



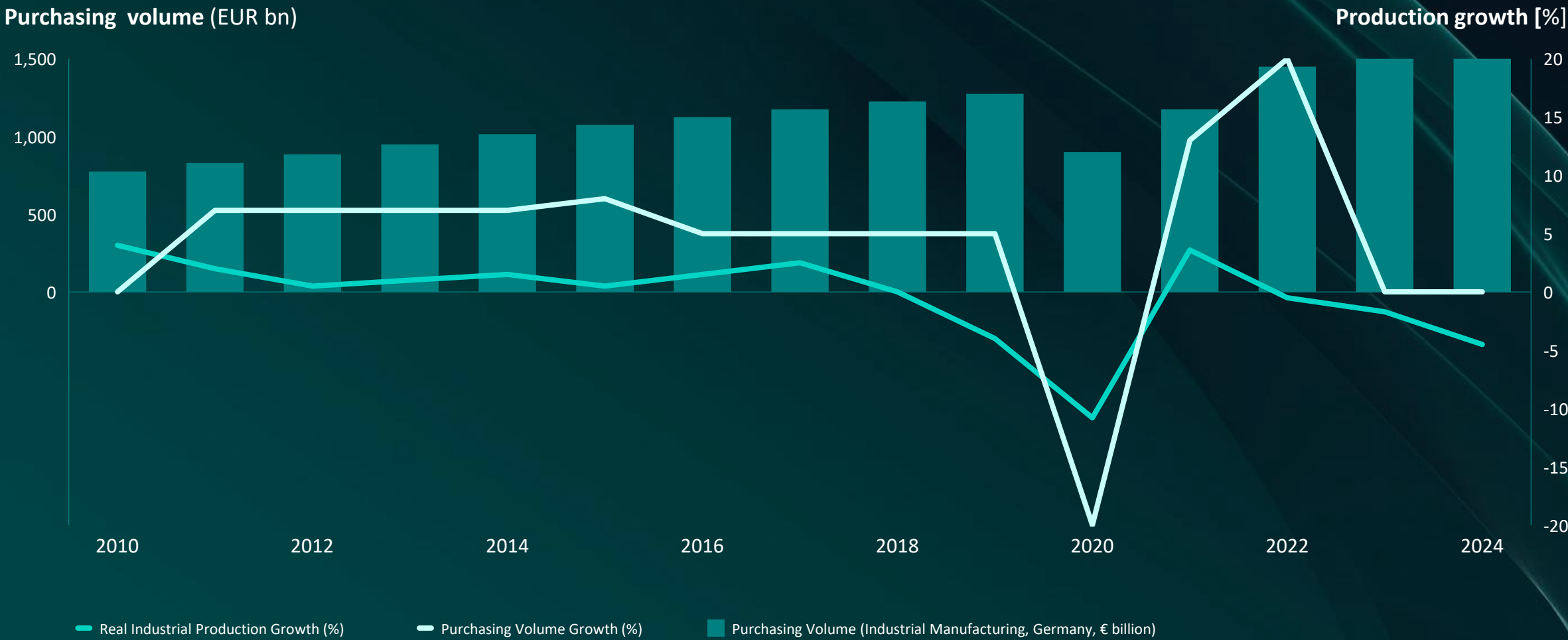
Solving the Procurement Paradox

Onventis Xchange

October 16th 2025

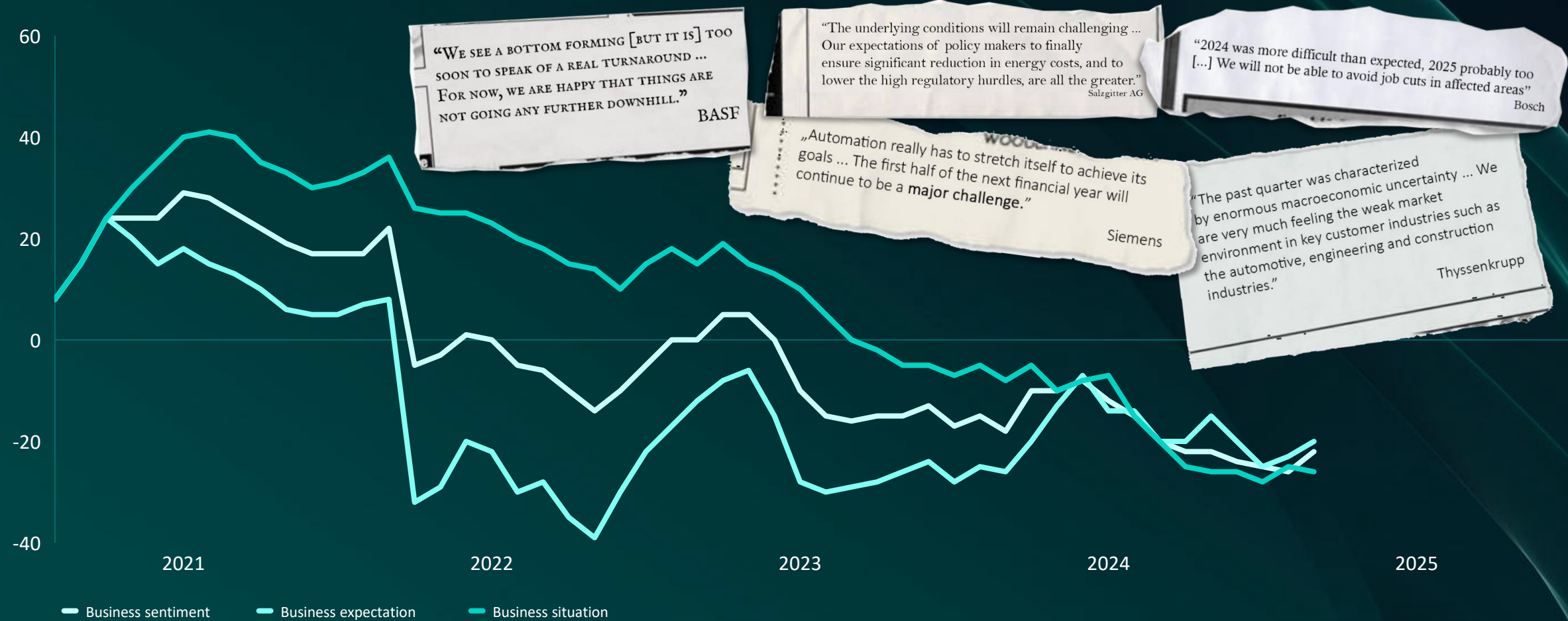
Roland
Berger

The Procurement Paradox – Purchasing volume outpacing production growth



Negative cost development mirrored by declining sentiment 4 years running

Economic survey German Industrial Manufacturing companies



VUCA (on steroids) is the new normal – Are you prepared?

Macro-economic development impacting costs



Surveys show, organizations feel the heat but are only partially prepared for it

Selected metrics regarding macro-economic trends



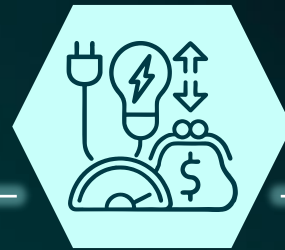
Persistent Inflation Pressure

Inflation is rated the #1 short-term risk by manufacturers



Ongoing Supply Chain Disruptions

Only 16% have full supplier risk visibility



High Energy Prices and Volatility

76% of industrial firms see high energy costs as a serious risk



Climate Change and Extreme Weather Risks

Only 33% implemented emissions cuts, 21% tackling supply-chain (Scope 3) emissions



Trade Tensions and Protectionism

48% plan investments in North America (record high)

