

Zinc: Low Carbon, Responsible, Credible

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- Represents 60% of worldwide zinc production, 80% in Western Hemisphere
- Offices in USA, Brussels, Delhi, Shanghai

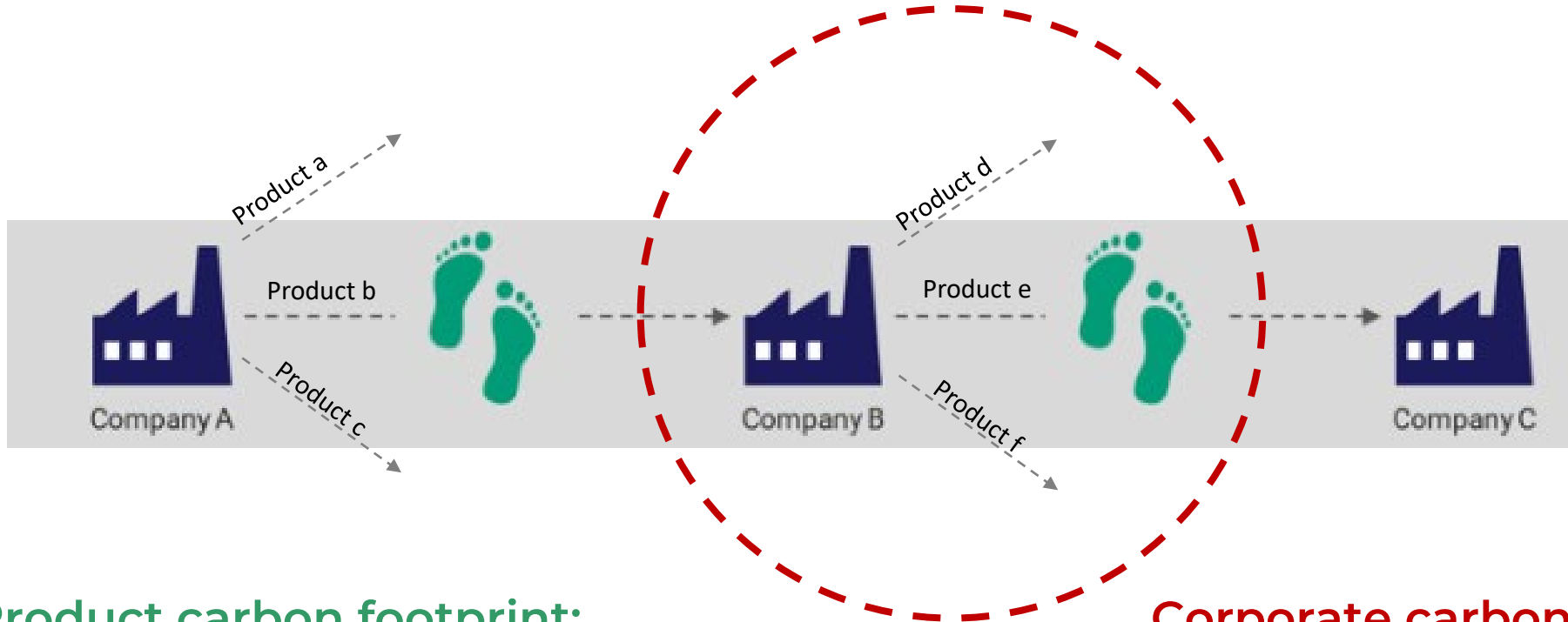


- More than 200 full and affiliate members
- Membership includes mining, smelting, first use and recycling

Content

- 1. Zinc carbon footprint**
2. Decarbonization Roadmap
3. Responsible sourced zinc
4. Summary

Types of Carbon Footprint



Product carbon footprint:

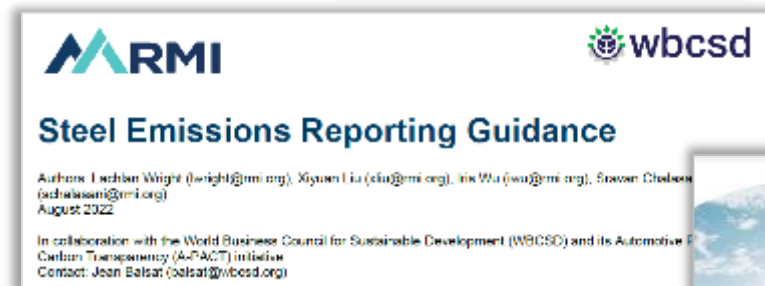
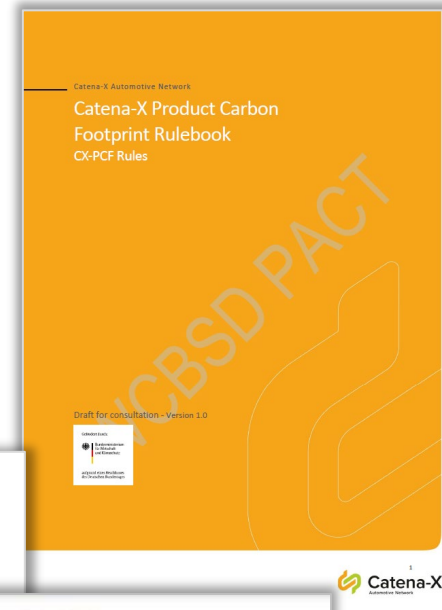
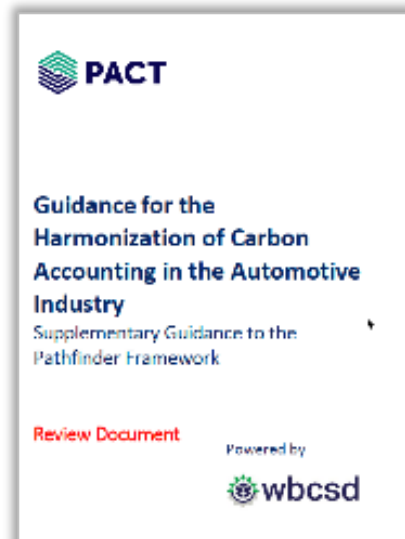
- Needed by downstream companies for their CF reporting
- Used in product design

Corporate carbon footprint:

- Demanded by banks
- Used in sustainability reporting

Product CF: Downstream Users Make the Rules ?!

