



## Achieving Scope 3 targets

### The Role of Supplier-Specific Carbon Footprint Data in Chemicals and Plastics Value Chains

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Taking net-zero chemical value chains from ambition to achievement



### Data

Life Cycle Inventory database for chemicals and plastics



### Consulting

Environmental assessments and reduction strategies



### Training

LCA and PCF workshop, methodologies & procedures

## REFERENCES

ACTEGA

Agora  
Energiewende

atiel  
analog technology

AVIENT

BAYER

Braskem

BRENNTAG

BYK

CABOT

Chevron

Oronite

covestro

DECHEMA  
Gesellschaft für Chemische Technik  
und Biotechnologie e.V.

EVONIK  
Leading Beyond Chemistry

FUCHS  
LUBRICANTS, TECHNOLOGY, PEOPLE.

heubach

INTERNATIONAL ACADEMY | RWTH AACHEN  
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INSTITUT FÜR  
KUNSTSTOFF  
VERARBEITUNG  
an der RWTH Aachen

kuraray

LANXESS  
Energizing Chemistry

Lubrizol

LYB LyondellBasell

UEIL

TRICON

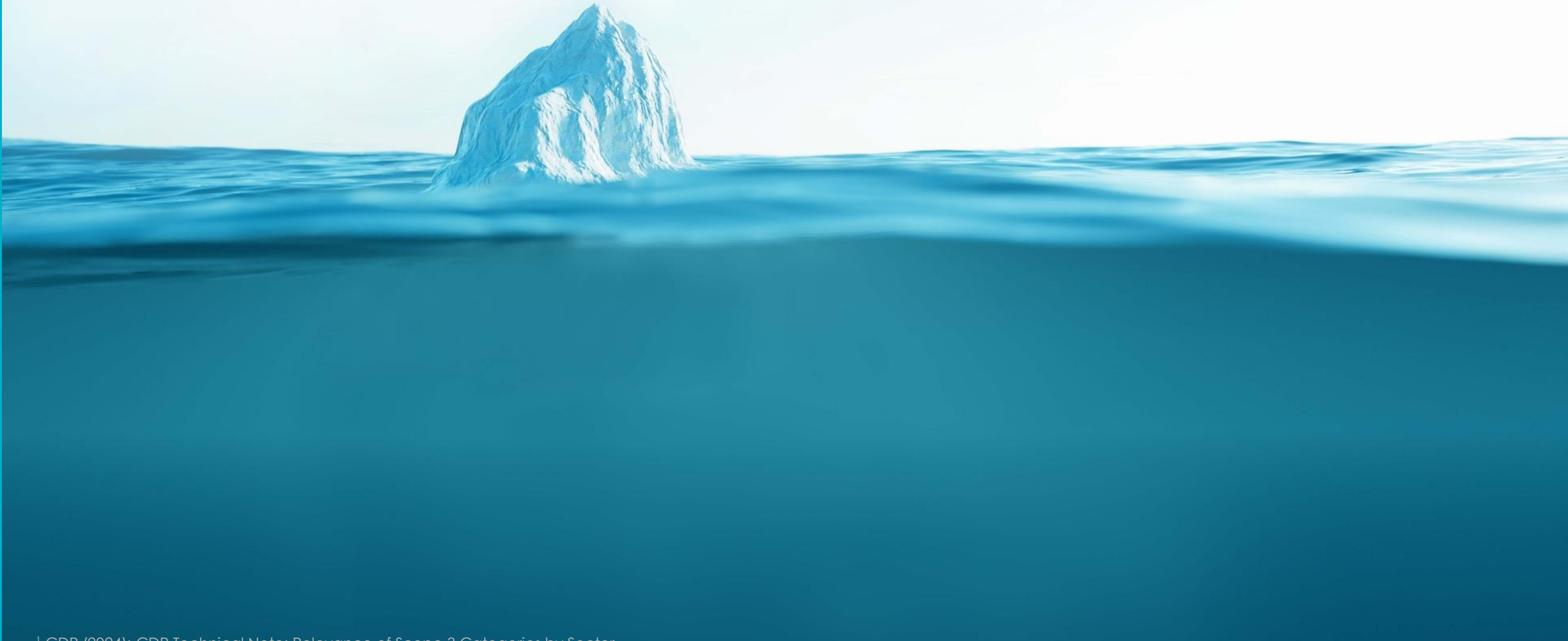
UPM BIOFORE  
BEYOND FOSSILS

Wuppertal  
Institut

and many more...

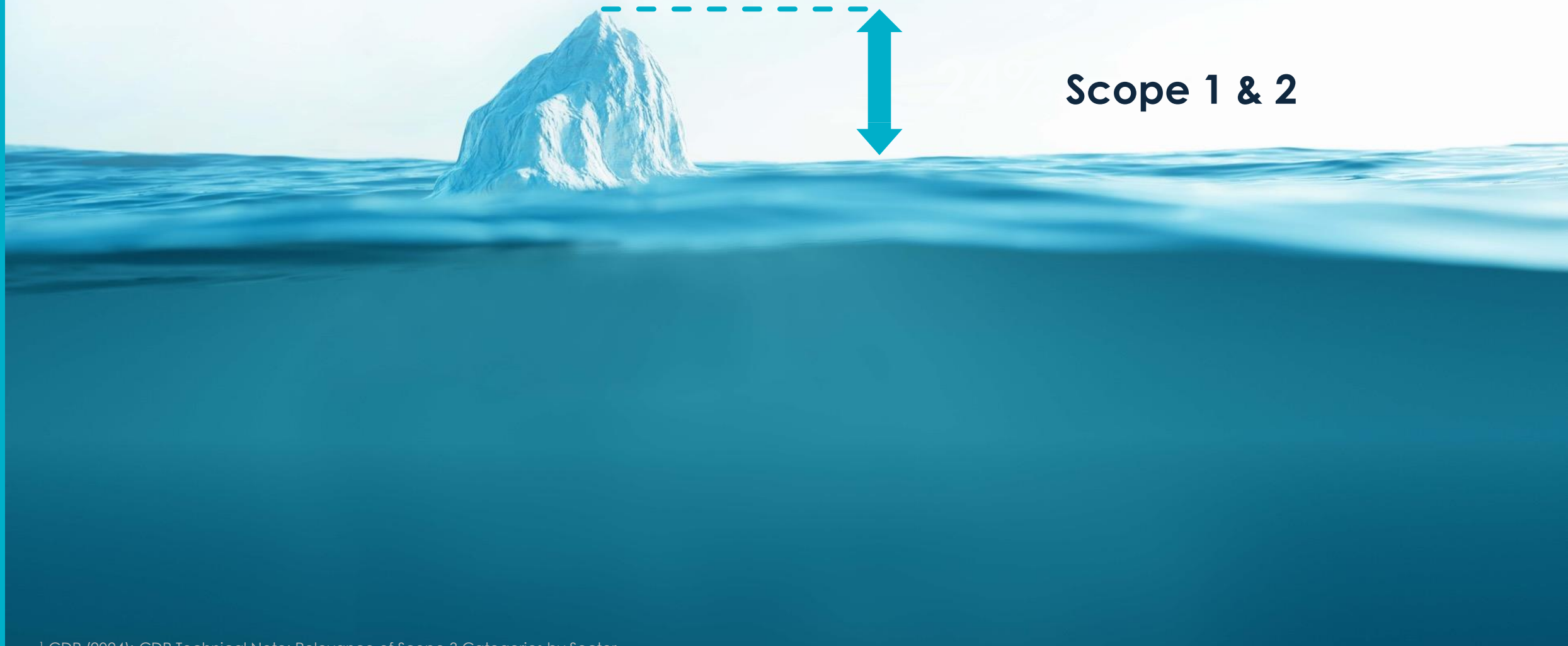
# Relevance of Emission Scopes for Corporate Carbon Footprints