Investments in future resilience need funding - Double-edged strategy required

Rebound

Claw back price increases

Contract renegotiation

Supplier rationalization

Game theory and mechanism design

AI supported tail-end optimization

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2

Prepare

Enable the organization to persist in a world in crisis mode

Diversification of Supply Base & Geographical Risk Management

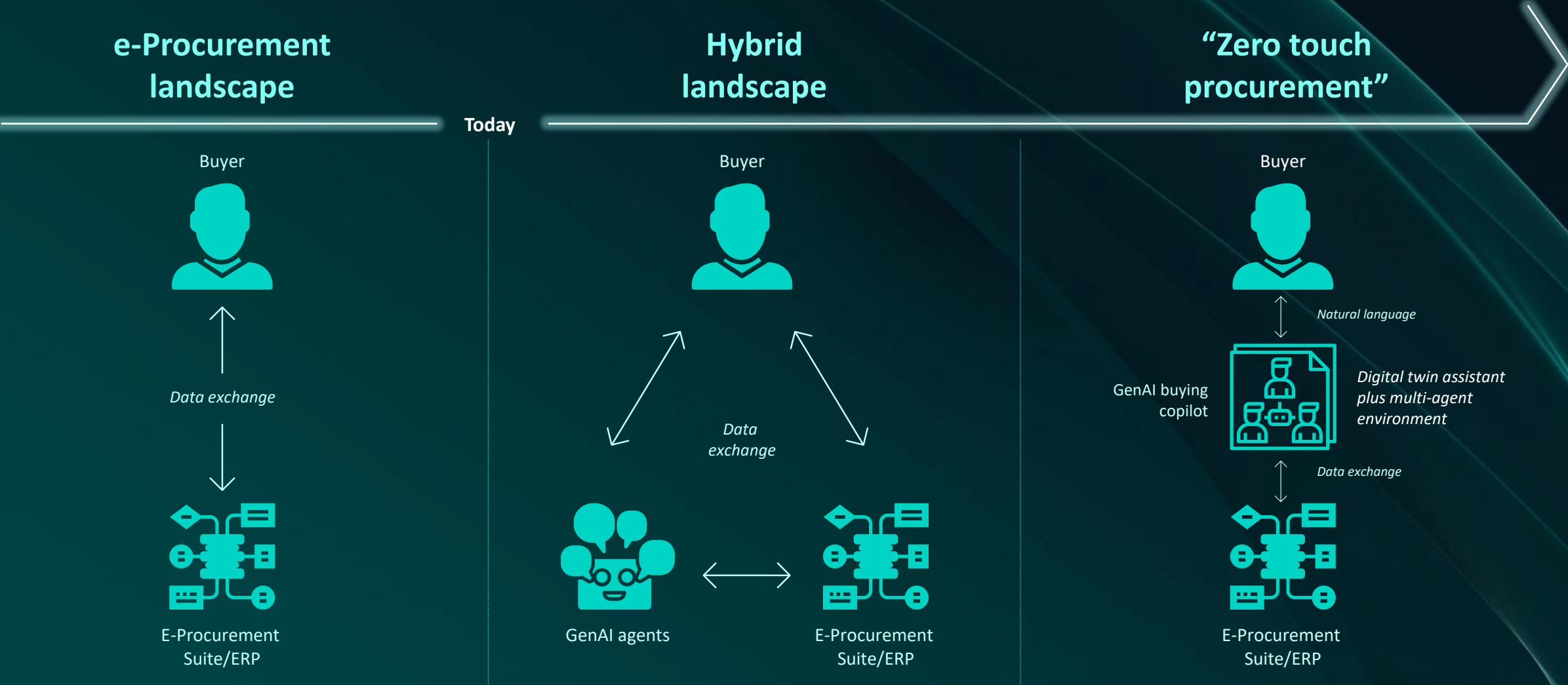
Dynamic Pricing and Hedging Strategies

Connecting supplier and customer contracts

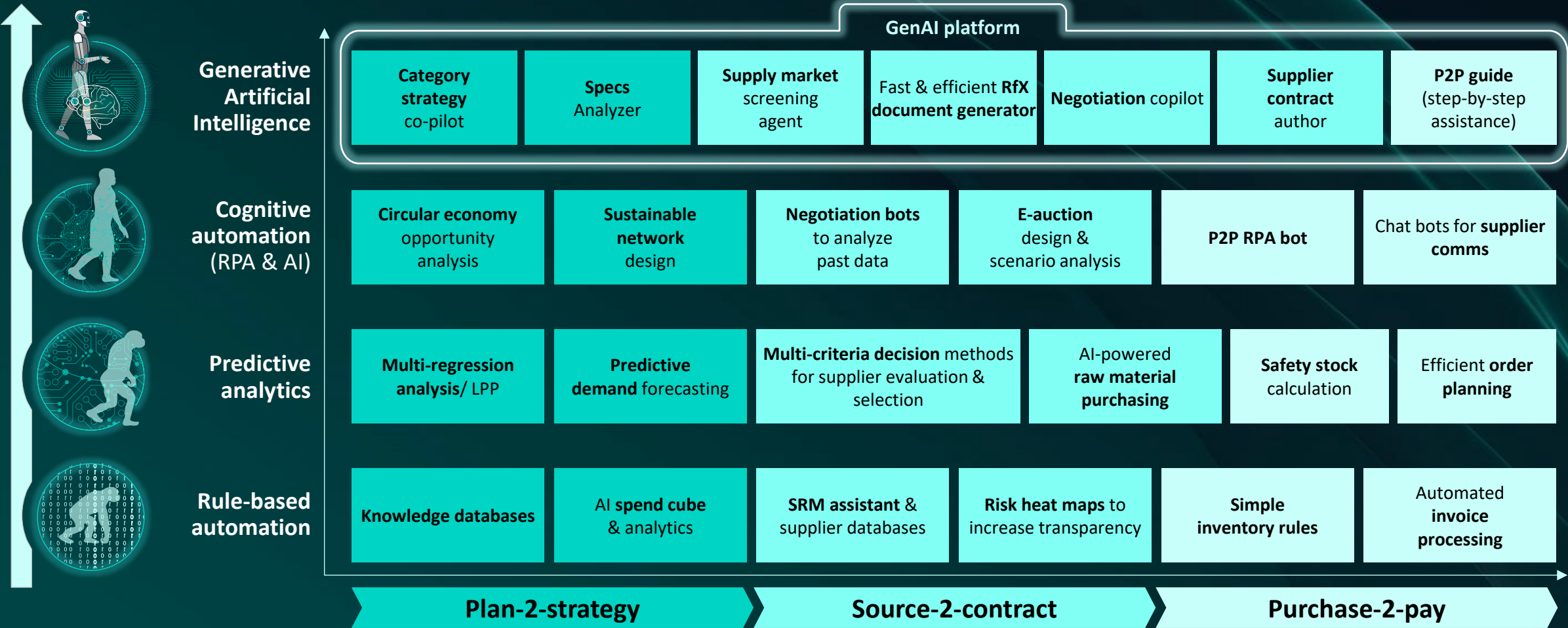
Decarbonizing Scope 3 emissions

...

GenAI will increasingly operate procurement tools...



...established along the entire procurement process



Procurement organizations are already using AI

Roland Berger CPO Best-Practice Sharing Survey end of 2024
For which tasks do you already use or intend to use GenAI support?



Game Theory is neither new nor highly innovative – But: AI is changing the game

Game theory is a Nobel-prize winning framework for analyzing:

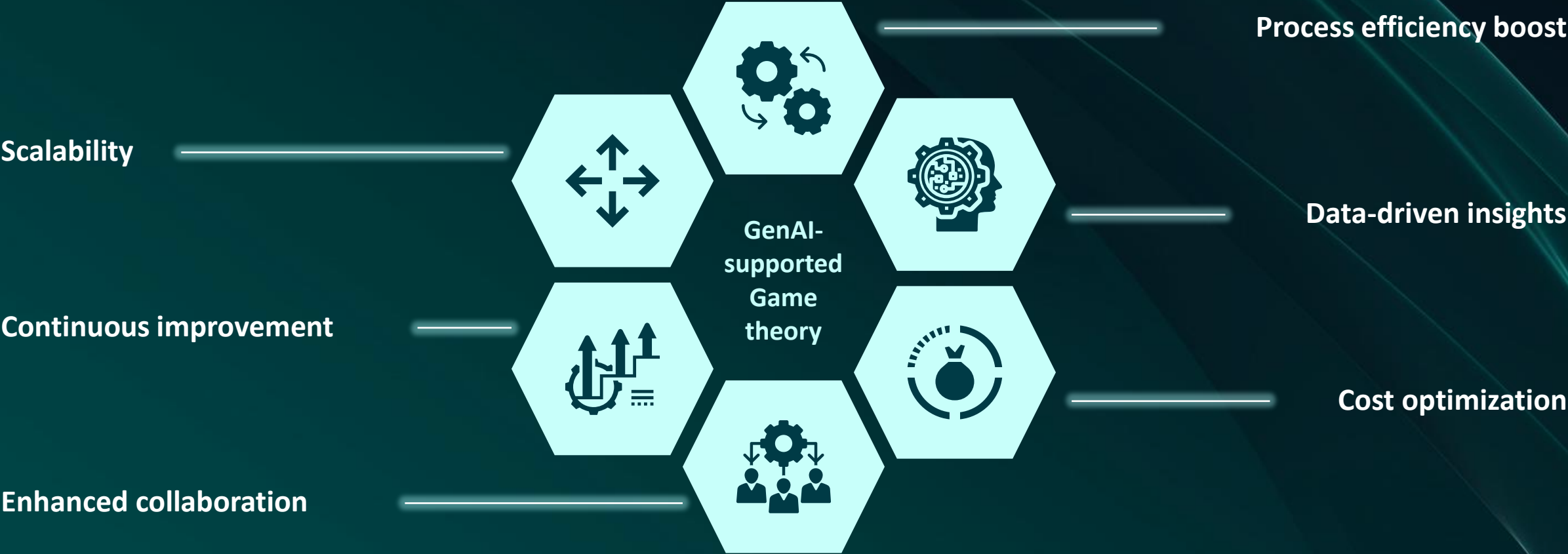
- **Interactions** between different parties (e.g., buyers and sellers in a negotiation)
- Reaction to **incentives** (e.g., unintended consequences of poor contract clauses)
- Design of interactive **mechanisms** (e.g., tender, auctions, and competitive negotiation processes)



The most immediate applications of game theory in Procurement are **auctions and competitive negotiation processes**



GenAI can improve an extensive part of the E2E procurement process



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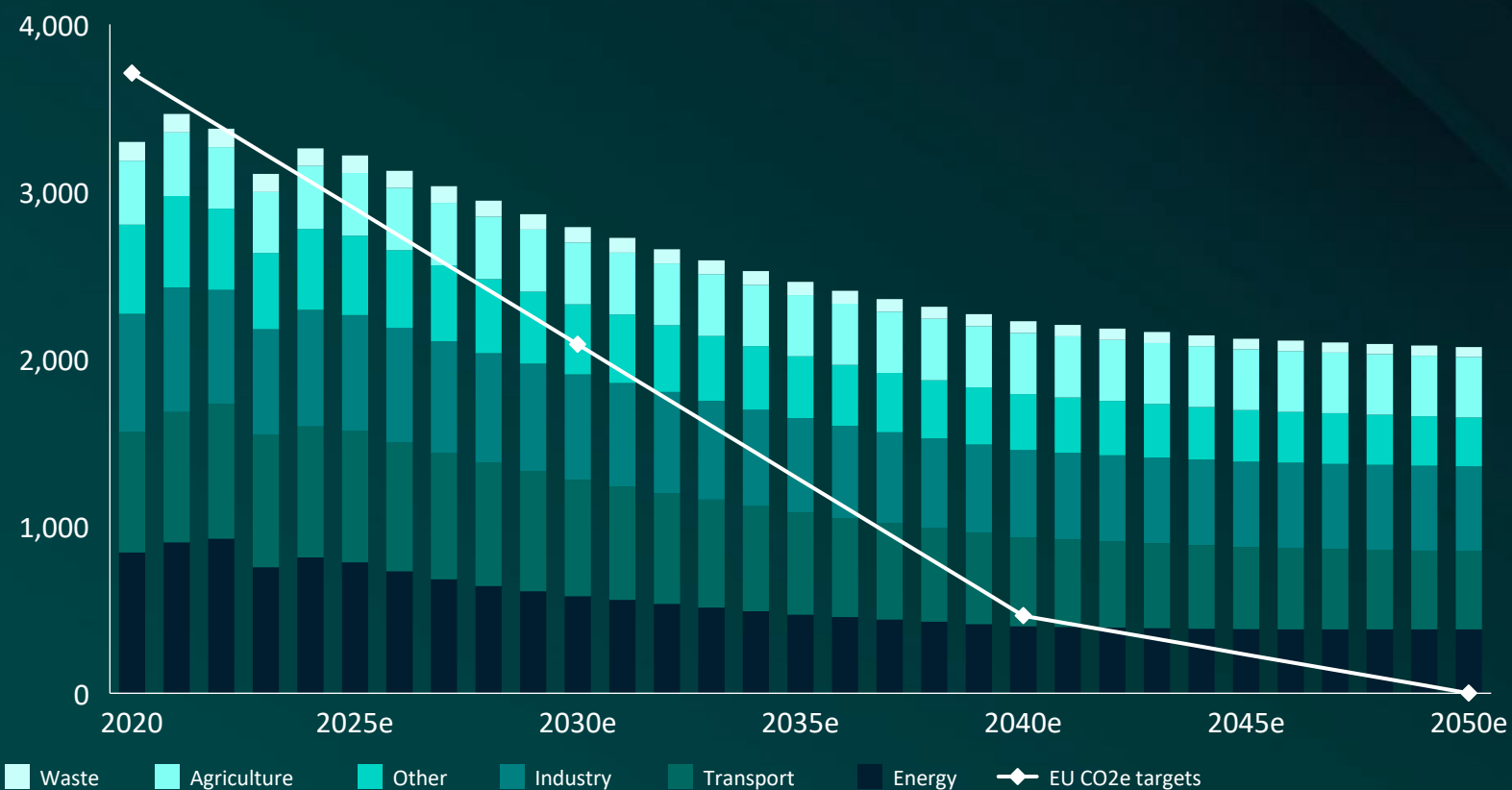
Decarbonizing Scope 3 emissions