- Downstream users define rules for CF reporting for suppliers
- Challenge: complying with multiple, different GHG reporting requirements



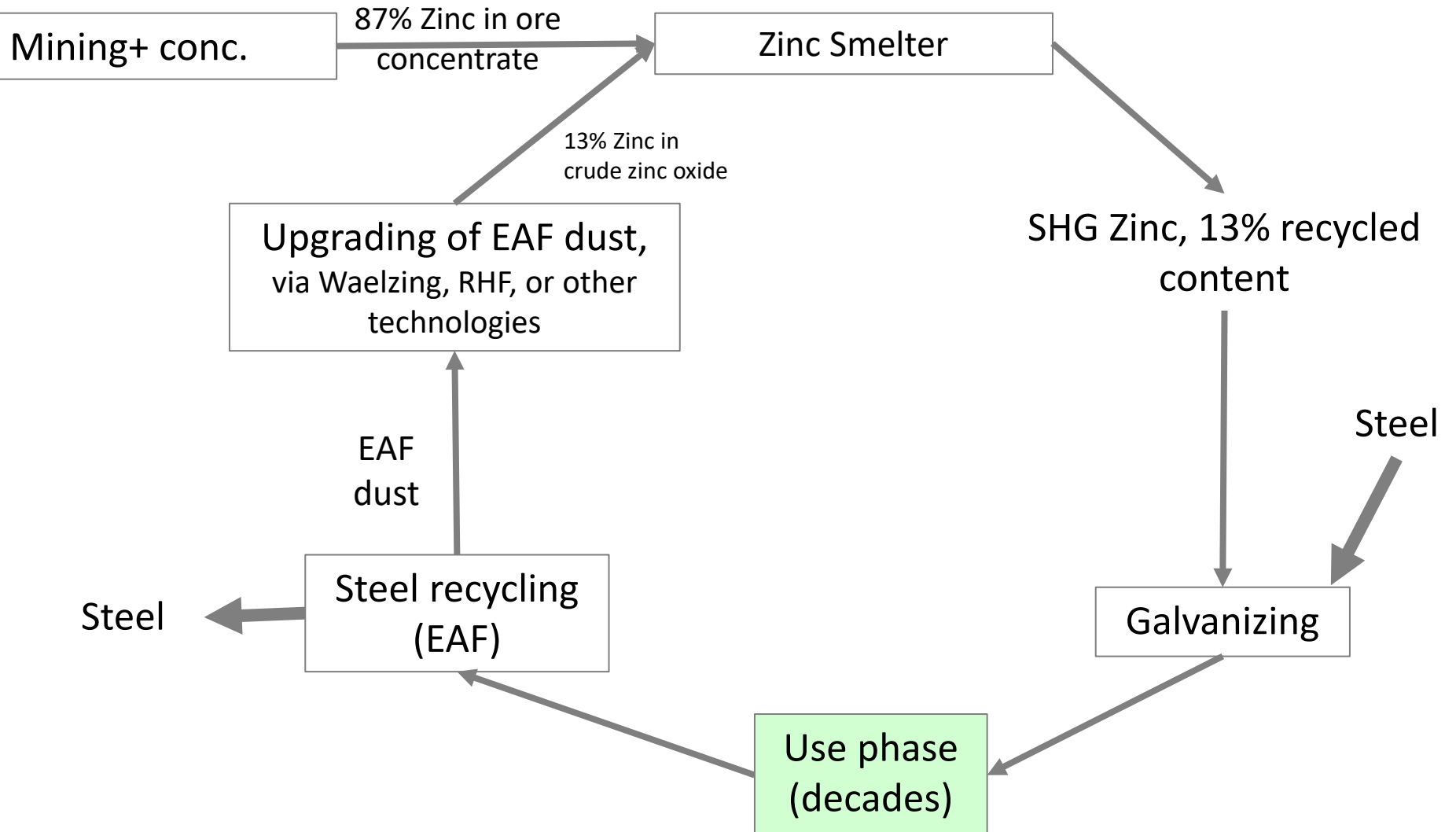
Zinc Product Carbon Footprint



- Downstream users want site-specific product CF information following a defined, transparent, LCA-based methodology
- **IZA provides LME approved guidance**
- **IZA connects up- and downstream**

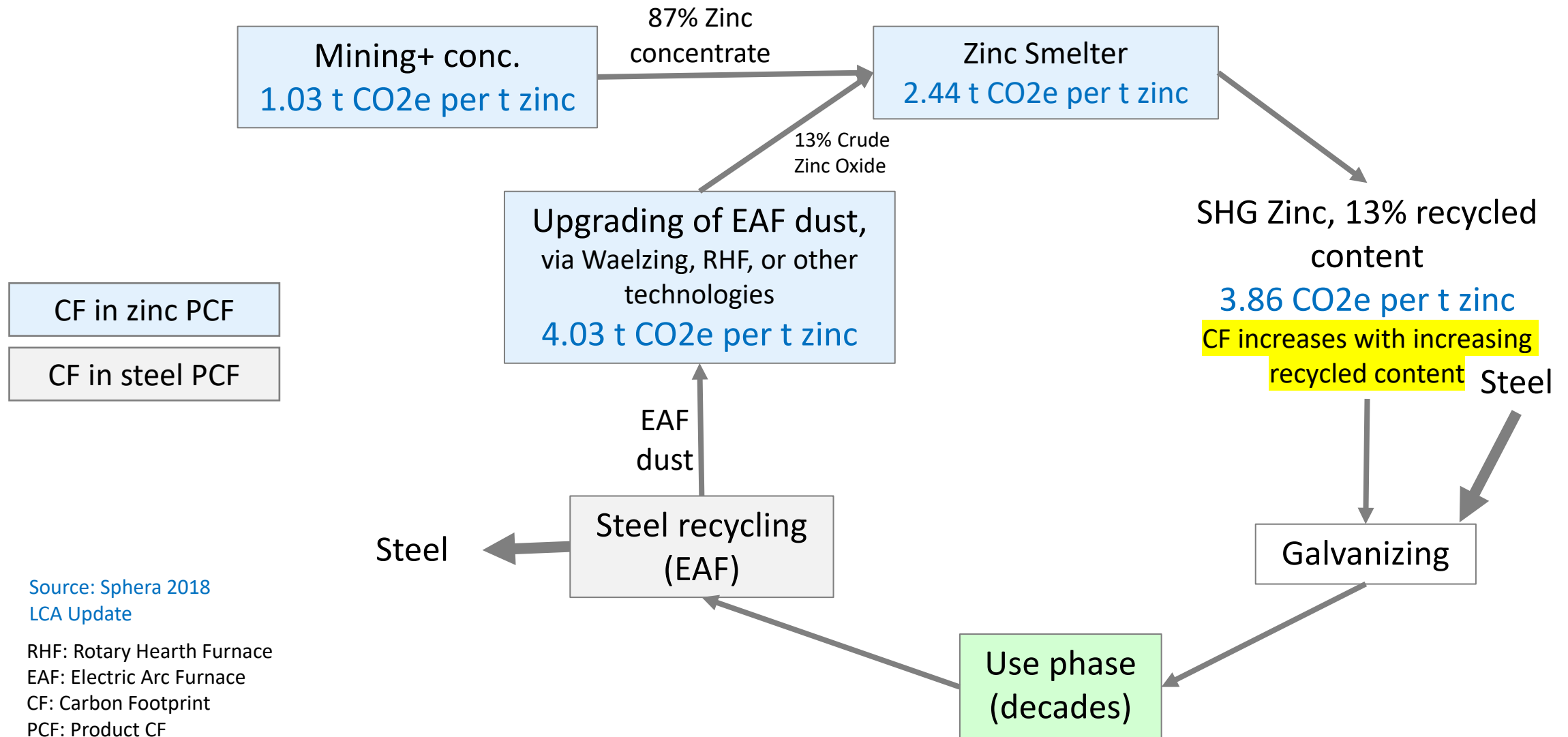
CF: Carbon Footprint
LCA: Life Cycle Assessment