Example: chemical industry<sup>1</sup>



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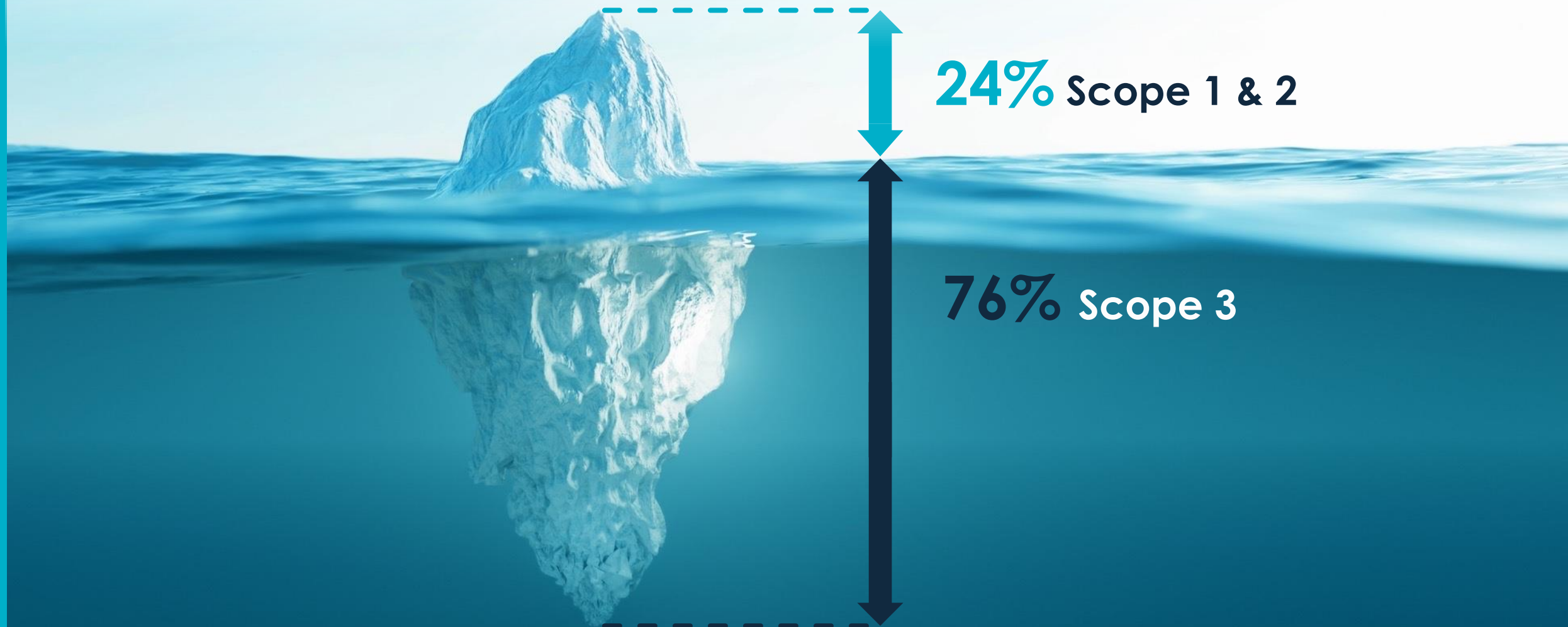
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<sup>1</sup> CDP (2024); CDP Technical Note: Relevance of Scope 3 Categories by Sector

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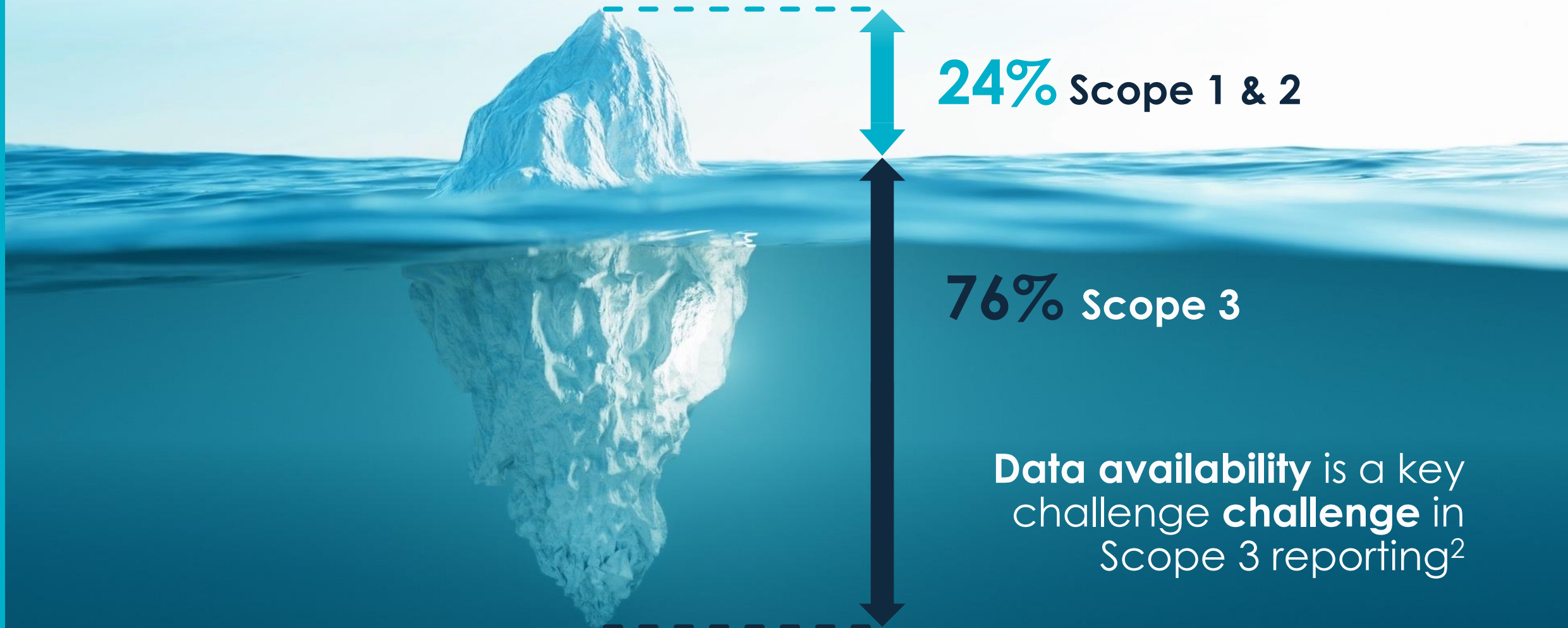


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# Relevance of Emission Scopes for Corporate Carbon Footprints

Example: chemical industry<sup>1</sup>



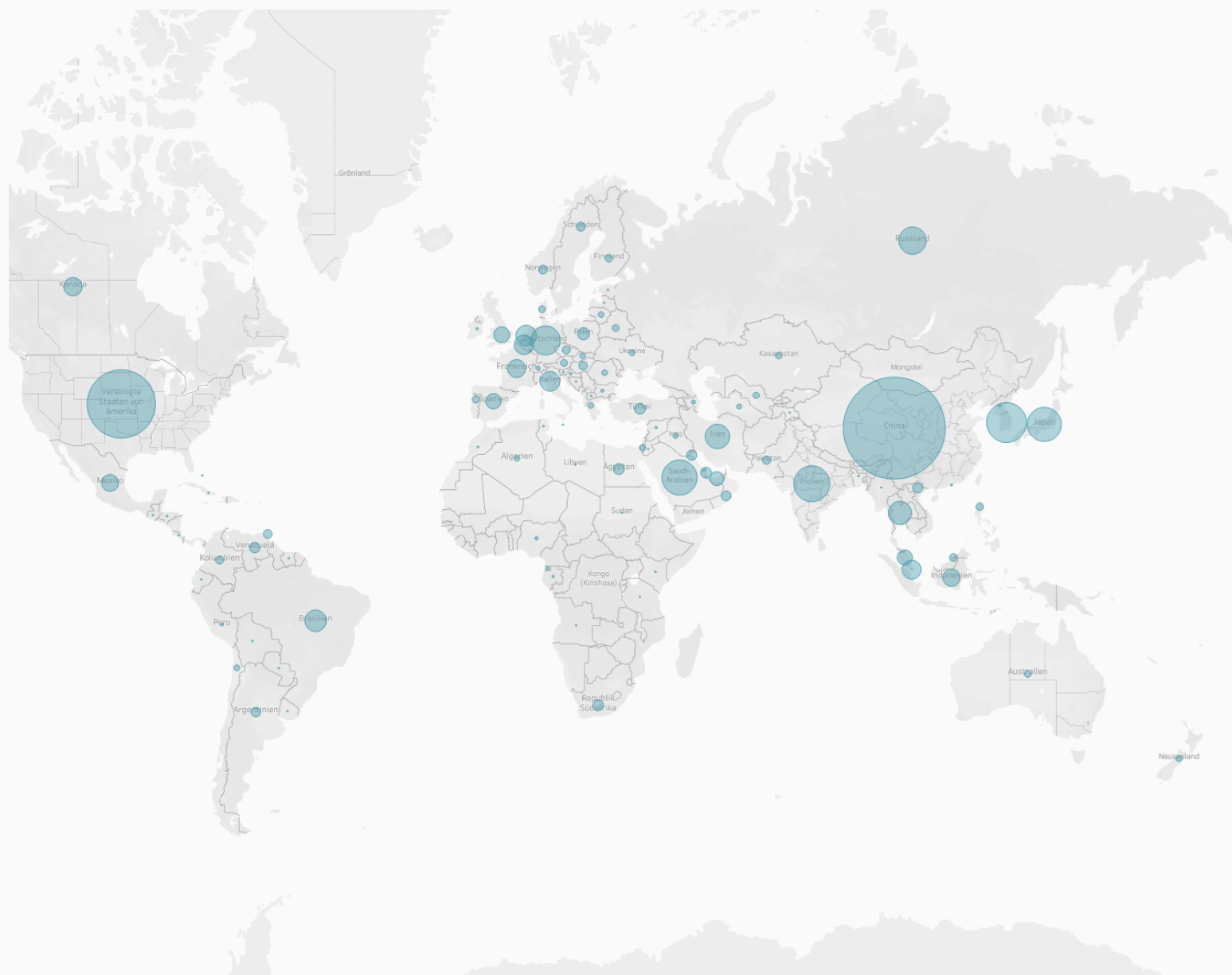
<sup>1</sup> CDP (2024); CDP Technical Note: Relevance of Scope 3 Categories by Sector

<sup>2</sup> SBTi (2023); Catalyzing value chain decarbonization

# Understanding the Structure of the **Chemical Industry**



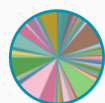
Production locations  
and volumes of  
chemicals