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The quiet deadline: With the EU ETS and CBAM, the EU climate targets do not wait for public opinion – Yet, we are far away from reaching our targets

Projected CO₂e emissions of EU-27 vs. EU emission targets

CO₂e emitted across sectors¹⁾ [mt]



1) Excluding Land Use Land Use-Change and Forestry; 2) CBAM: Carbon Border Adjustment Mechanism

Source: European Environment Agency (EEA)

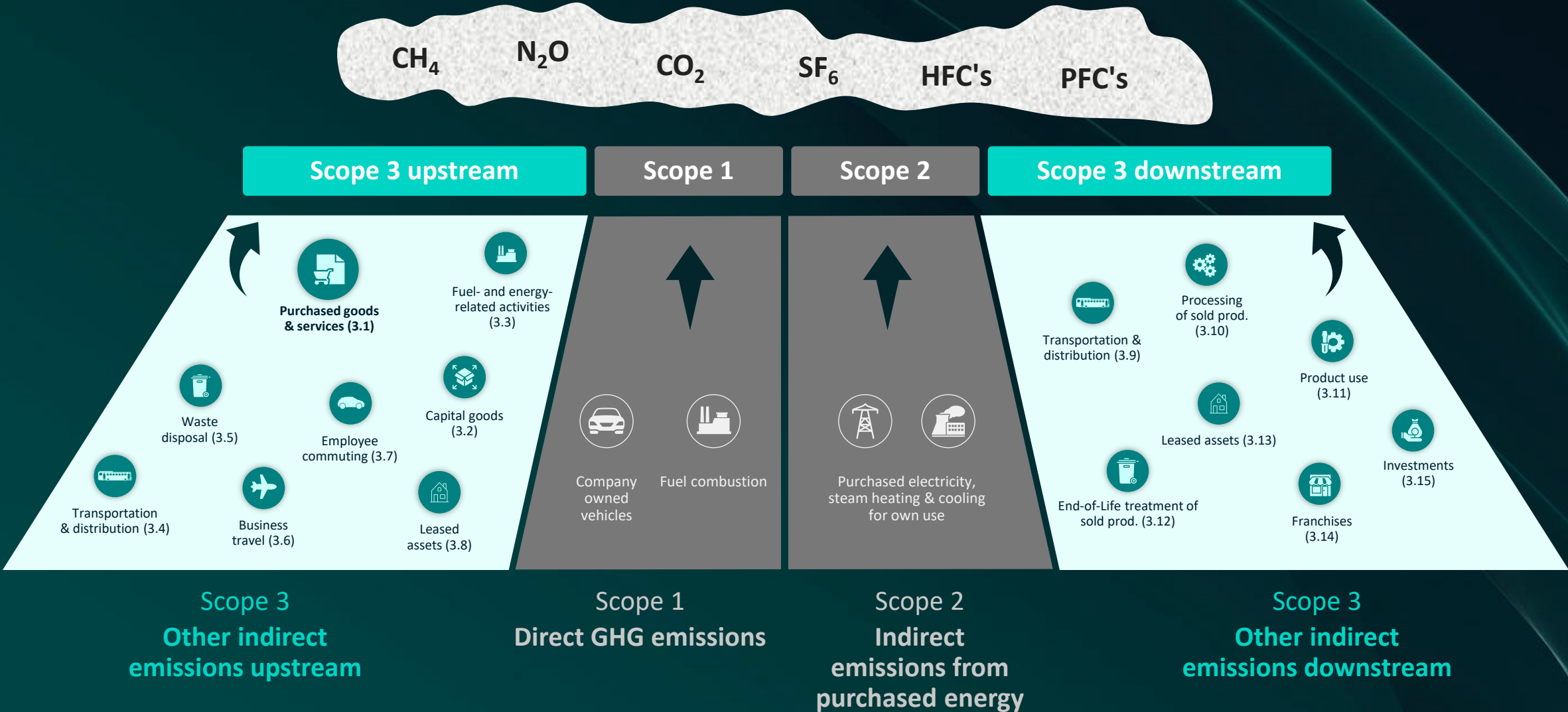
Increasing pressure and complexity

- **EU emissions target** legally binding and enforced via **EU ETS (Emissions Trading System)**
- **Free allocation** of allowances will be **phased down** progressively as **CBAM²⁾** is ramped up
- Increasing pressure due to **"cap and trade"** mechanism (certificate volume reduced by c.4.4% p.a.)



