



LCA's Role in Leading Organizations Towards Net Zero

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Agenda

About Sphera

LCA: Overview and New Developments

LCA's Role in Net Zero and Examples

Sphera is the leading global provider of **enterprise and product sustainability purpose-built solutions**, data and services.



**ENVIRONMENT,
HEALTH, SAFETY &
SUSTAINABILITY**



**PRODUCT
STEWARDSHIP**



**SUPPLY CHAIN
TRANSPARENCY**



**OPERATIONAL RISK
MANAGEMENT**



SOFTWARE
Aggregate, digitize & monitor ESG risk & performance data.

DATA ANALYTICS
Apply predictive & prescriptive analytics for scenario planning & benchmarking.

CONSULTING
Leverage insights to drive business outcomes & meet regulations.

OUR MISSION

To create a safer, more sustainable and productive world.

Amplify sustainability with **Sphera Sustainability Consulting** services

- Corporate carbon footprint
- Scope 3 assessment
- Product carbon footprint and life cycle assessment
- Portfolio sustainability assessment
- Biodiversity assessment

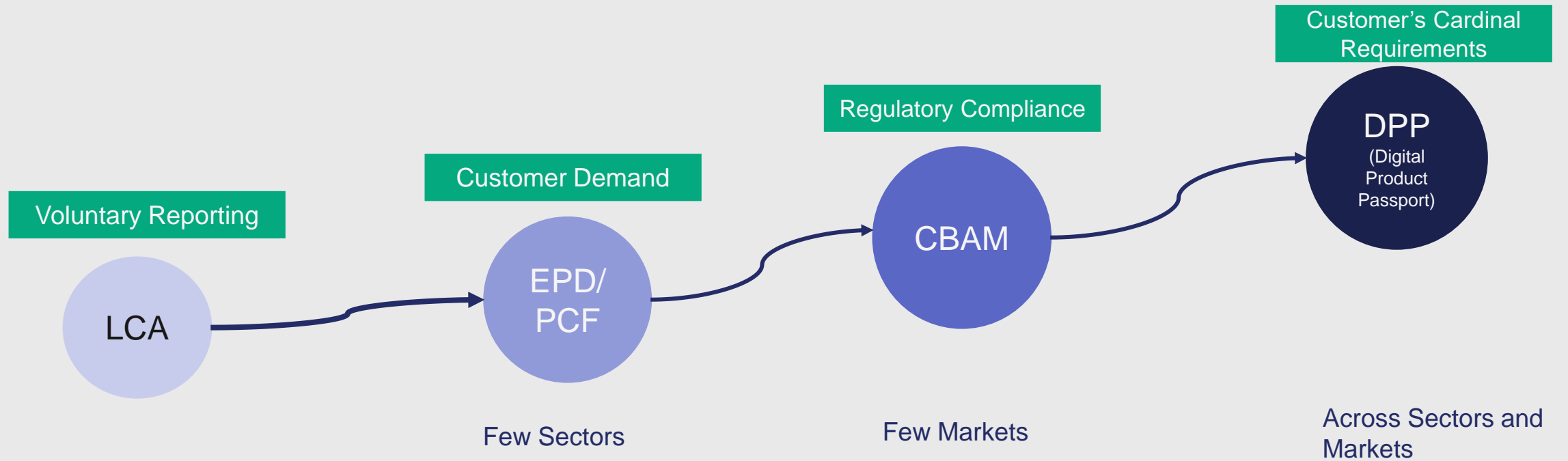
- Compliance and reporting support for BRSR, **CBAM**, CSRD, SFDR, EU Taxonomy, CSDDD, SEC
- Support with voluntary frameworks: **GRI, CDP, TCFD & TNFD, SBTi & SBTN**, IFRS S1 & S2
- Environmental product declarations, **EPDs**



- (Double) **materiality assessment**
- Sustainability benchmarking
- ESG framework and ratings alignment
- Climate risk and opportunities assessment
- Sustainability, climate, net-zero strategy and target development