Recycled Content in Refined Zinc

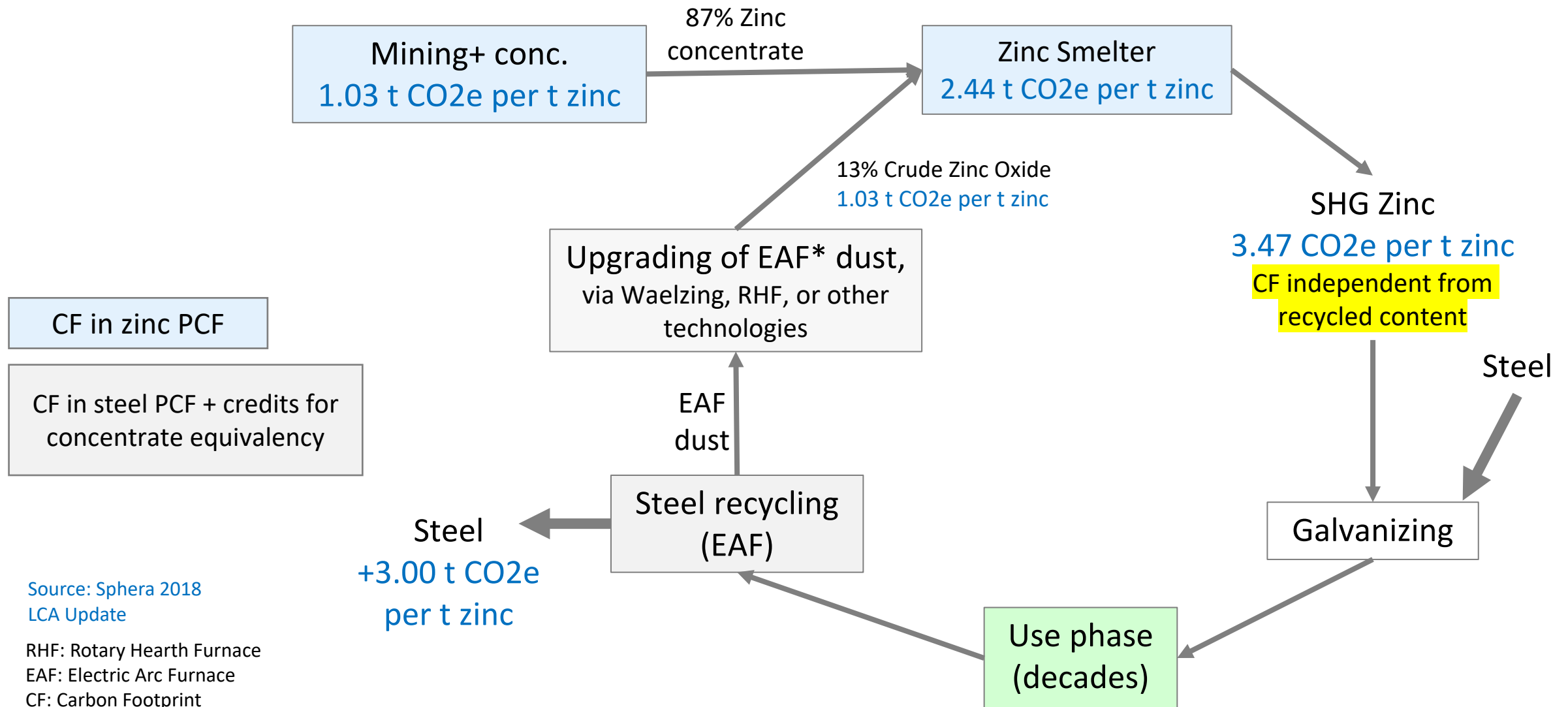


RHF: Rotary Hearth Furnace
EAF: Electric Arc Furnace
CF: Carbon Footprint
PCF: Product CF

Carbon Footprint and Recycled Content (1.0)



Carbon Footprint and Recycled Content (2.0)