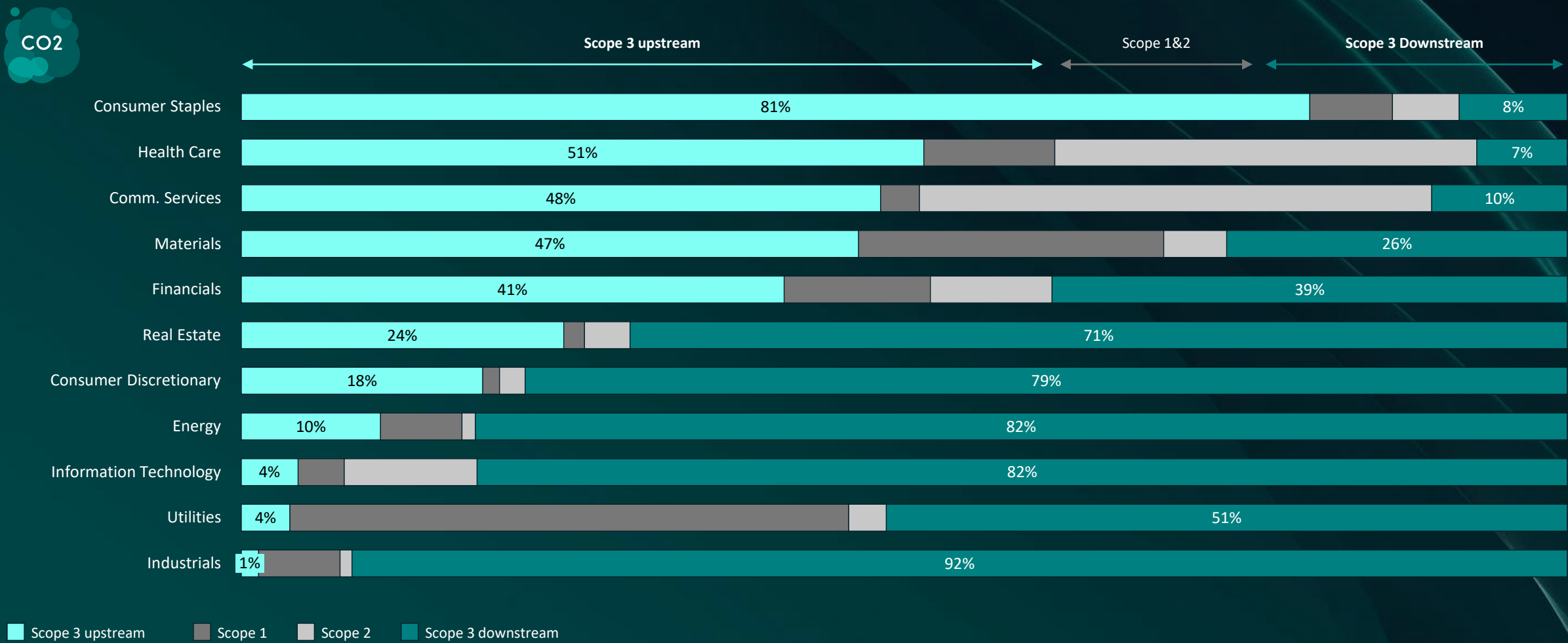
Companies must be prepared to **quantify, track and reduce CO₂ emissions**

Scope 3 emissions not owned or controlled by the company



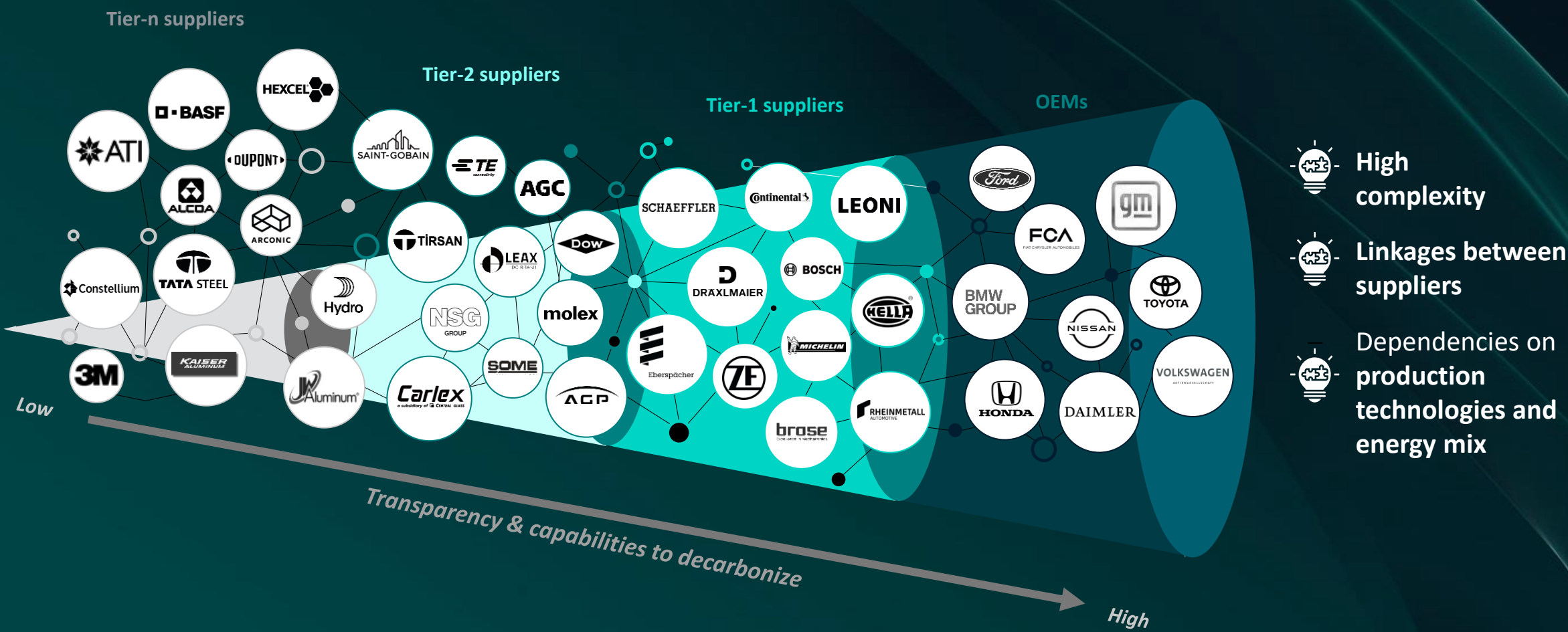
Yet a significant share of emissions allocated in Scope 3