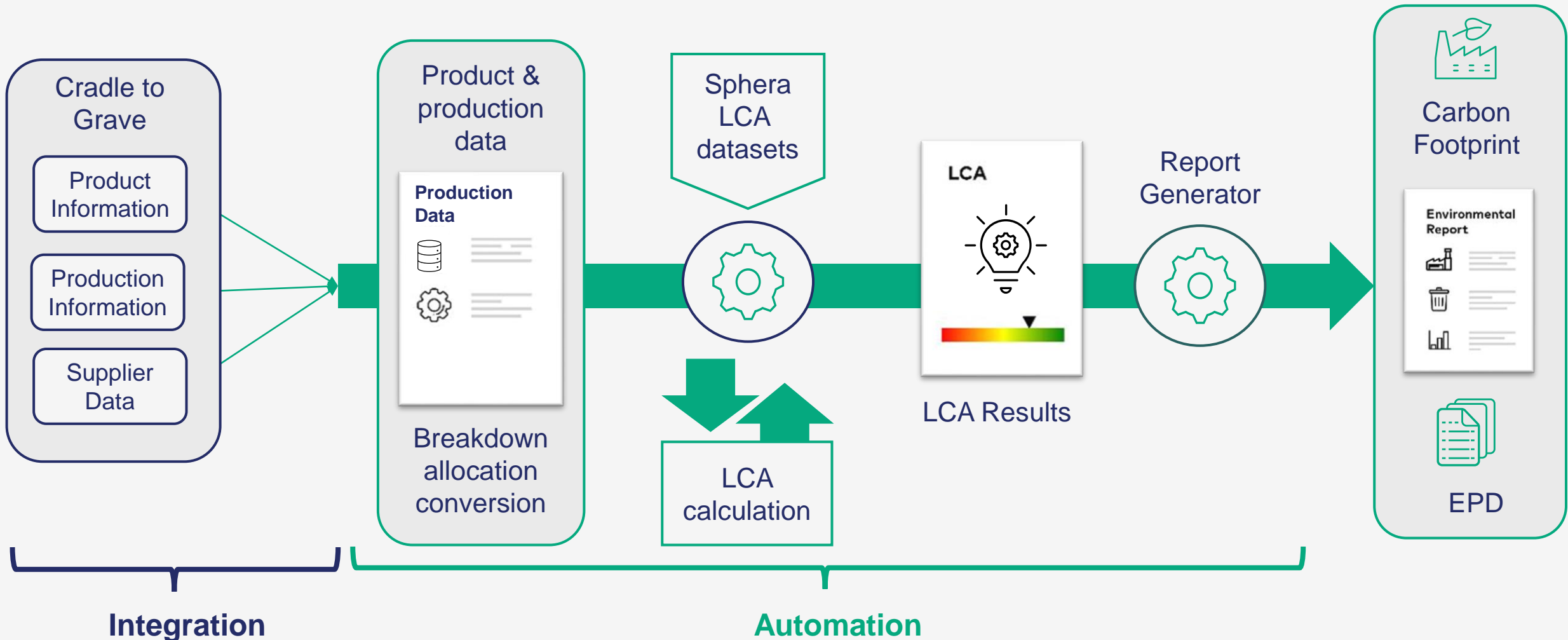
- **Eco-design, LCA, EPD tools**
- LCA Automation
- Environmental and techno-economic analyses of (new) technologies
- Supplier engagement and **supply chain decarbonization**
- Circular economy consulting