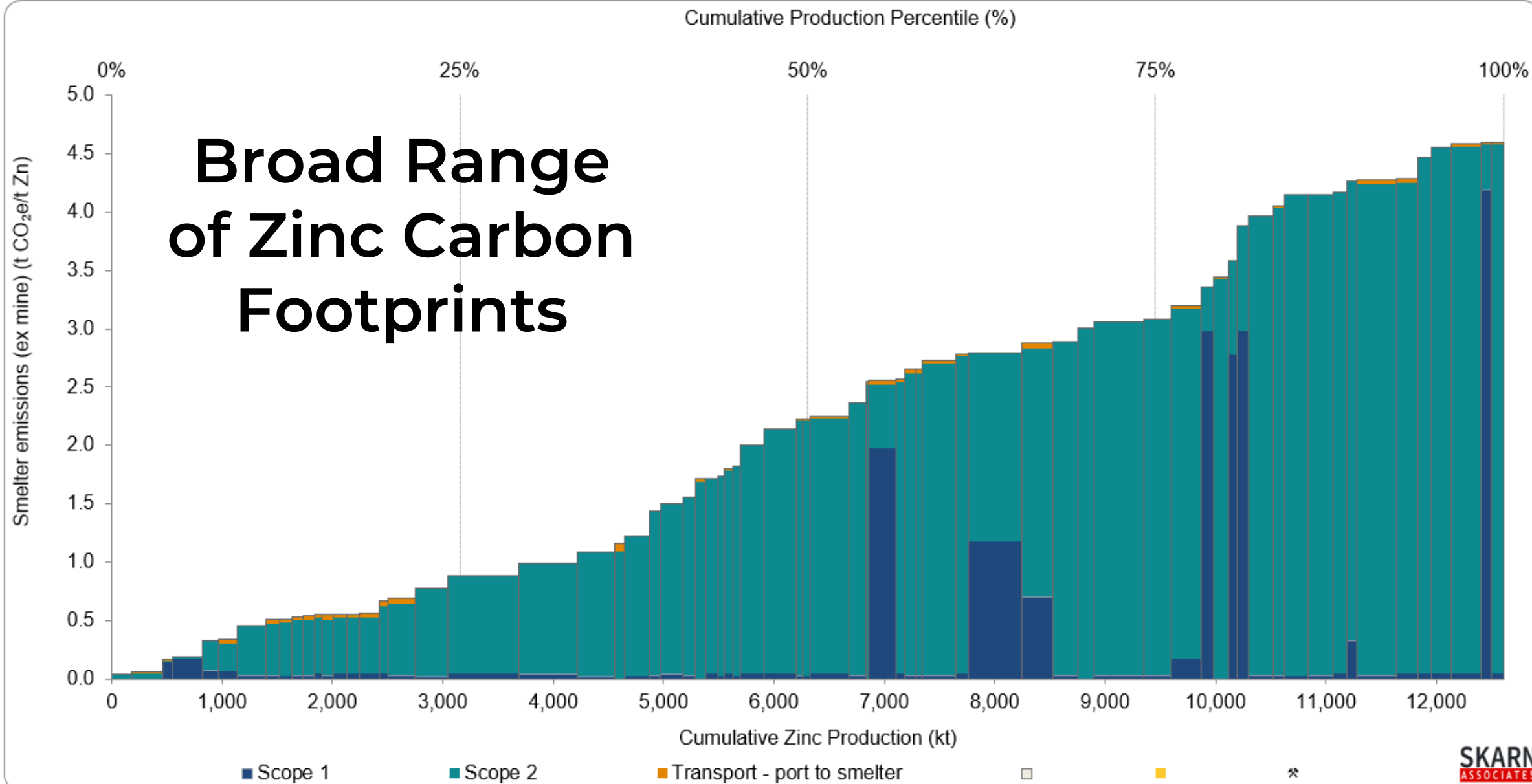




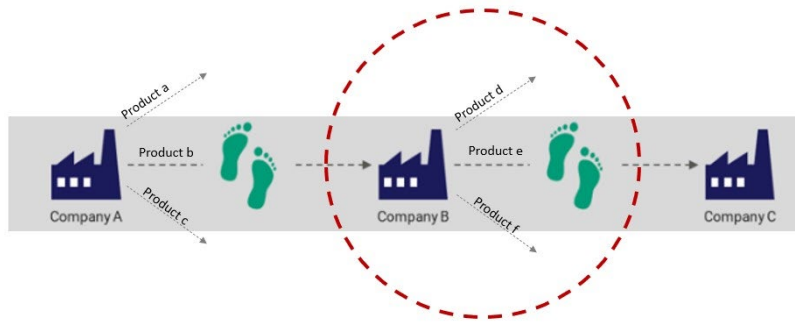
Specific Versus Average Carbon Footprint

- Averages used as default and in early design stages.
 - High quality average data in relevant data bases ensure market access.
- **IZA provides global and European averages based on industry data.**

Broad Range of Zinc Carbon Footprints



Content



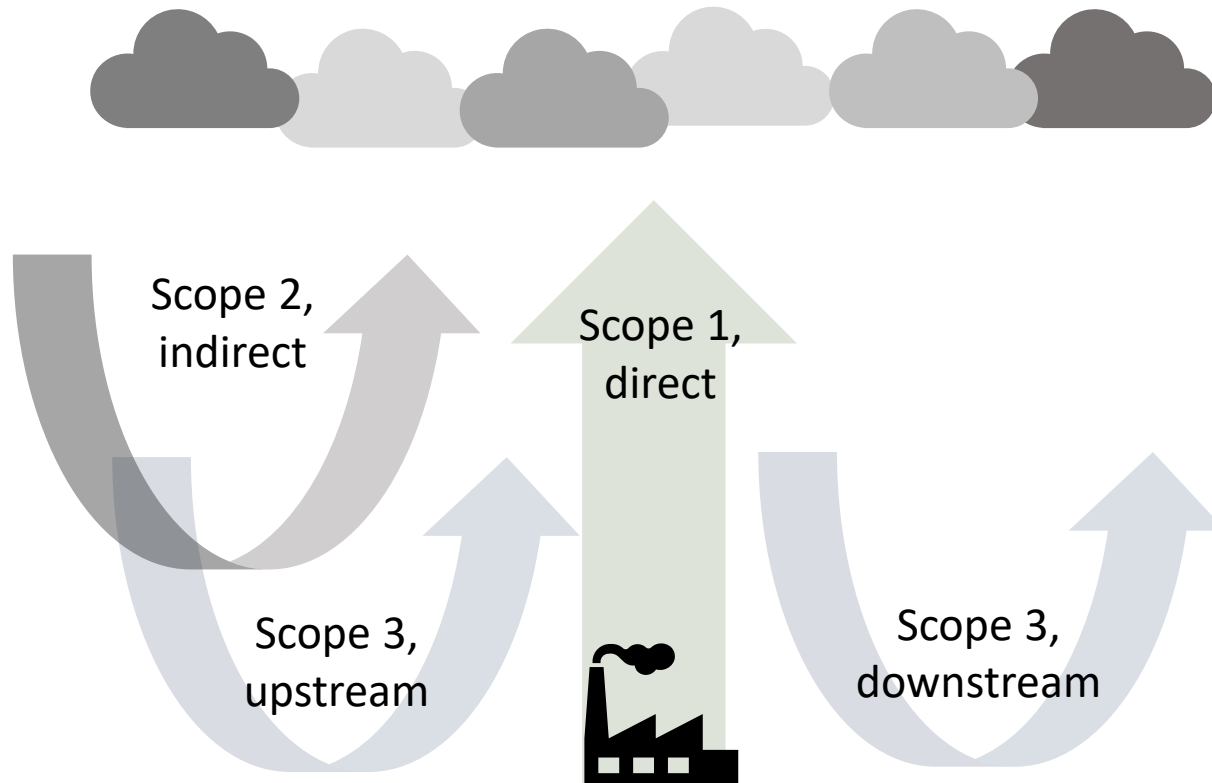
1. Zinc carbon footprint

- Product carbon footprint
- **Corporate carbon footprint**

2. Responsible sourced zinc

3. Summary and conclusion

GHG Emissions as CO2 eq per company or site per year



Corporate Carbon Footprint

- Widely accepted: GHG Protocol “Corporate Accounting and Reporting Standard”

