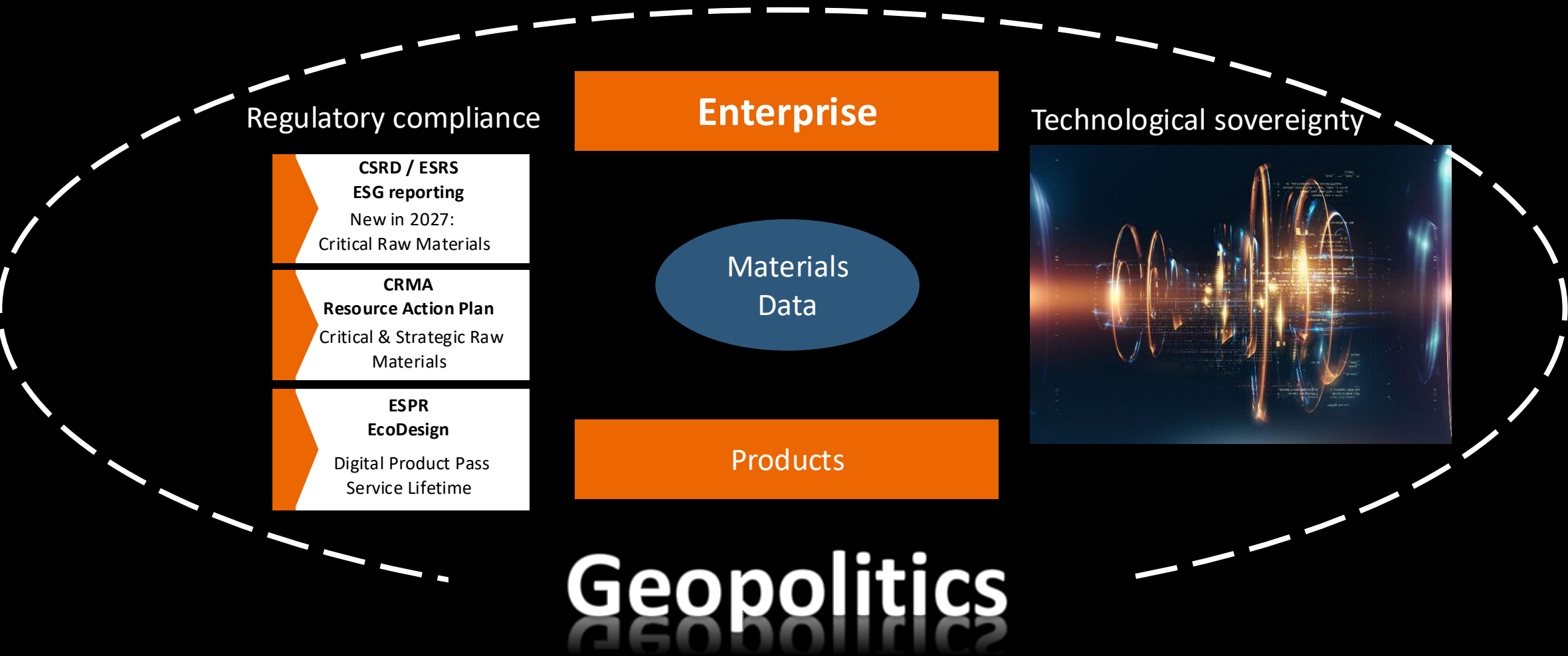
Criticality Assessment: example for material risk of a key component per single material (chemical element)



EU policy is picking up speed, slowly but steadily



Regulatory framework conditions, political targets and social initiatives are calling for a sustainable, circular economy



We support leading companies on supply chain sustainability.