LCA's Role in Net Zero - Evolution



How LCA solutions work with your systems

Efficient generation of reliable and high quality LCA results



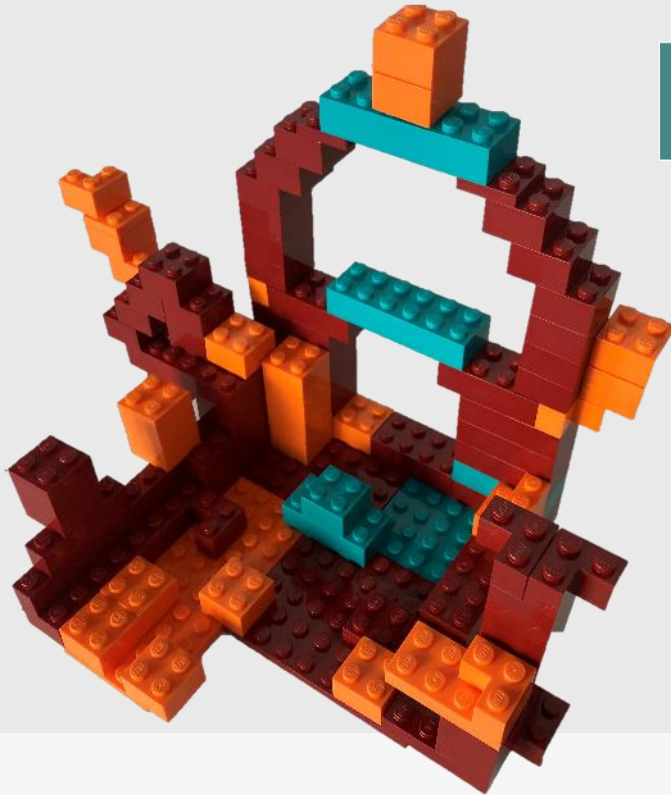
Two complimentary perspectives across the businesses

Climate Change

Product level

- Life Cycle Assessment (LCA)
- Product Carbon Footprint (PCF)