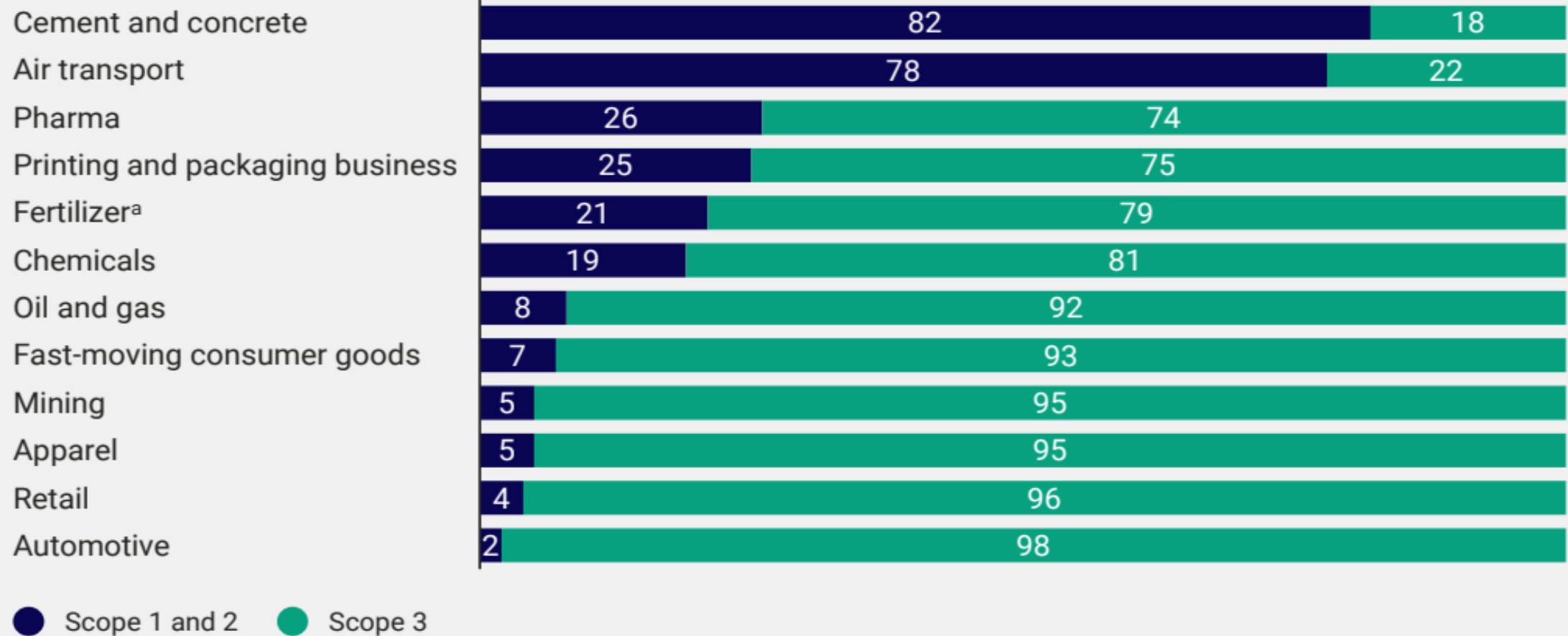
- Scope 1: Direct GHG emissions occur from sources that are owned or controlled by the company
- Scope 2: Indirect GHG emissions from the generation of purchased electricity.
- Scope 3: All other indirect emissions occurring from sources not owned or controlled by the company, 15 categories.

Scope 3 GHG Emissions

15 categories link companies along value chains to one another:

1. Purchased goods and services
2. Capital goods
3. Fuel and energy related activities
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased assets
9. Downstream transportation and distribution
- 10. Processing of sold goods**
- 11. Use of sold goods**
- 12. End-of-life recycling of sold goods**
13. Downstream leased assets
14. Franchise
15. Investments

Scope 3 Makes all the Difference



a. Includes agricultural chemicals.

Source: McKinsey & Company analysis, drawing on select data from CDP and McKinsey's Catalyst Zero solution

Scope 3 reporting: Zinc Producers

- An increasing number of companies report on Scope 3 emissions.
- Companies report on different, only few report on all 15 categories.
- They do not use the same reporting methodologies.

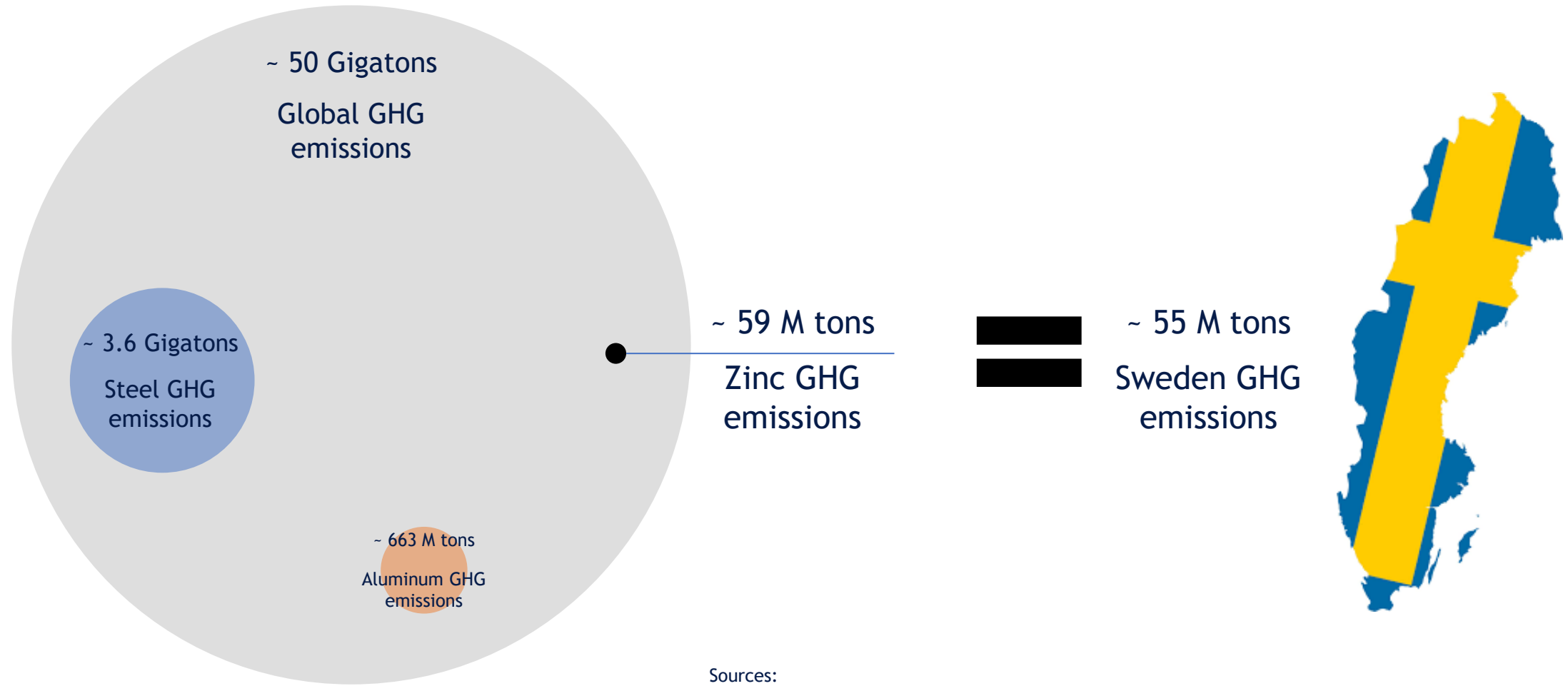
➤ IZA Project: guidance on Scope 3 GHG reporting