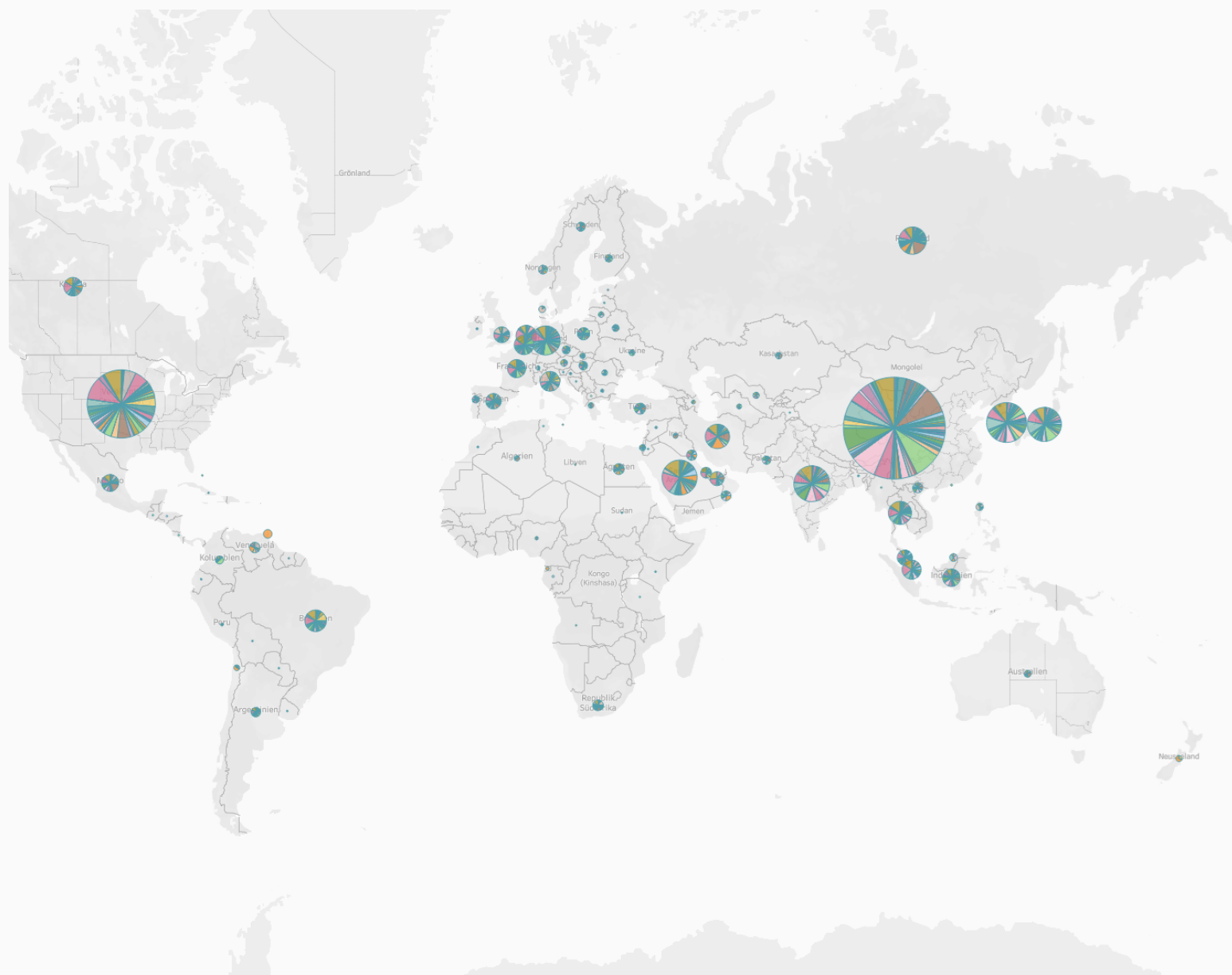
# Understanding the Structure of the Chemical Industry



Production locations  
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Technologies used  
and process  
parameters