Data **precision** & emission tracking

Actionable reduction insights

Fair, carbon-based supplier assessment

Low supplier effort, high **comparability**

Empower suppliers on their journey

Deep-tier emission reduction

Co-developed with procurement **experts**

Designed

by experts



Used

by industry

SIEMENS



Trusted

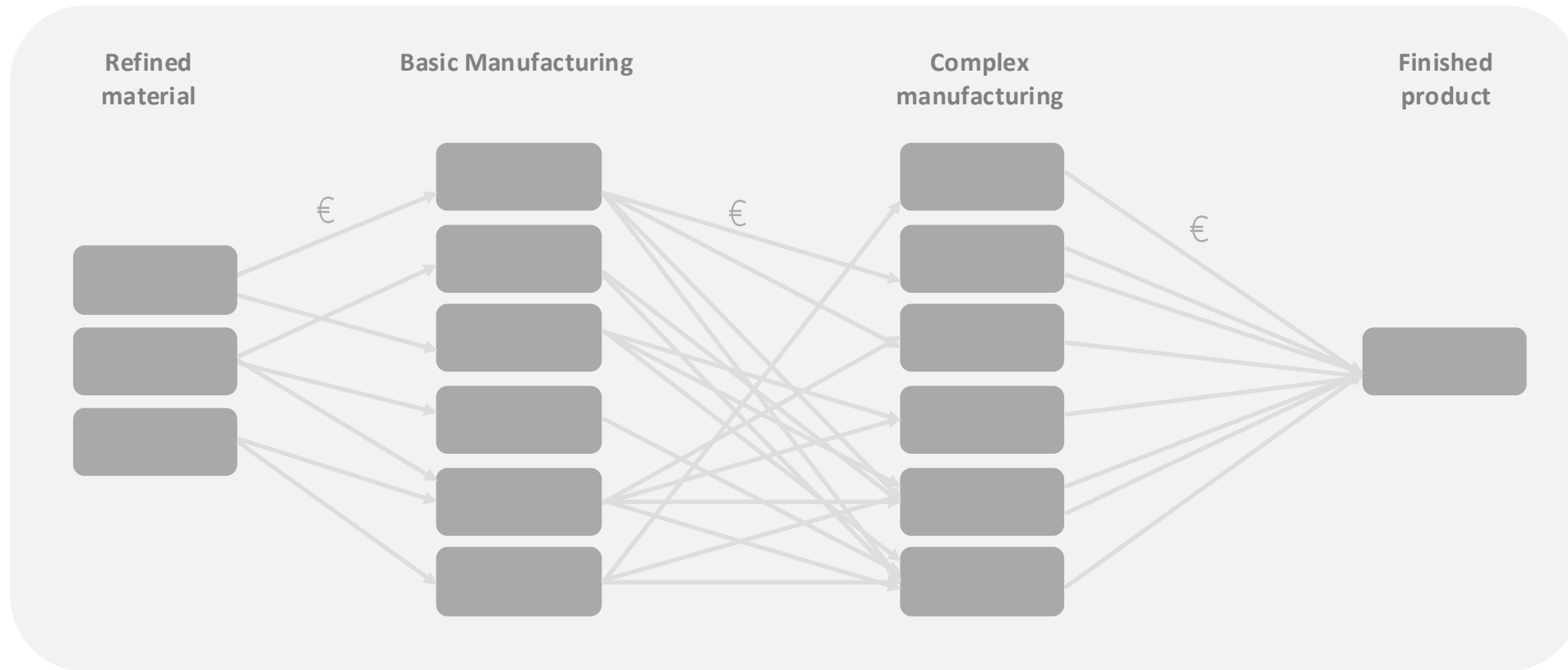
by peers



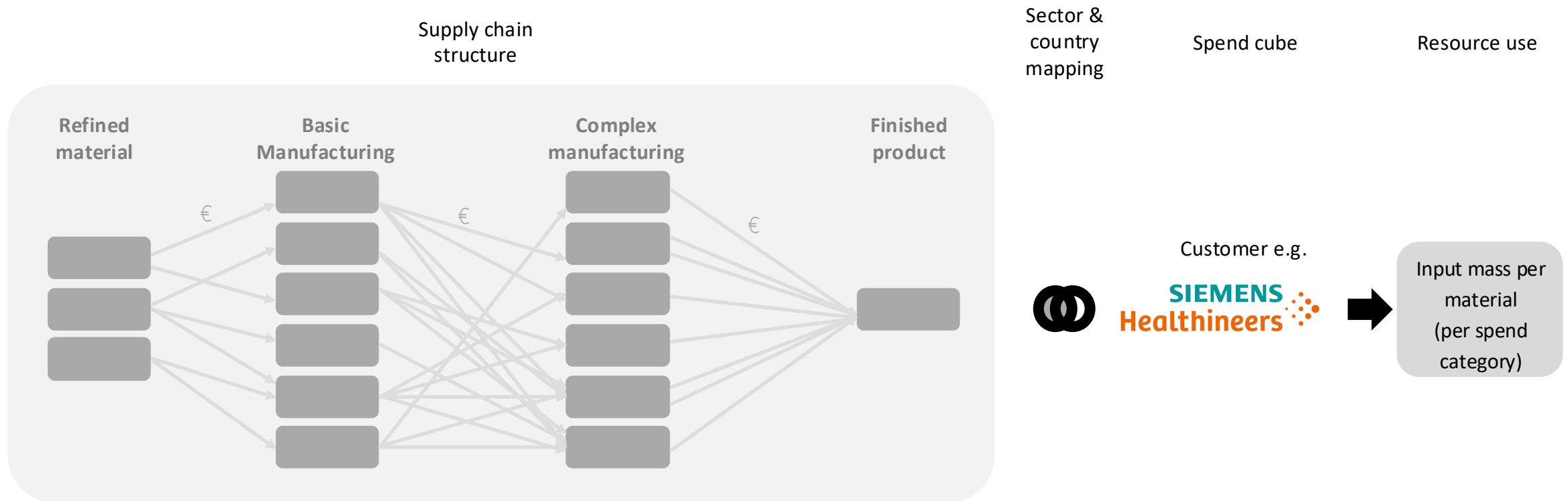
Quantifying critical raw materials across the supply chain – efficiently and based on immediately available information