+++ Guidance and harmonization needed to ensure credibility and transparency +++

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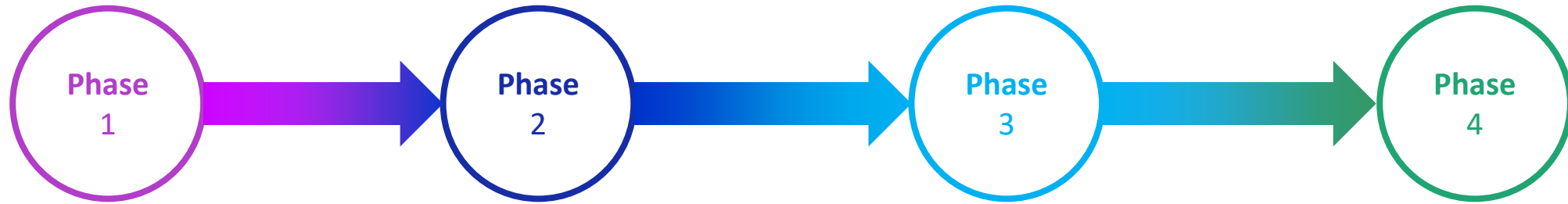
Baseline Carbon Footprint



Sources:

1. [Global GHG emissions](#)
2. [Steel GHG emissions](#)
3. [Aluminum GHG emissions](#)
4. [Sweden's GHG emissions](#)

Decarbonization Roadmap



Scoping

- ✓ Review existing data
- ✓ Company interviews
- ✓ 2050 supply/demand

Baseline CF

- ✓ Baseline CF
- ✓ Scope 3 screening
- ✓ Regionalize baseline CF
- ✓ Country level grid greening
- ✓ Growth scenario
- ✓ CF Guidance