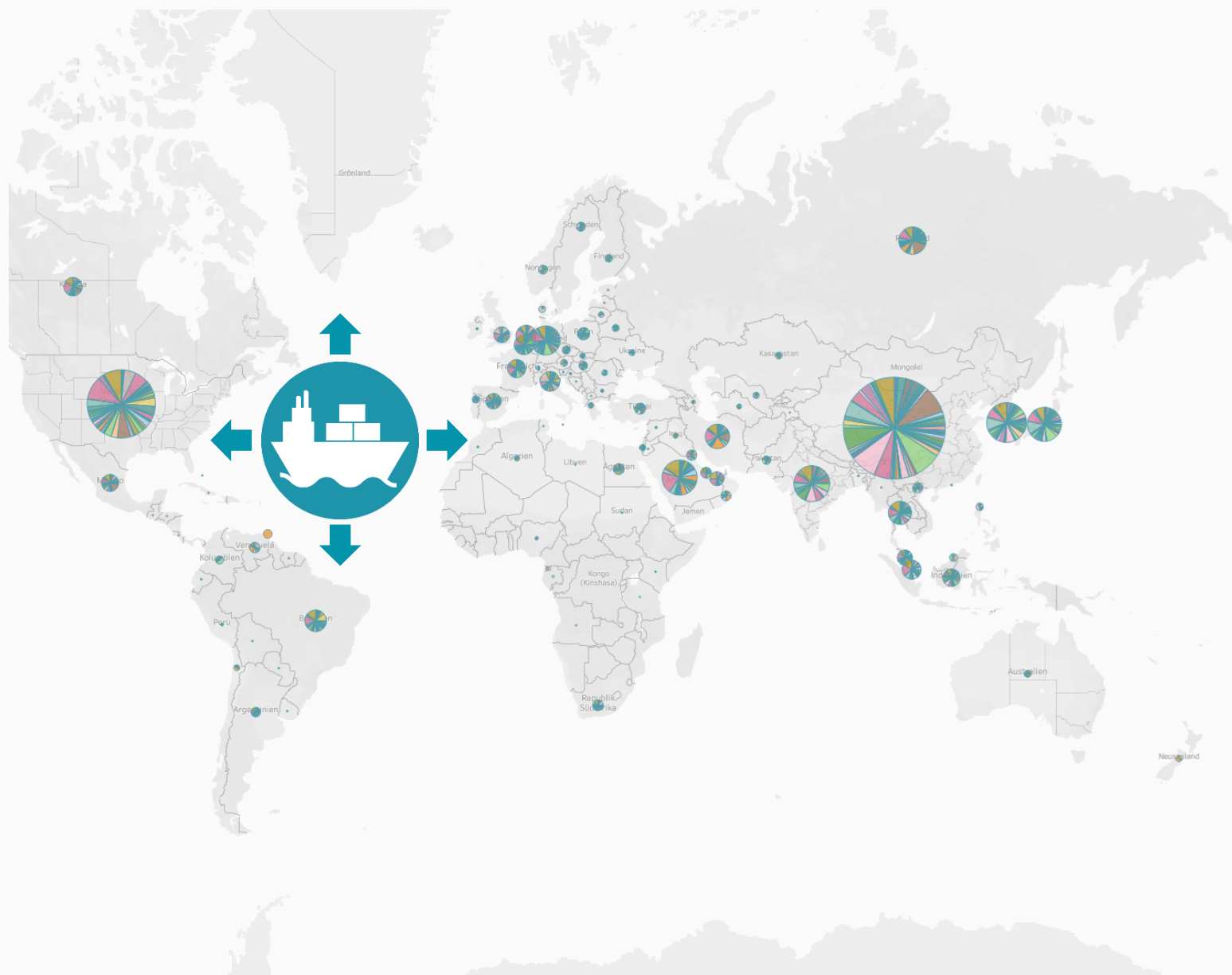


# Understanding the Structure of the Chemical Industry

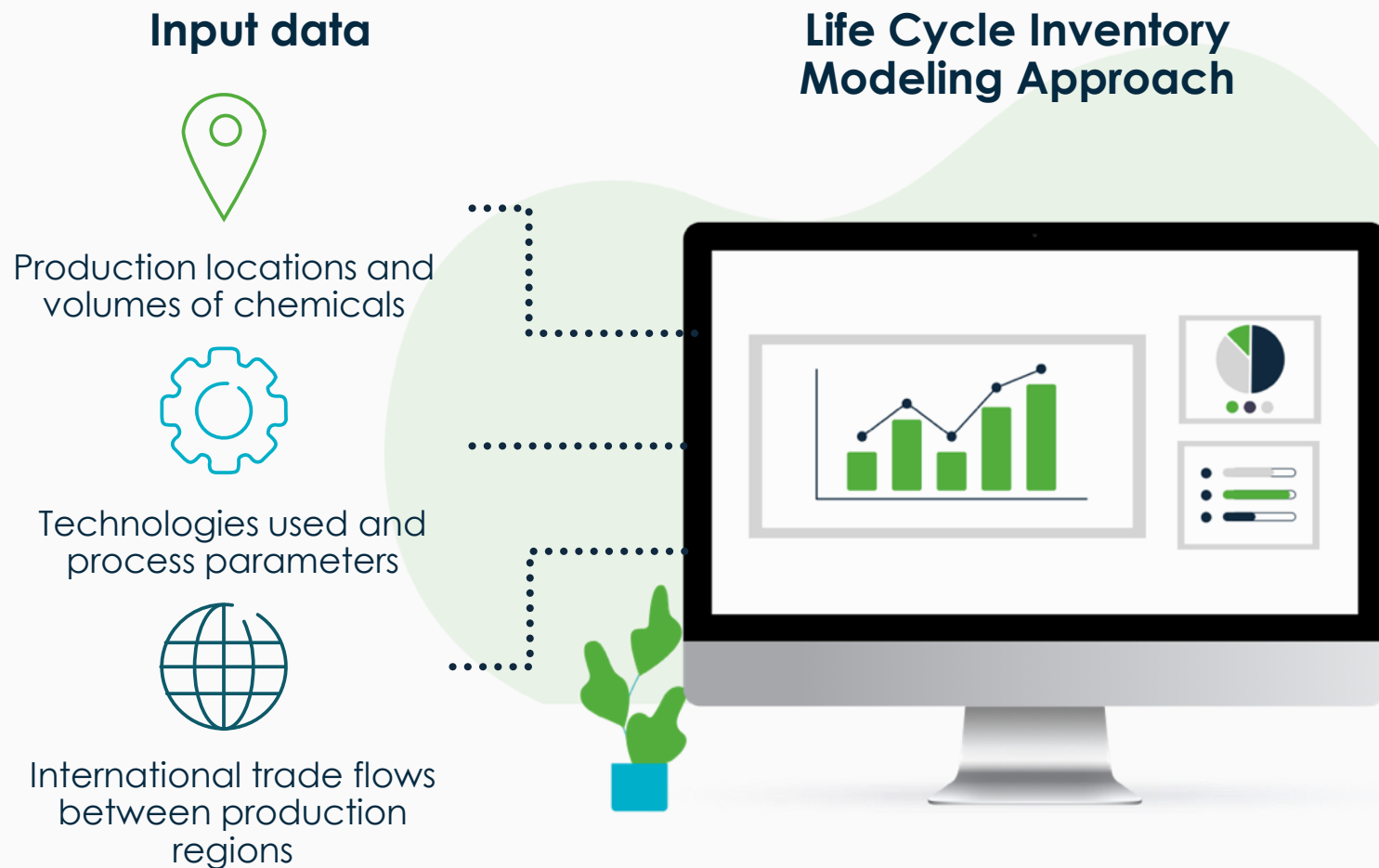
● Production locations and volumes of chemicals

● Technologies used and process parameters

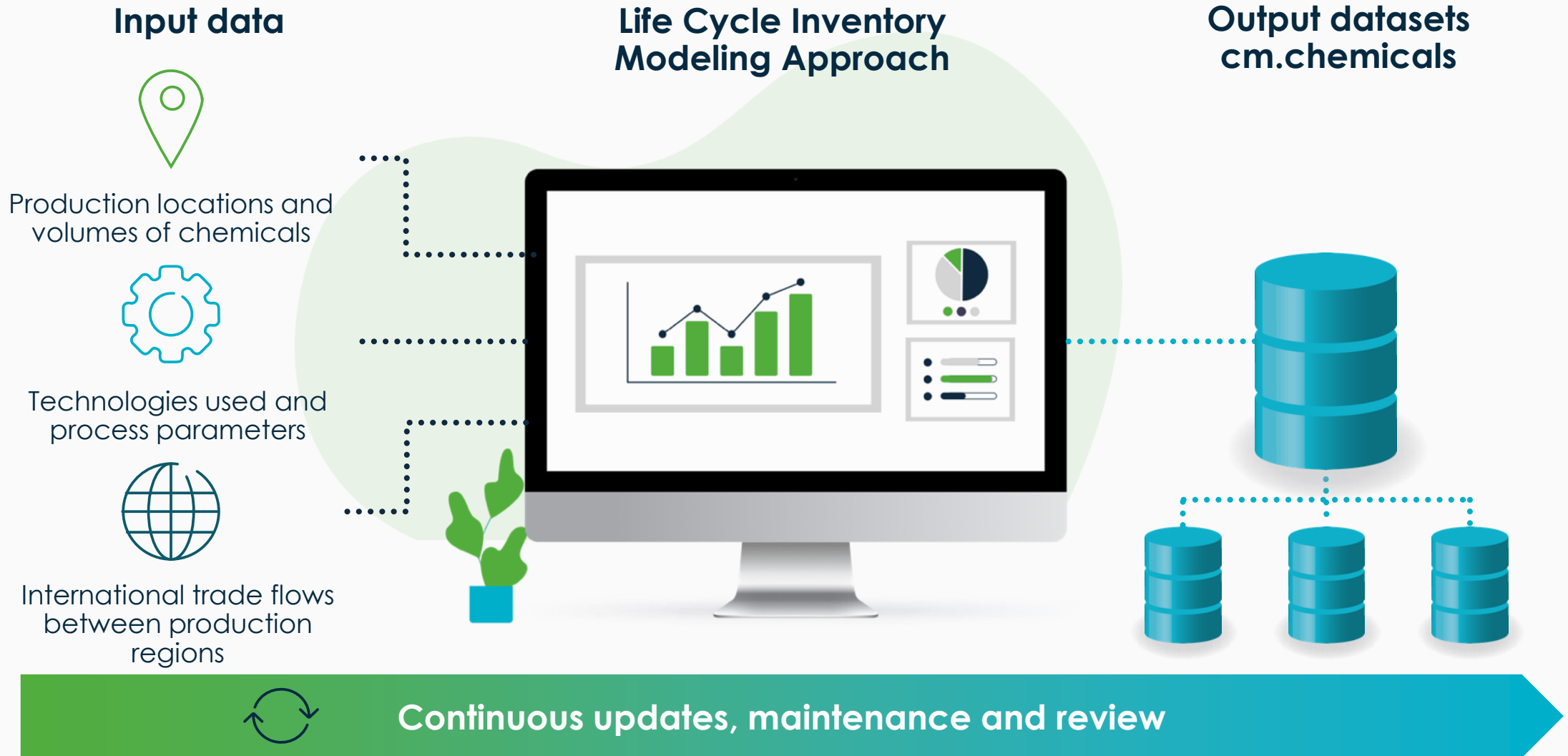
➔ International trade flows between production regions



# LCA – Carbon Minds database approach



# LCA – Carbon Minds database approach





## Coverage

130,000+ datasets covering 1,300+ chemicals and plastics

## Specific

200+ regions, various technologies, and individual suppliers

## Compliant

Methodology in compliance with ISO 14040/14044/14067, TfS and UEIL/ATIEL

# Consumption mixes: domestic production plus imports

Example: Polypropylene (PP)

## Large differences in climate impacts



Feedstock use



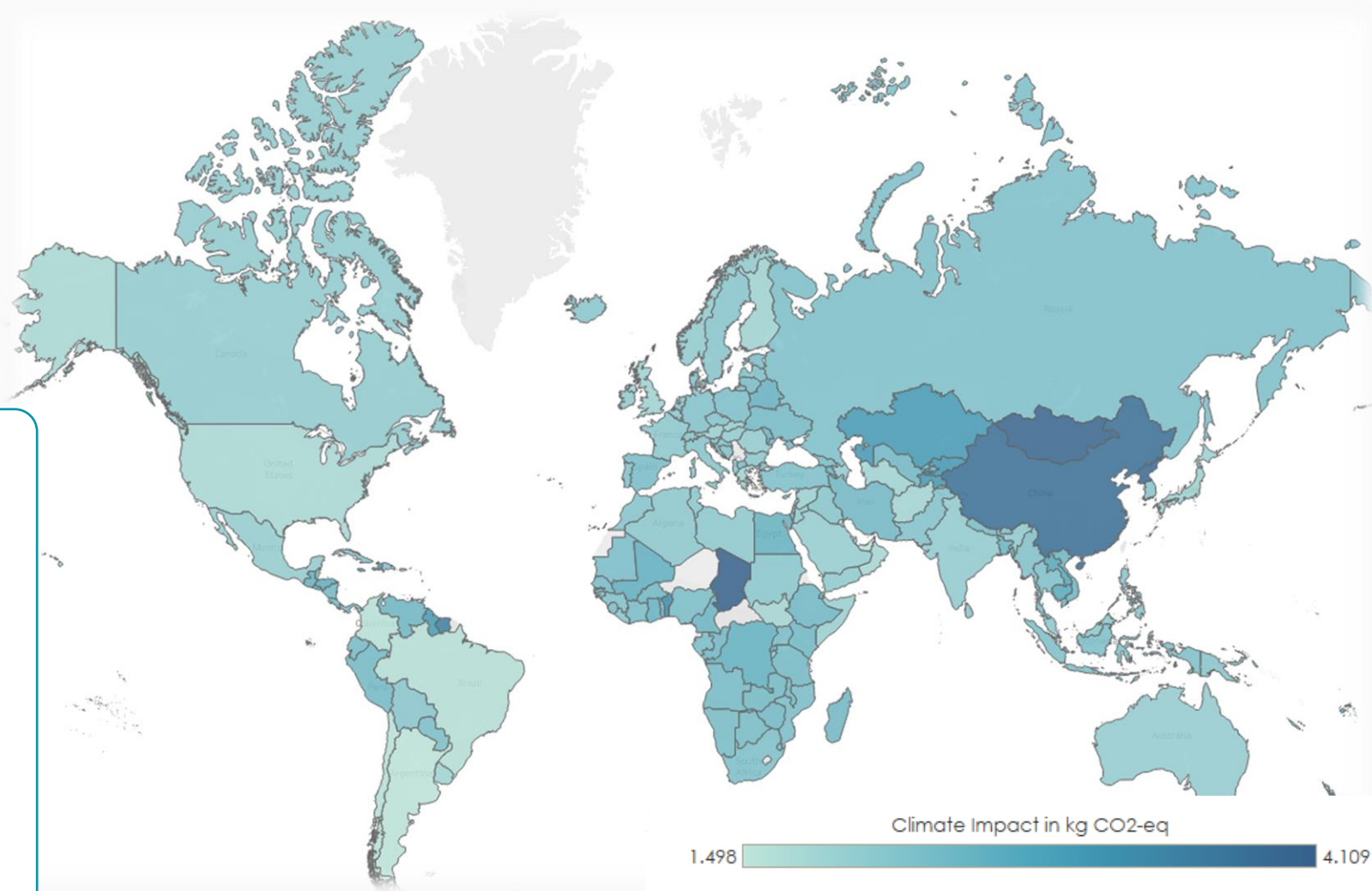
Technologies



Energy



Trade





# Production mixes: domestic production only

Example: Polypropylene (PP)