- Multiple Products
- Different life cycle stage

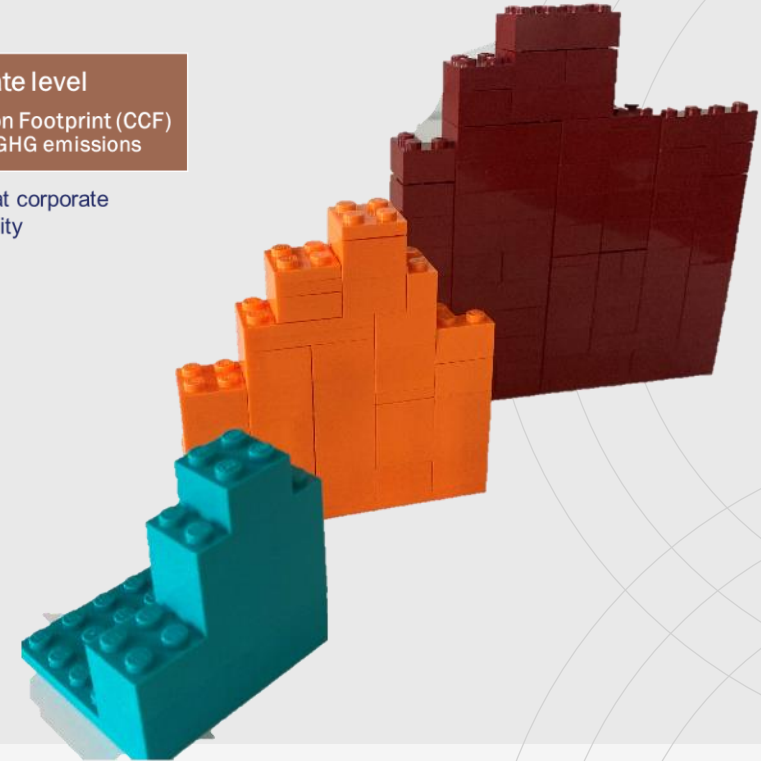


Product LCA

Corporate level

- Corporate Carbon Footprint (CCF)
- Scope 1,2 & 3 GHG emissions

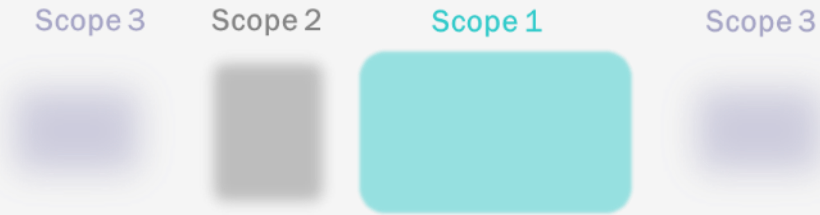
- Measured at corporate
- GHG intensity



Corporate Strategy / Net Zero

LCA helps improve value chain GHG quantification

CORPORATE STRATEGY



⊗ From **THIS**



☑ To **THIS**



LCA Data / EF Factors

Robust, authentic engineering-based LCI data repository

All relevant LCI&LCIA data available within one solution

World's largest LCA data repository

Industrial Data



50+ Associations & Companies authorized data
> 500 EPDs

Sphera Data



- Managed LCA Content (GaBi Database)
 - 23 Extension Databases
 - **Unique** Data On Demand Service
- ~ 17,000 standard
> 100,000 inventories