A global model quantifies material flows for each product group

ctrl + s



Linking the model to the spend cube creates transparency

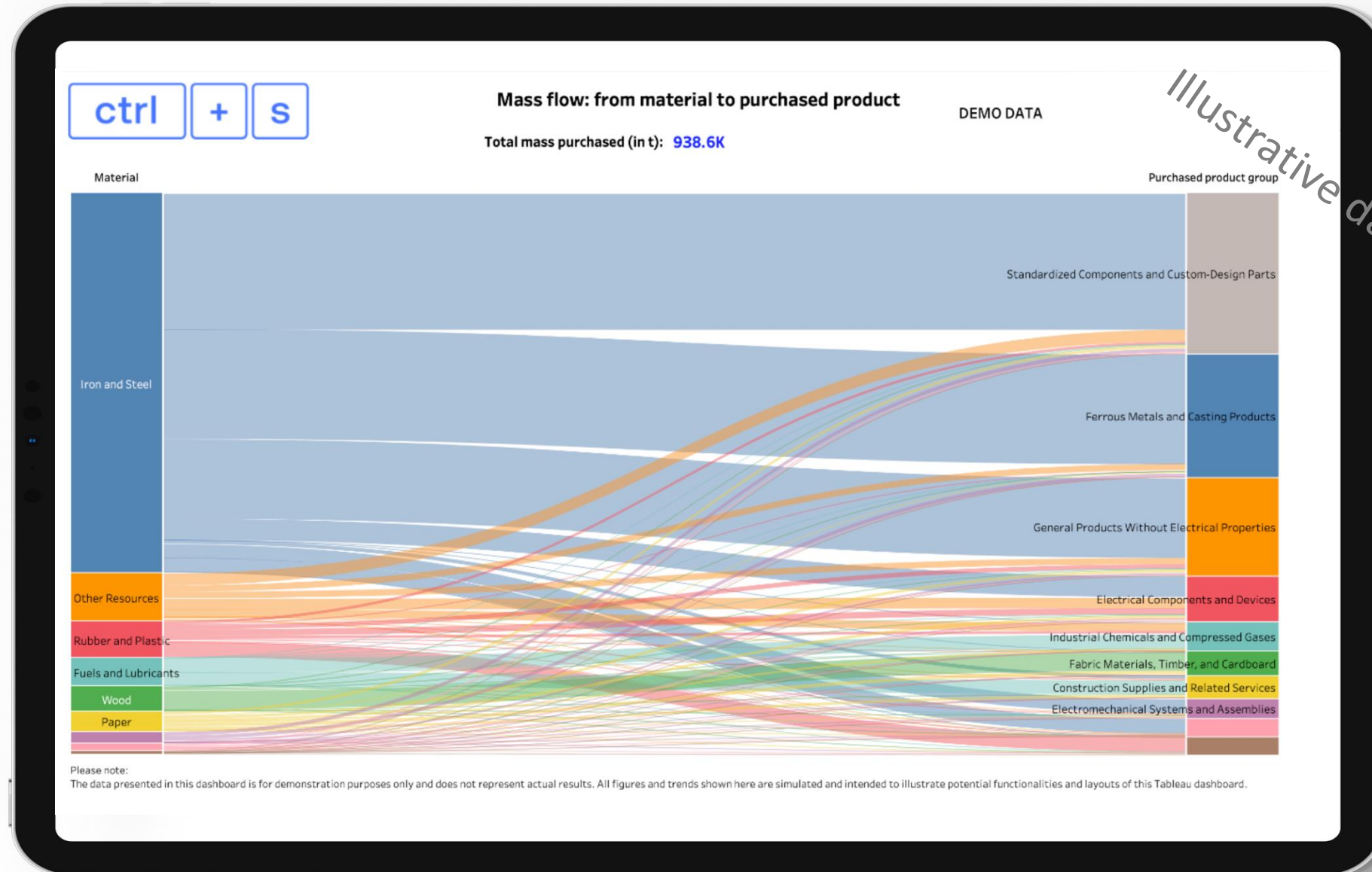


Material flows within the company