## Large differences in climate impacts



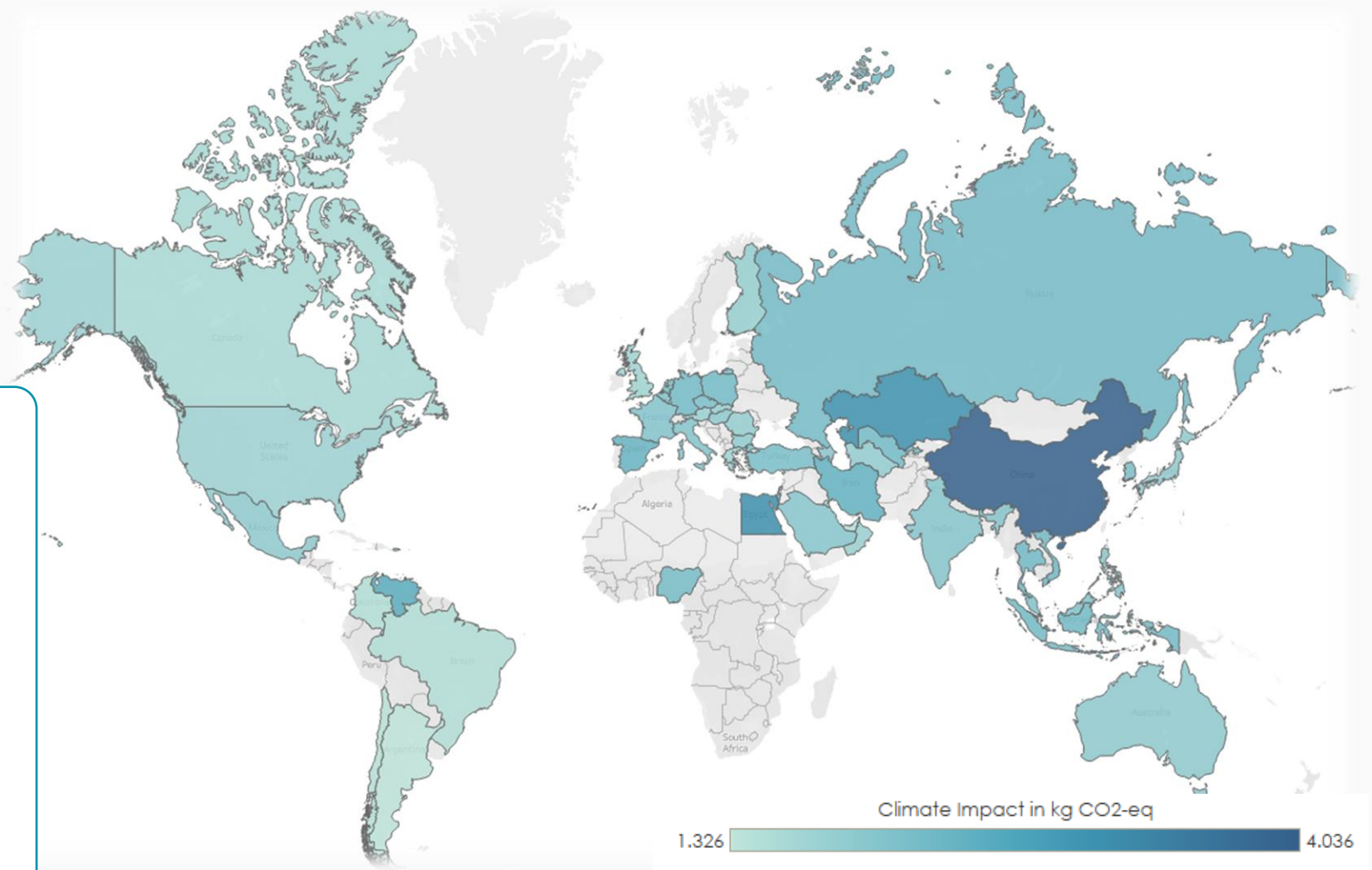
Feedstock use



Technologies



Energy



# Production mixes: domestic production only

Example: Polypropylene (PP)

## Large differences in climate impacts



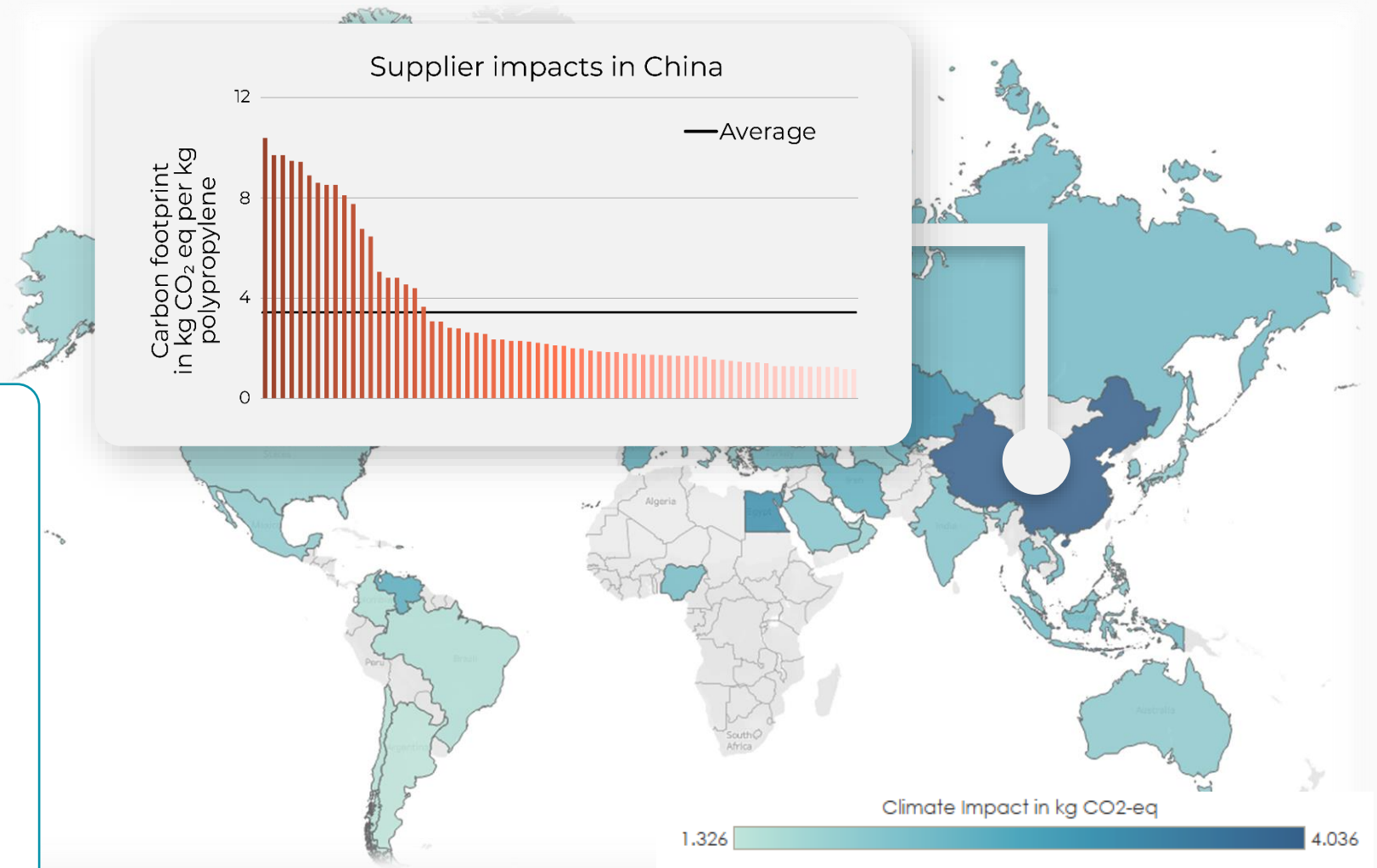
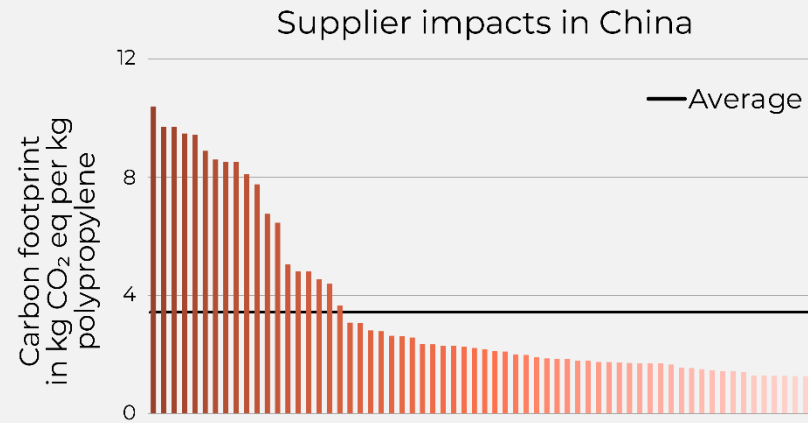
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Technologies