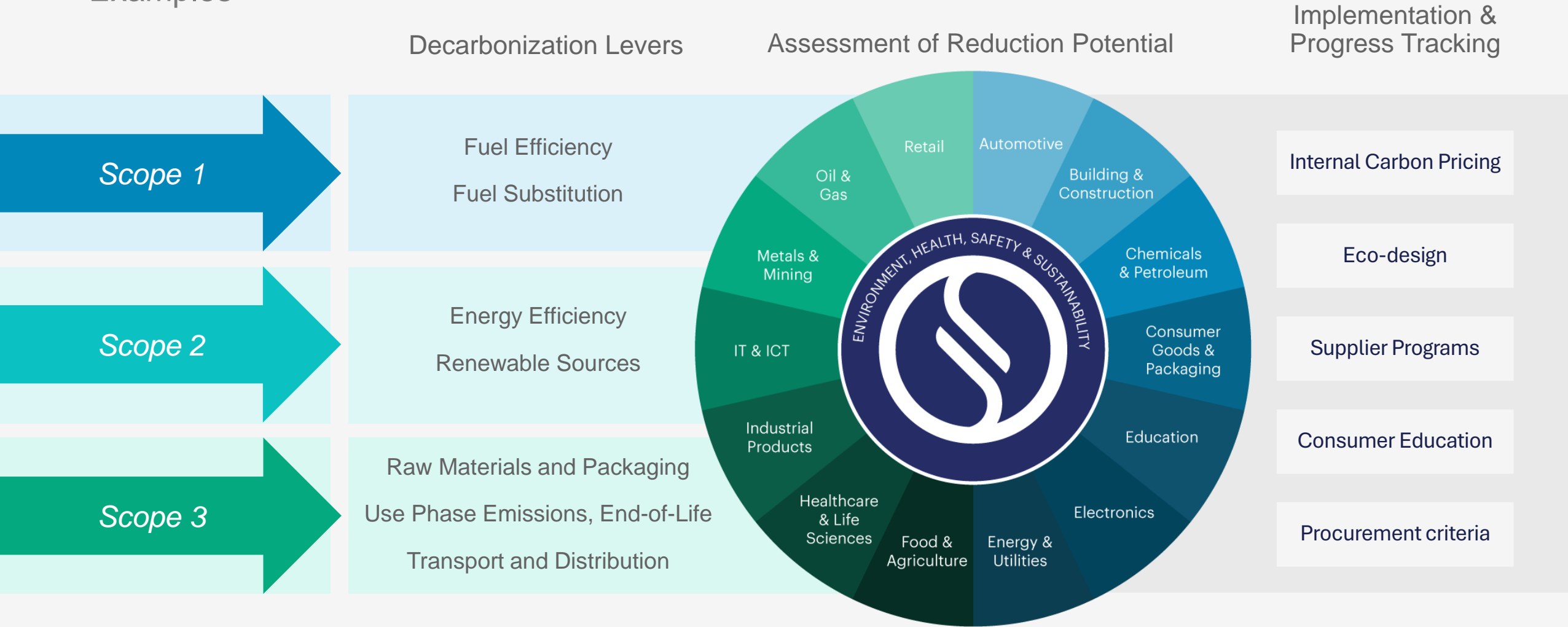
3rd Party Data



U.S. Life Cycle Inventory Database

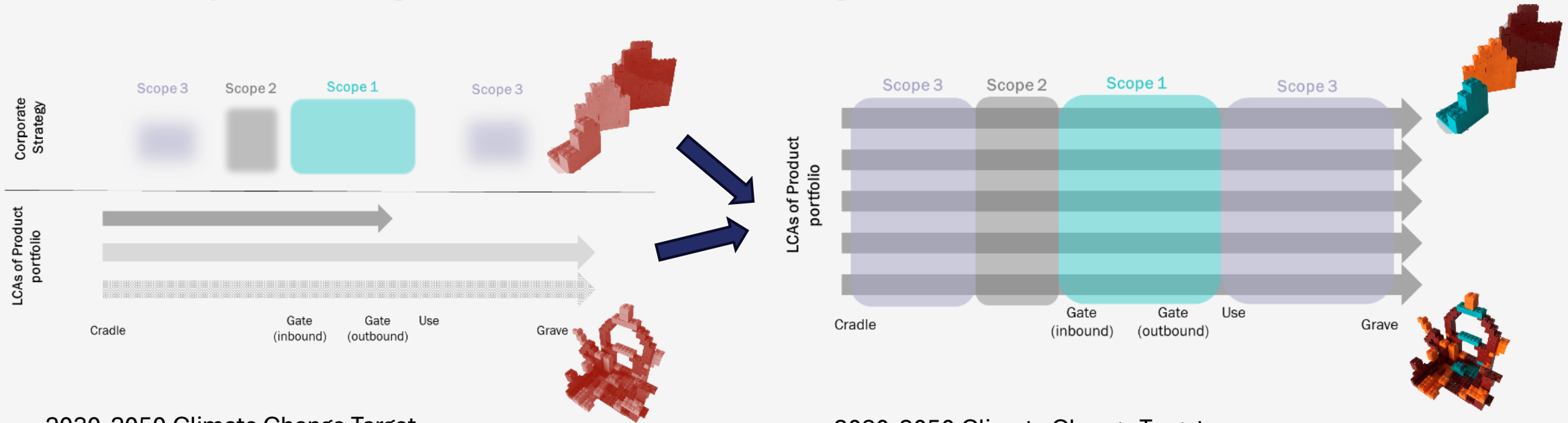
LCA leads to identified Decarbonization Levers

Examples



Asset-specific Decarbonization
Expertise & Industry-based sector-
specific databases

LCA helps set up Net Zero roadmap



2030-2050 Climate Change Target

- ⊗ Unclear decarbonization roadmap
- ⊗ Misaligned product dev. and corporate initiatives
- ⊗ Hotspots are not identified, missing granularity
- ⊗ Limited scope 3 coverage
- ⊗ Carbon Tunnel Vision

Net Zero challenges

2030-2050 Climate Change Target

- ☑ Clear decarbonization roadmap
- ☑ Aligned product and corporate initiatives
- ☑ Assessed carbon hotspots in the value chain
- ☑ Strategic scope 3 coverage
- ☑ Opportunities of integrating climate into business

LCA as a Solution



Decarbonization Pathway Using the Science Based Targets (SBTs)

“Setting GHG emission reduction targets in line with climate science is a great way to future-proof natural capital for all of us. We partnered with Sphera for our mobility and farm solutions business to set up emissions reduction targets as per the SBTi framework. Sphera’s data services on supply chain GHG emissions and domain expertise helped us to achieve the desired outcome.”