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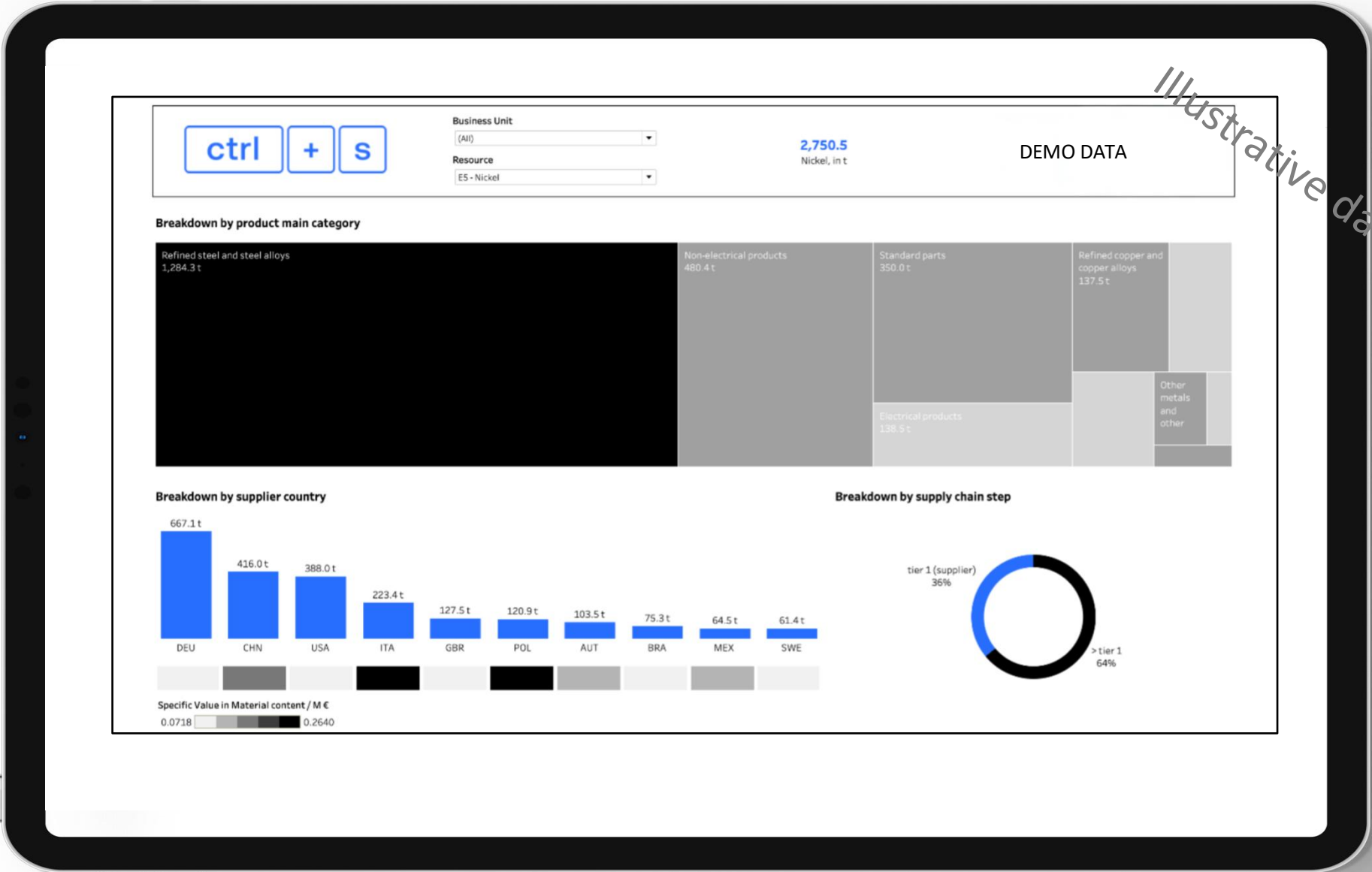
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Raw material use by spend item and sourcing country