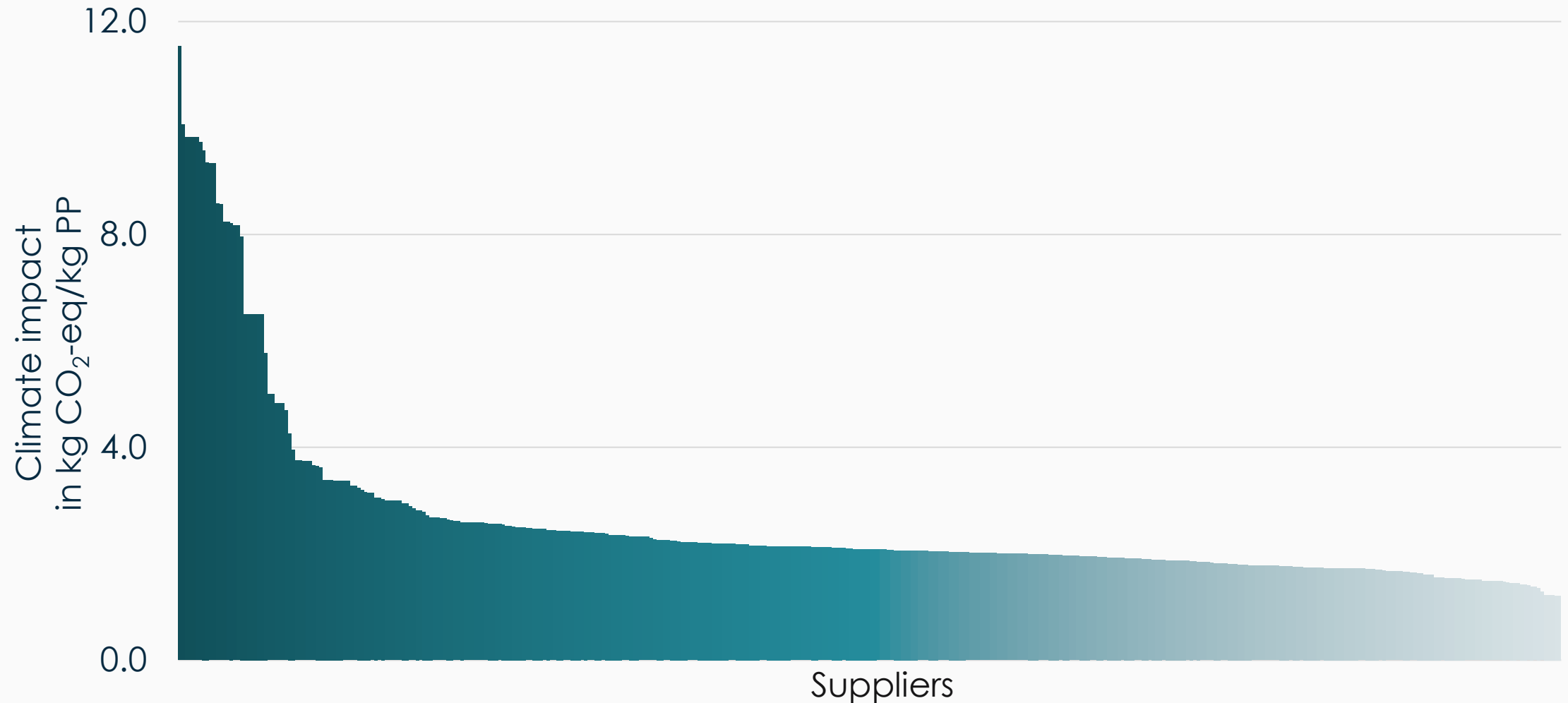


Energy



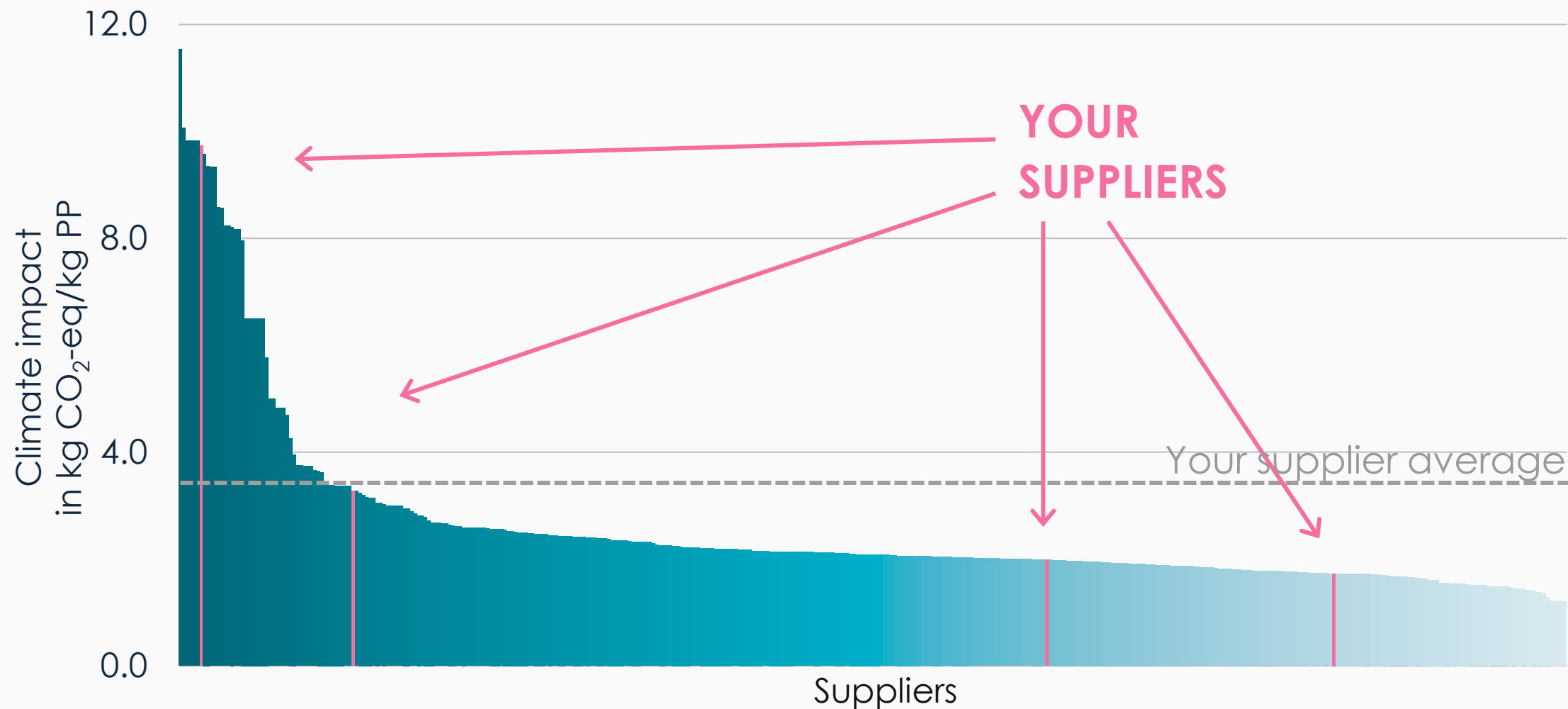
# Differences in Climate Impacts based on Production Technologies