Decarb. scenarios

- Level of ambition
- Emission reduction pathways
- Target setting

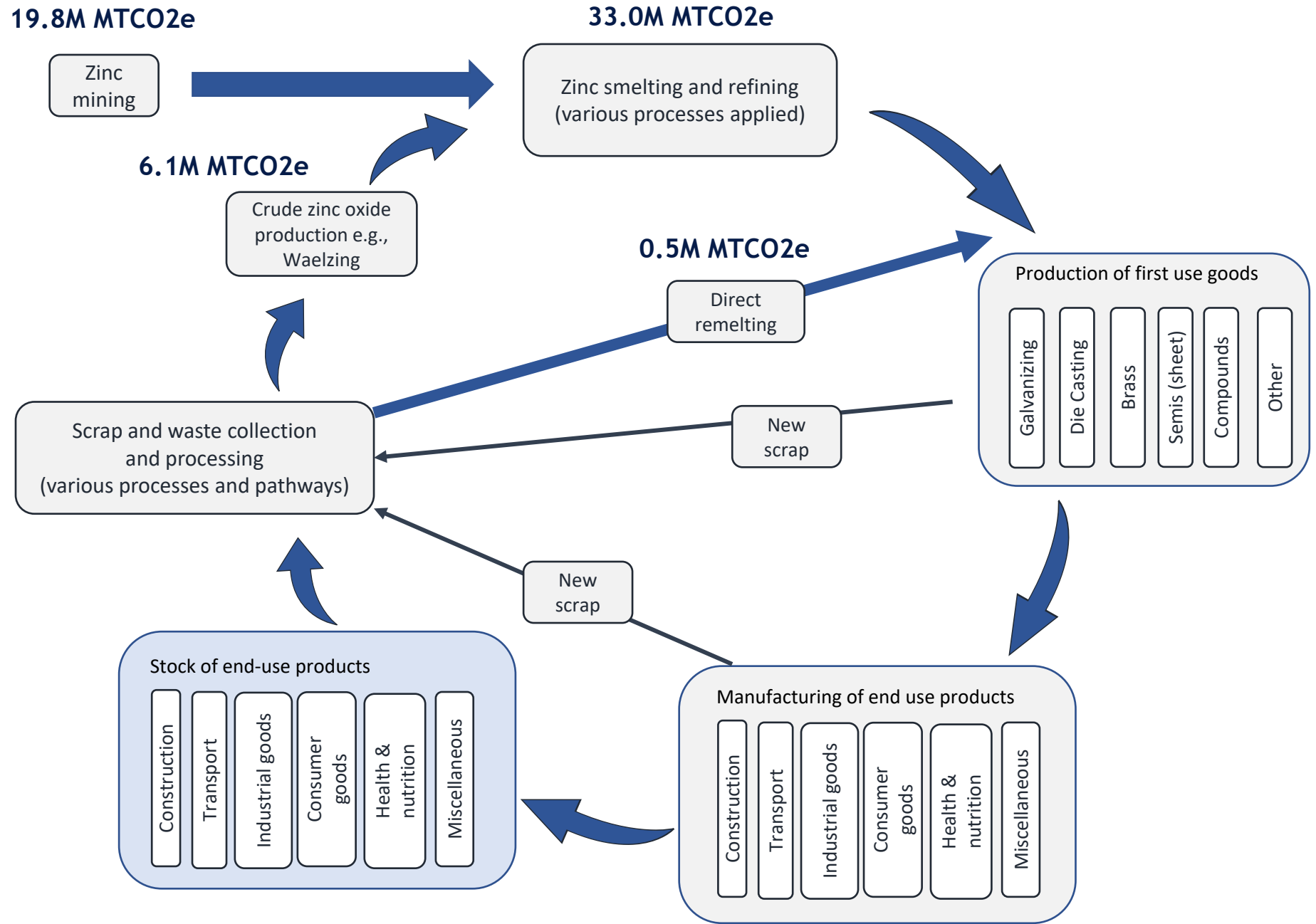
Operationalization

-

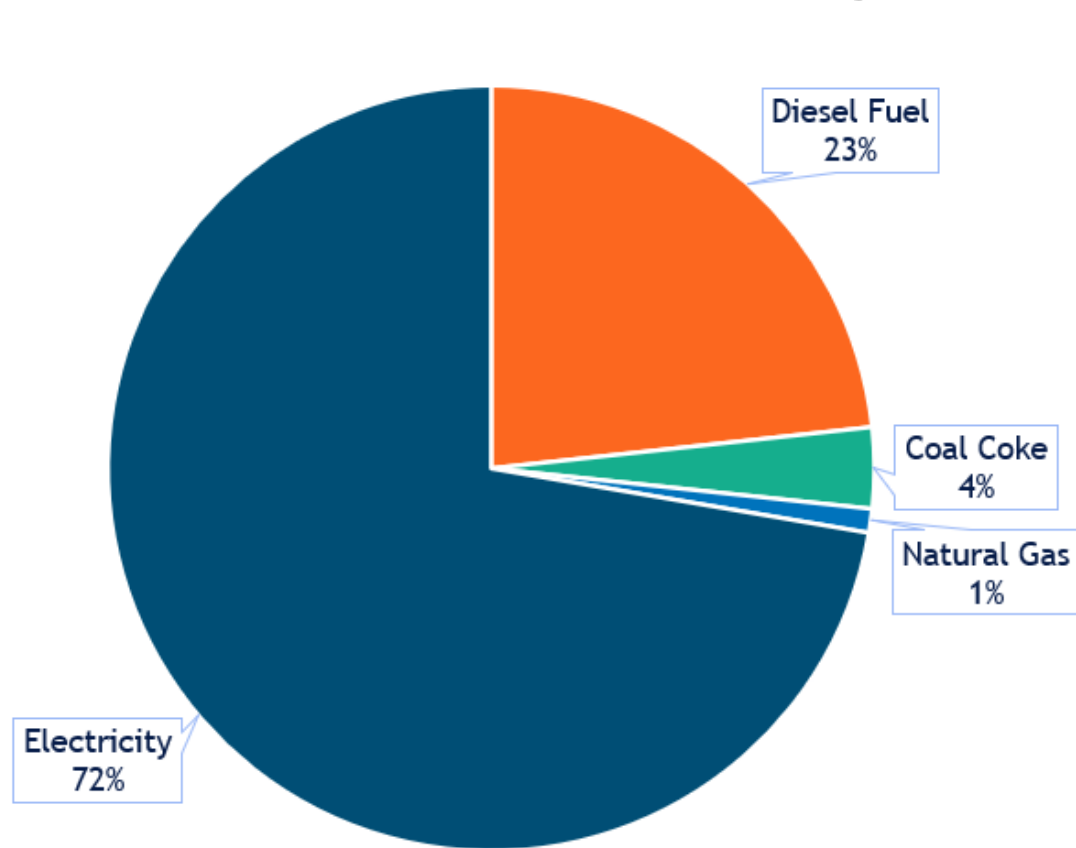


Baseline Carbon Footprint

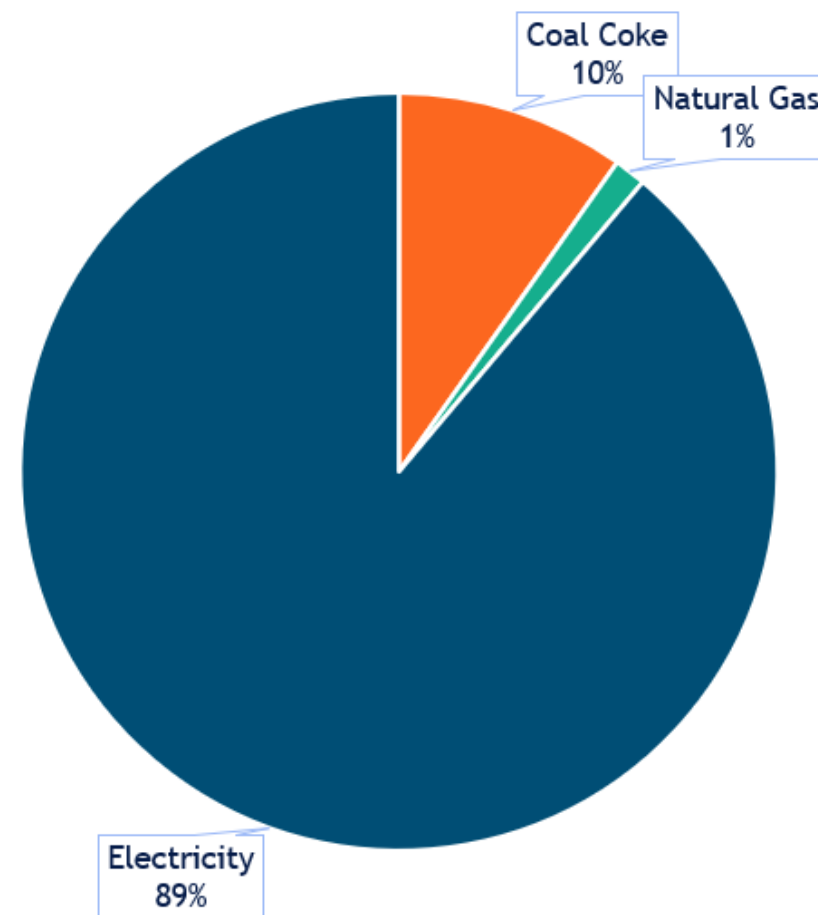
CF of global zinc production:
59 million t CO₂e