Share of scope 1, 2, 3 by industry sector [%]



To make it even trickier, Scope 3 upstream decarbonization is complex


Supply chain complexities (Example: Automotive)



The most emission-contributing suppliers need to be identified on a spend-based and/or mass-based approach to gain CO₂e transparency along the supply chain

Spend & mass-based supplier segmentation

Spend-based assessment



➡ Less granular but better data availability

Mass-based assessment



➡ More accurate, but data availability and mapping of components to suppliers is tricky

Required input

Spend data



Mass breakdown



Emissions factor database



(IPCC Emissions Factor Database)



(Climatiq Database)



(Ecometrica Database)

GenAI use cases

Sustainability rating automation

Emission factor classification

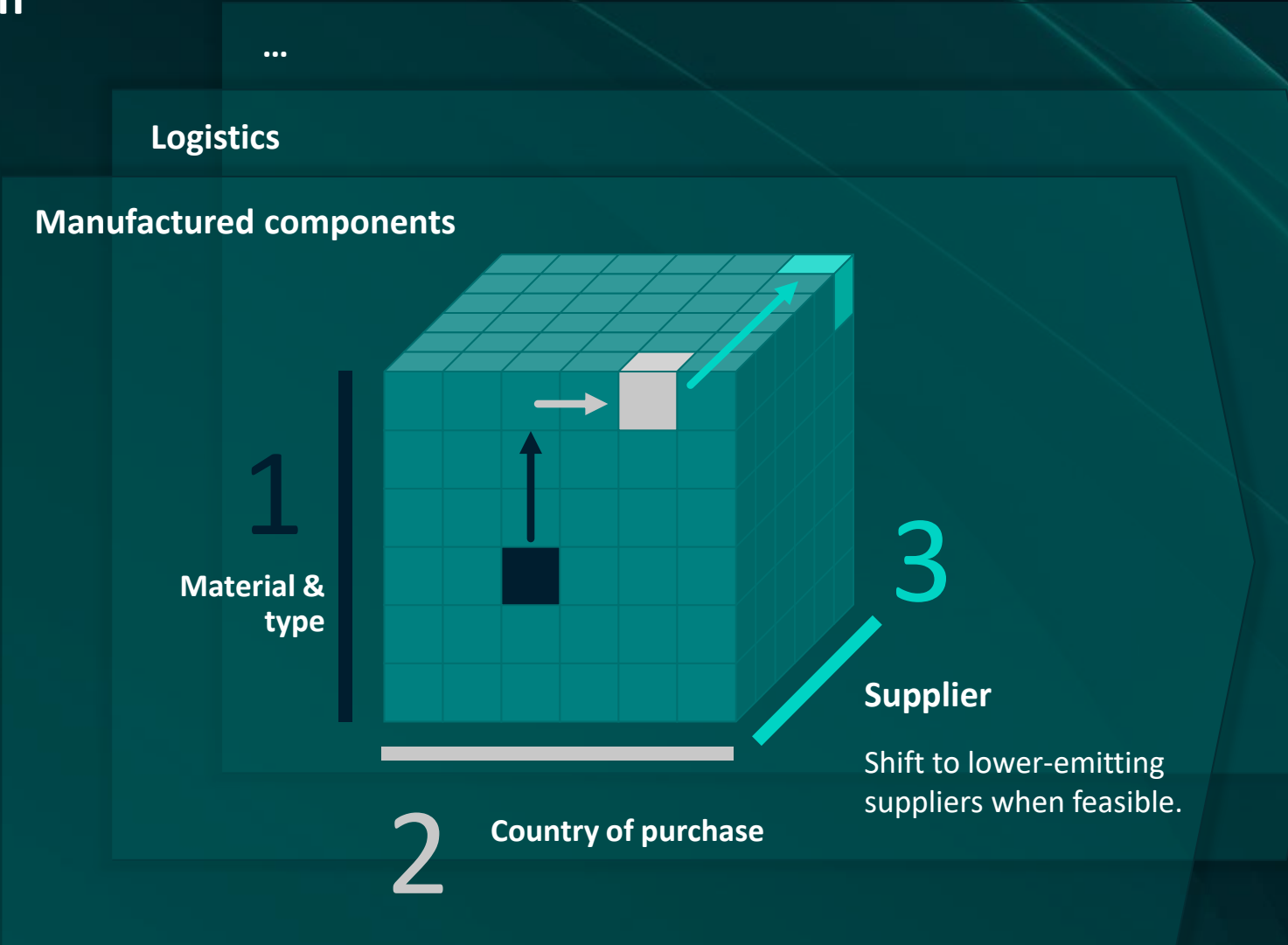
Automated emission tracking

AI-powered mass breakdown (e.g., based on CADs)