Example: Polypropylene (PP) production



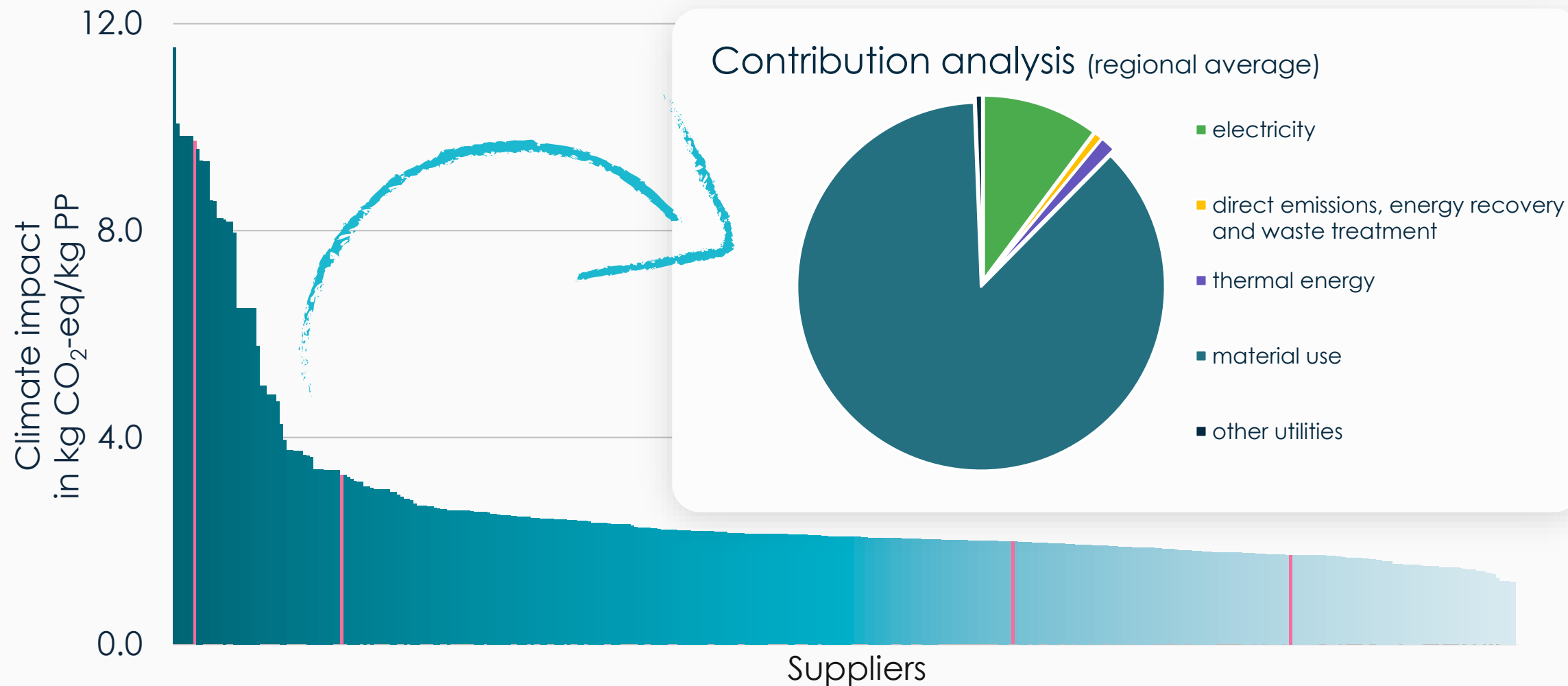
# Account for your own supply chain emissions for your PCFs

Example: Polypropylene (PP) production



# Engage with your suppliers based on solid data

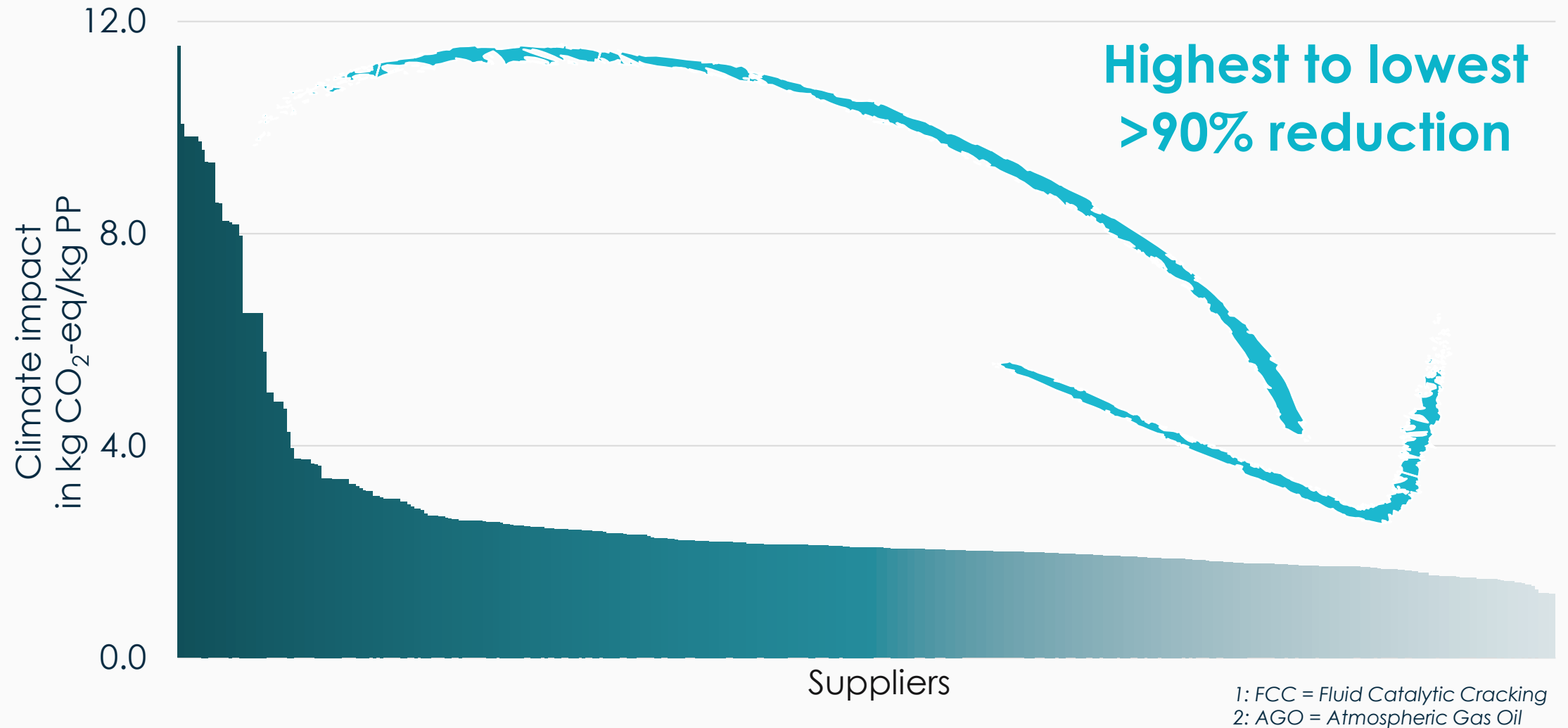
Example: Polypropylene (PP) production





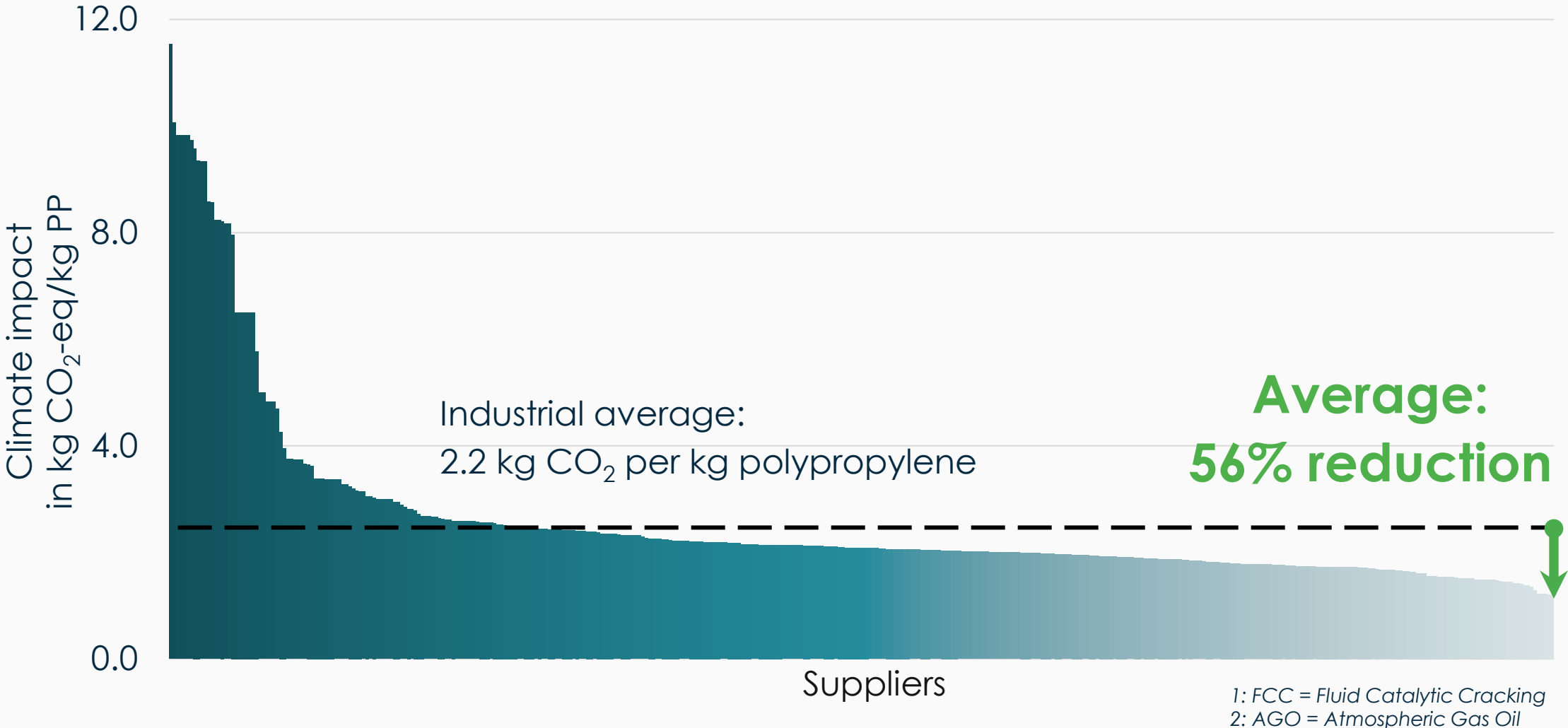
# Reduce emissions though purchasing decisions