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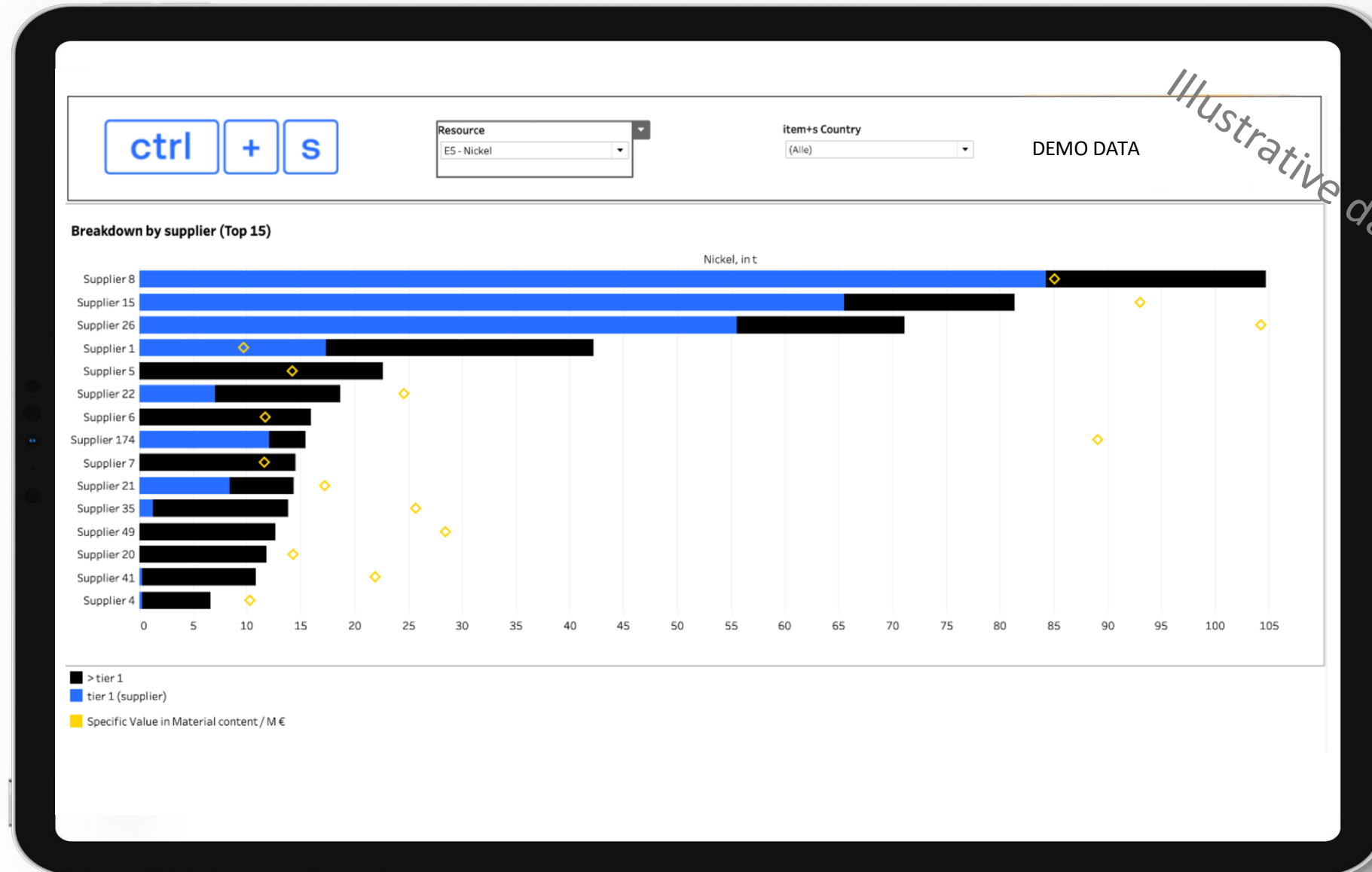


Raw material dependencies by supplier

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What's next?



How will you tackle
your rising critical raw
material risks?

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Thank+s



Questions ? Meet us at Booth C06 !

Download our Whitepaper on hidden raw material exposure



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