Roland Berger | 17

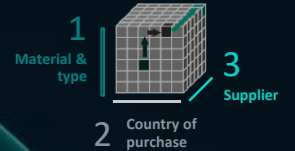
Carbon intensive components
require a holistic emission
reduction approach

Replace materials or
services with lower-
emission
alternatives



Evaluate your supplier's location and material sources

Proven reduction levers support the approach – The dimensions materials, suppliers and country of purchase will drive the decarbonization



Focus on scope 3 upstream emissions: High level levers categories¹⁾

Emission type

Lever category

Rationale

3.1
Upstream emissions – Purchased goods and services



Enable supplier
(same energy grid)

Enable suppliers to employ low-emission manufacturing technologies or to have sourced low-emission energy



Change supplier
(different energy grid)

Switch to suppliers that are in a low-emission energy grid (another country/region)



Change material (mix) of product

Substitute material with lower CO₂e footprint (e.g., use recycled metals)

3.2
Upstream emissions – Capital Goods



Increase lifespan of production equipment

Optimize maintenance and utilization of equipment to increase lifespan of capital goods

3.4
Upstream emissions – Transportation & distribution



Reduce ad-hoc deliveries

Expand demand forecast horizon to allow parts to be delivered by sea or train freight instead of air cargo



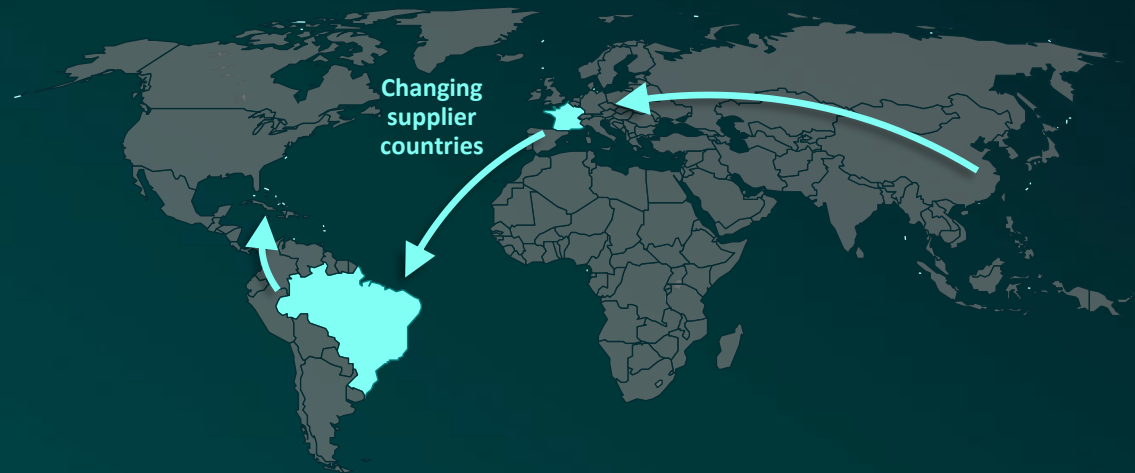
Source from national suppliers

Source components from suppliers in the local country to reduce long haul transportation

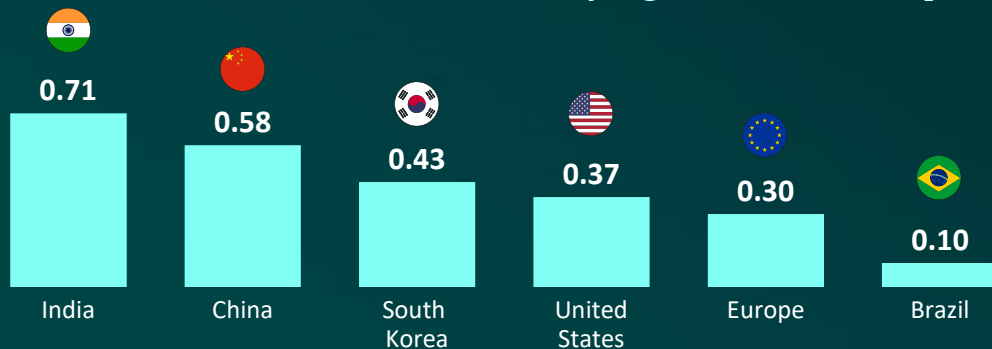
1) Non-exhaustive

Example: Prioritizing cleaner source countries allows to reduce Scope 3.1 emissions – Regional proximity will furthermore reduce Scope 3.4 emissions

Country of purchase decarbonization measures – Project example



Grid emission by region in 2023 [kg CO₂e/kWh]



Project example to showcase emissions impact from lower emission countries

Component for turbo chargers



Status quo



Our client's supplier is based in **China**. The company procures **fabricated metal products** from the supplier for a turbo charger. The emissions amount to **0.94 t CO₂e** per t of procured metal

Changing supplier



We recommended our client to **procure a similar product from a German supplier**. Among other factors, the grid emissions are significant lower, thus the emissions reach only **0.27 t CO₂e**

0.94 to 0.27 t CO₂e

The grid emission in each country is a significant contributor towards the emissions

Double-Edged Strategy: Rebound Now & Prepare for Tomorrow's Surge

Rebound

Have you been able to claw back price increases of the past years?

If yes, how did you do it?

2

Prepare

Which measures have you taken to persist in a VUCA world on steroids?

How prepared do you feel?



Maxim Przystaw



Hannah Zühlke

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