Example: Polypropylene (PP) production

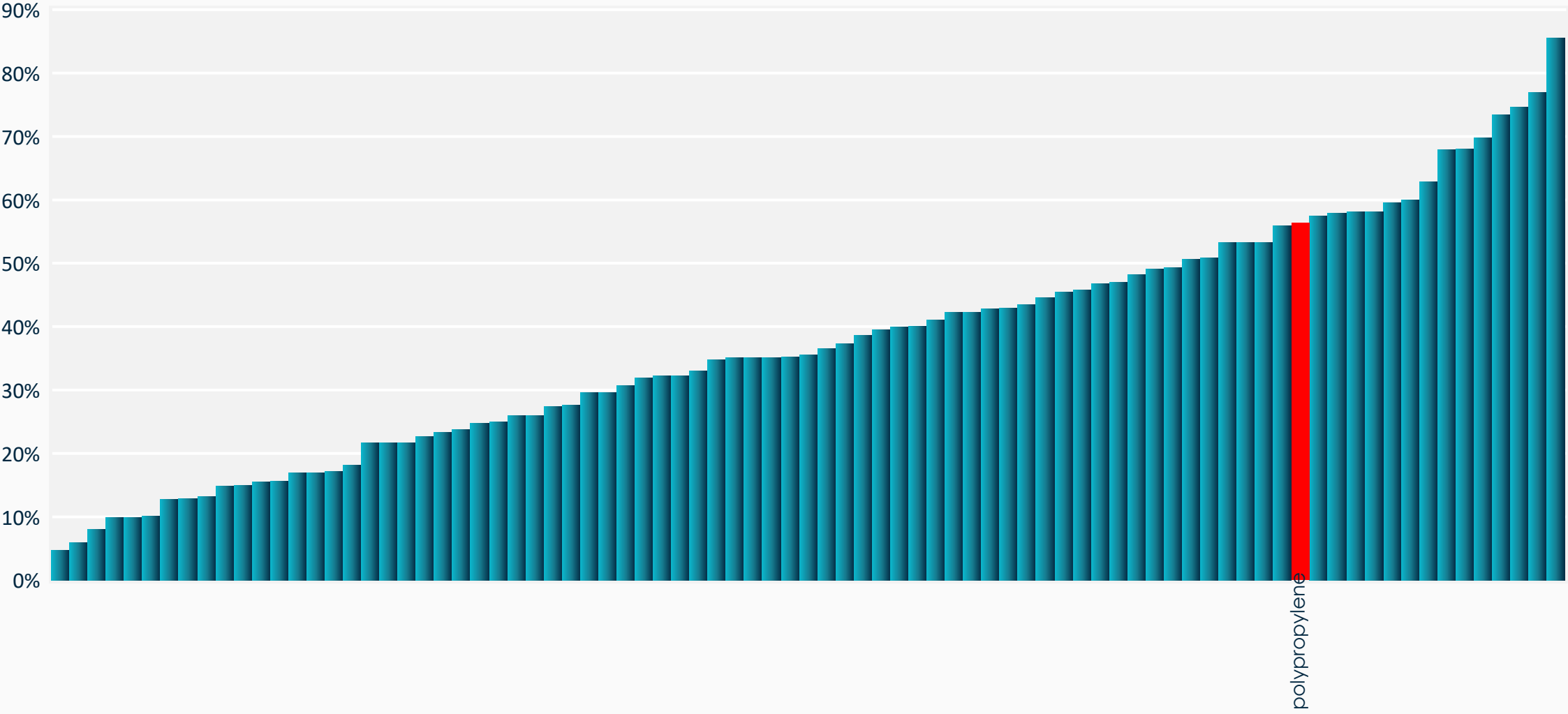


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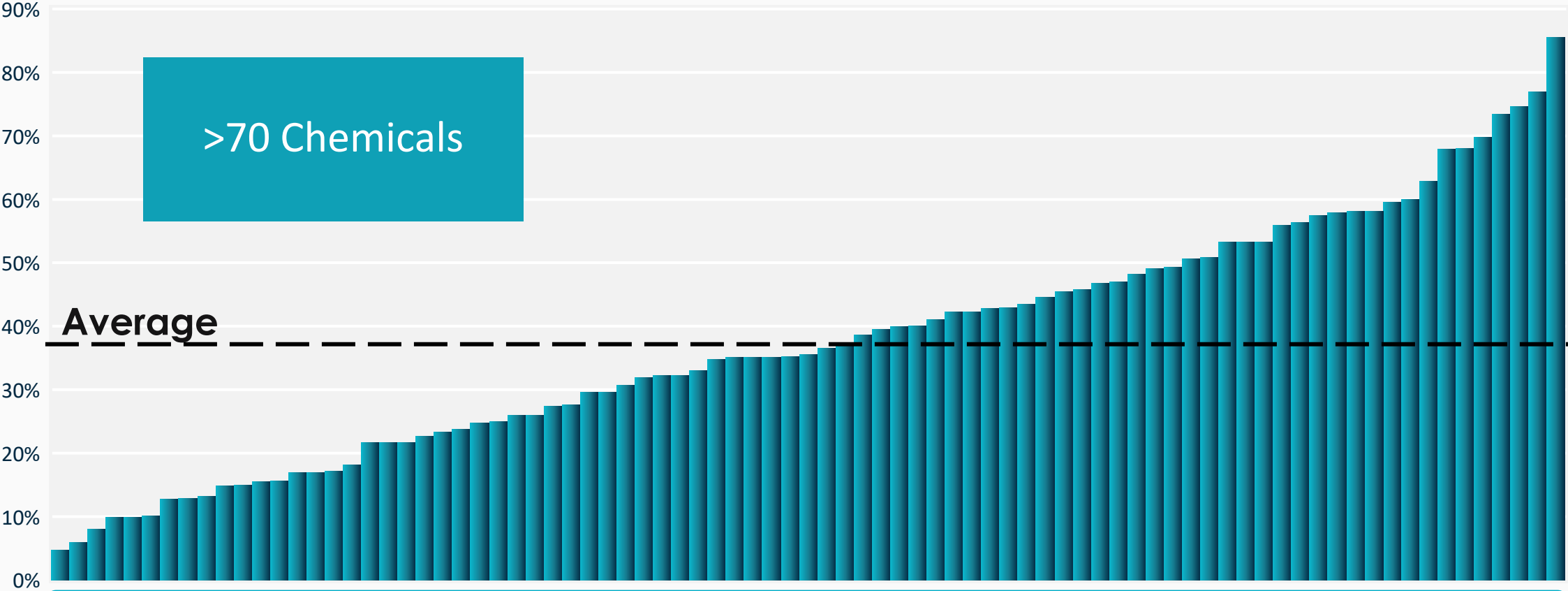
Example: Polypropylene (PP) production



# Average Climate Impact Reduction: *Polypropylene*



# Average Climate Impact Reduction:



Large reduction potential through optimization:  
38% climate impact reduction potential on average

# Carbon Minds data suite for Scope 3.1

## Data



- PCF and LCA data for chemicals and plastics
- 100,000+ datasets covering 1300 chemicals in up to 200 production regions
- Country averages for production, consumption & technologies, as well as contribution analyses

## Supplier Footprint Analytics

New

- Supplier-specific PCF and LCA data
- Covers nearly all suppliers for 72 commodities in all production regions
- Benchmarking and contribution analysis

## Service

- **Implementation:** Automated matching services for large product portfolios
- **Closing data gaps** through detailed modelling & proxy suggestion engine
- **Consulting & training:** Net zero pathways, PCFs, LCAs and capacity building



## Summary

# The role of supplier-specific PCFs for Scope 3 targets



Quantify your supply chain emissions



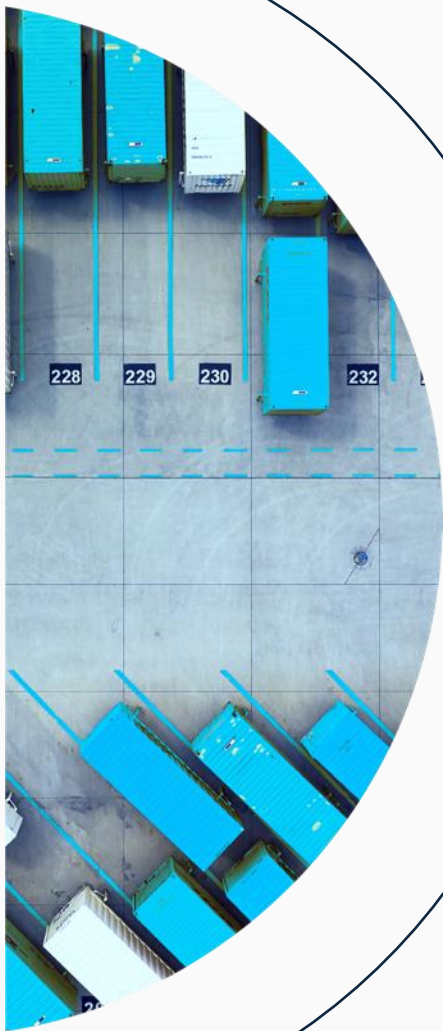
Benchmark and engage with your suppliers



Identify emission reduction opportunities



Systematically reduce your supply chain emissions



# Thank you!

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