—Anirban Ghosh
Chief Sustainability Officer
Mahindra Group



- **Founded in 1945**
- **Mumbai, Maharashtra**
- **Automotive**
- **\$ 19.4 Million Revenue**
- **256,000+ Employees**

CHALLENGES



Setting greenhouse gas emissions reduction targets in line with climate science

Identification of the right target types for automotive and farm businesses

Assessing and quantifying scope 3 GHG emissions

SOLUTIONS



Mahindra turned to Sphera Sustainability Consulting Services to benefit from their expertise in scope 3 GHGs screening & quantification across applicable categories as well as simulating scenarios for emission reduction targets

RESULTS



30% reduction in scope 3 GHG emissions by 2033 for the auto and farm divisions.

47% Reduction in scope 1 and scope 2 GHG emissions per equivalent product unit to get in line with SBT emissions by 2033 for the auto and farm divisions.

Minimum ambitious criteria for scope 3 target is now in line with 2 degrees Celsius.

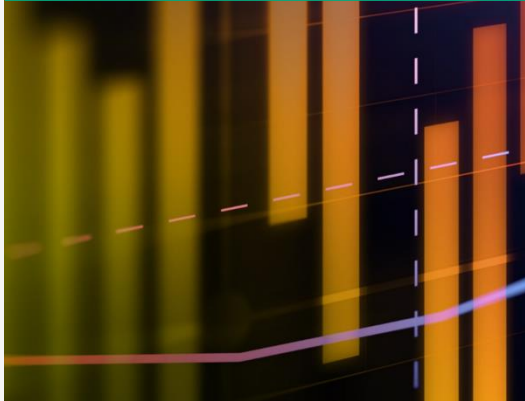
Sustainable branding & competitive advancement.



Using LCA as an approach to Net Zero Journey

“Saudi Basic Industries Corporation, known as SABIC, is a Saudi chemical manufacturing company. 70% of SABIC's shares are owned by Saudi Aramco. It is active in petrochemicals, chemicals, industrial polymers and fertilizers.”

- **Founded in 1976**
- **Riyadh, Saudi Arabia**
- **Petrochemicals**
- **\$ 141.5 billion Revenue**
- **29,000+ Employees**



CHALLENGES



Centralized and standardized global data collection

Integrating environmental and social criteria in operational business practices

Consolidating data from diverse business divisions and locations

SOLUTIONS



SABIC turned to Sphera Sustainability Consulting Services to benefit from their expertise in integrated reporting aligning with IIRC Framework

RESULTS



Business Value Creation Model as per IR framework

Identification of Peers and Peer Analysis of assessed inputs, outputs and outcomes

LCA used to identify potential impacts which helps to develop sustainable portfolio



EPDs Support Environmental Transparency and Reporting

“Product responsibility is very important for the JSW Group –with consistent efforts to externally benchmark and improve the environmental footprint of our products, we conducted Life Cycle Assessment (LCA) of our key products 5 years ago with Sphera’s team. EPDs are progressively being made an integral part of our product branding and marketing. Sphera is supporting us at all stages for LCA and EPDs.”

—Prabodha Acharya, Chief Sustainability Officer, JSW Group Limited



- **Founded in 1982**
- **Mumbai, Maharashtra**
- **Steel Manufacturing**
- **\$ 21 Billion Revenue**
- **13,128+ Employees**

CHALLENGES



Understanding the environmental impacts across the value chain of different products

Readiness for the Material Credits in Green Building Certification Programs like LEED v4/v4.1

SOLUTIONS



JSW introduced Sphera Sustainability Consulting Services to create Environmental Product Declarations (EPDs) for key products.

RESULTS



Published EPDs providing environmental profiles transparently

Transparency and reporting allowed them to identify environmental hotspots, set benchmarks for optimum resource decisions and continually improve performance

Awareness across various functions on the upcoming trends on sustainability



Thank you!



Sphera is the leading global provider of integrated sustainability, risk & performance management software, data and services.

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