GHG Emissions Zinc Mining and Smelting



2019 GHG **zinc mining** Scope 1+2 emissions by source

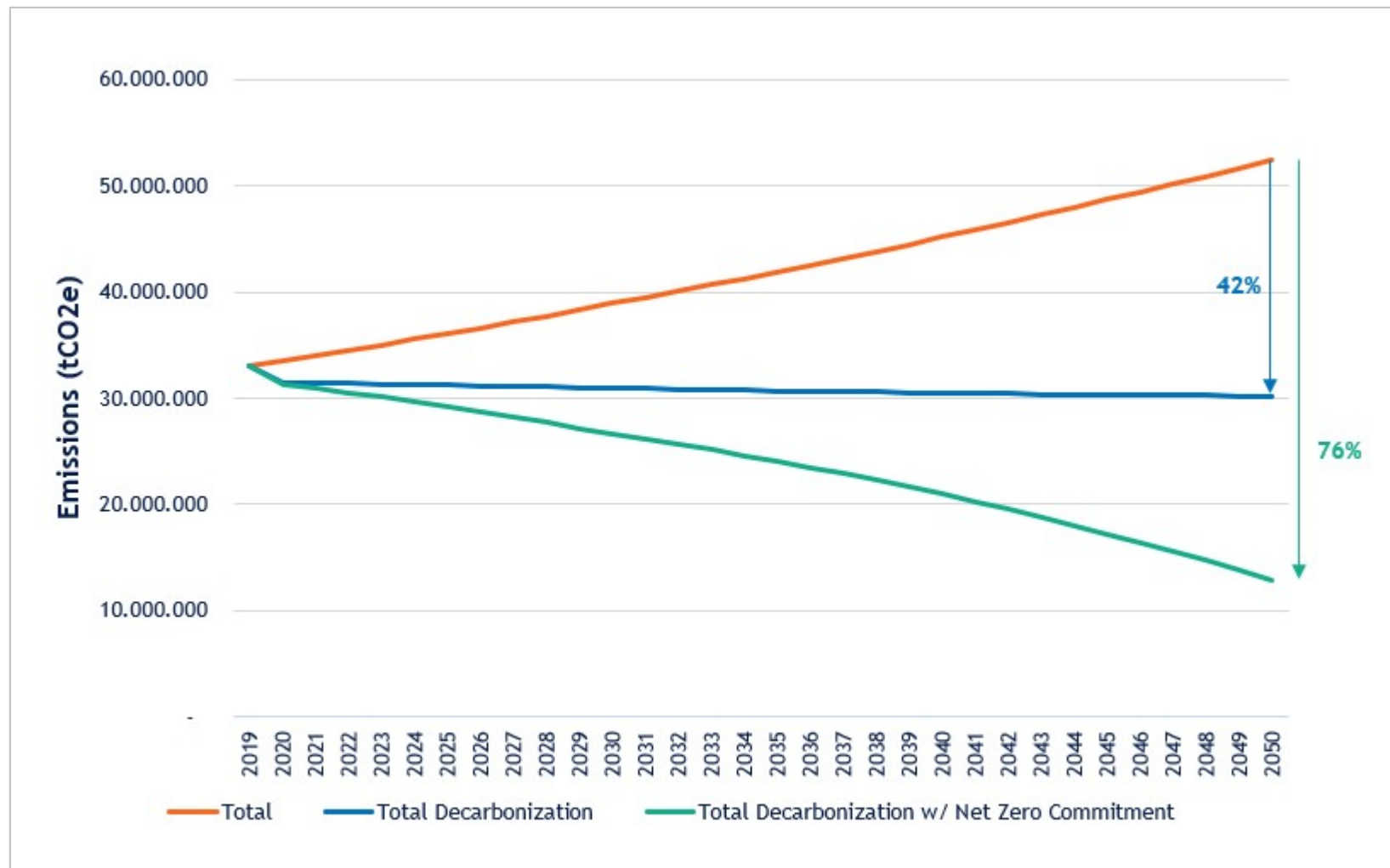


2019 GHG **zinc smelting** Scope 1+2 emissions by source

Consider Country-Level Grid Greening

Zinc smelting

- Can achieve 42% reduction in overall emissions based on grid decarbonization forecast from IEA historical data
- Can achieve 76% or greater reduction in overall emissions based on the net zero ambitions of 10 countries
- Of the remaining emissions, depending on the scenario, 17%-40% are Scope 1 emissions



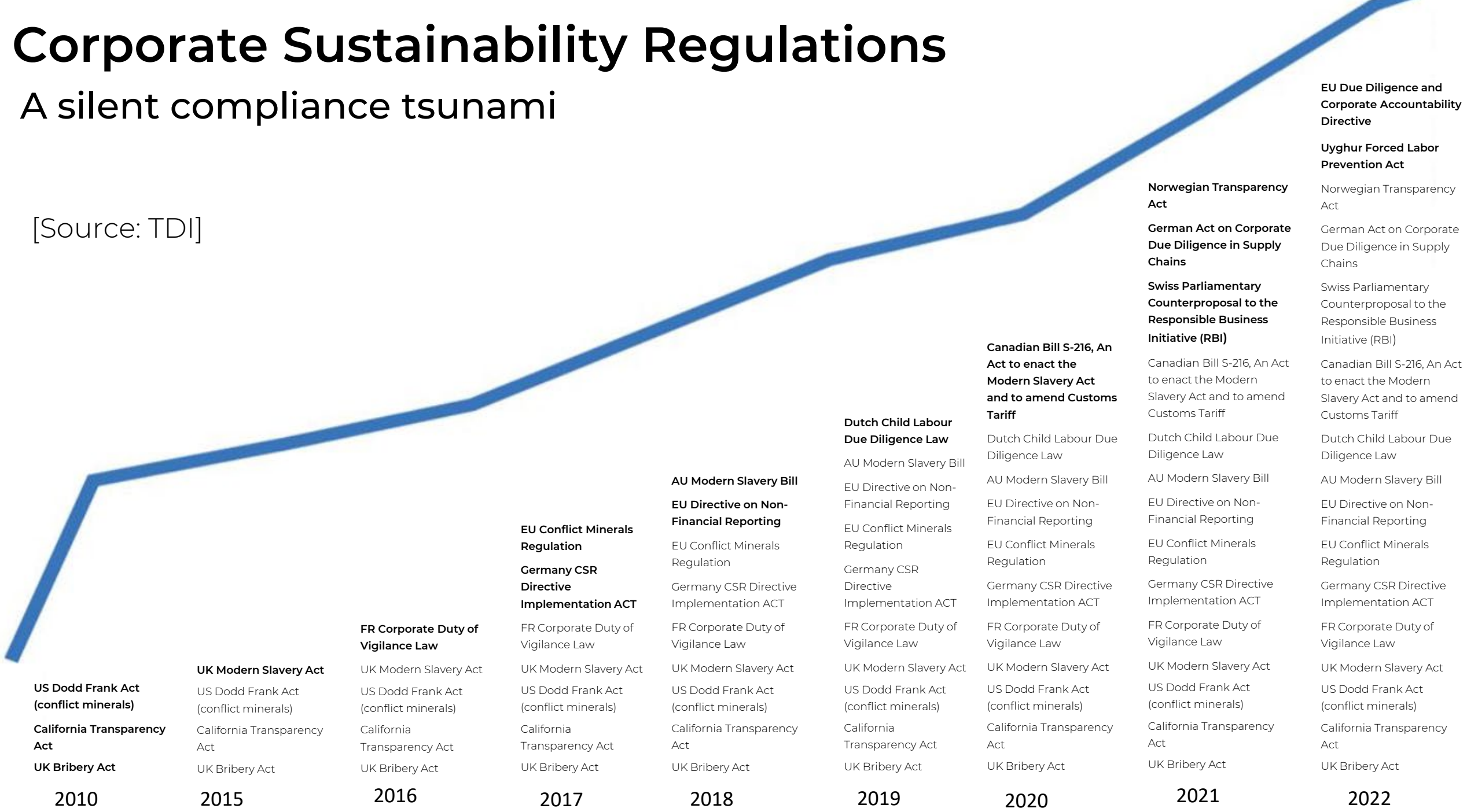
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Corporate Sustainability Regulations

A silent compliance tsunami

[Source: TDI]



Responsible Sourcing

- Increasingly mandatory, demanded by regulators, users, banks
- IZA ensures that credible ESG standards are available to all zinc producers worldwide.



- Joint Due Diligence Standard for LME registered brands
- From due diligence to ESG*: Zinc Mark

*ESG: environmental, social, and governance



Clarification Needed

- Proliferation of standards leads to confusion and inefficiency.
 - IZA works towards cross-recognition and convergence.
- The not-harmonized increase of responsible sourcing requirements adds to the burden of reporting and bureaucracy without improving the situation on the ground.
 - IZA and EM advocate for having the Zinc Mark recognized by end use sectors and regulators.





Summary

- ✓ Different types of CFs are used for different purposes.
- ✓ IZA supports zinc producers in providing the CF information needed.
- ✓ IZA ensures that credible responsible sourcing standards are available to all zinc producers worldwide.



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zinc association

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#ResponsibleZinc
#RenewableEnergy #Zinc**

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