

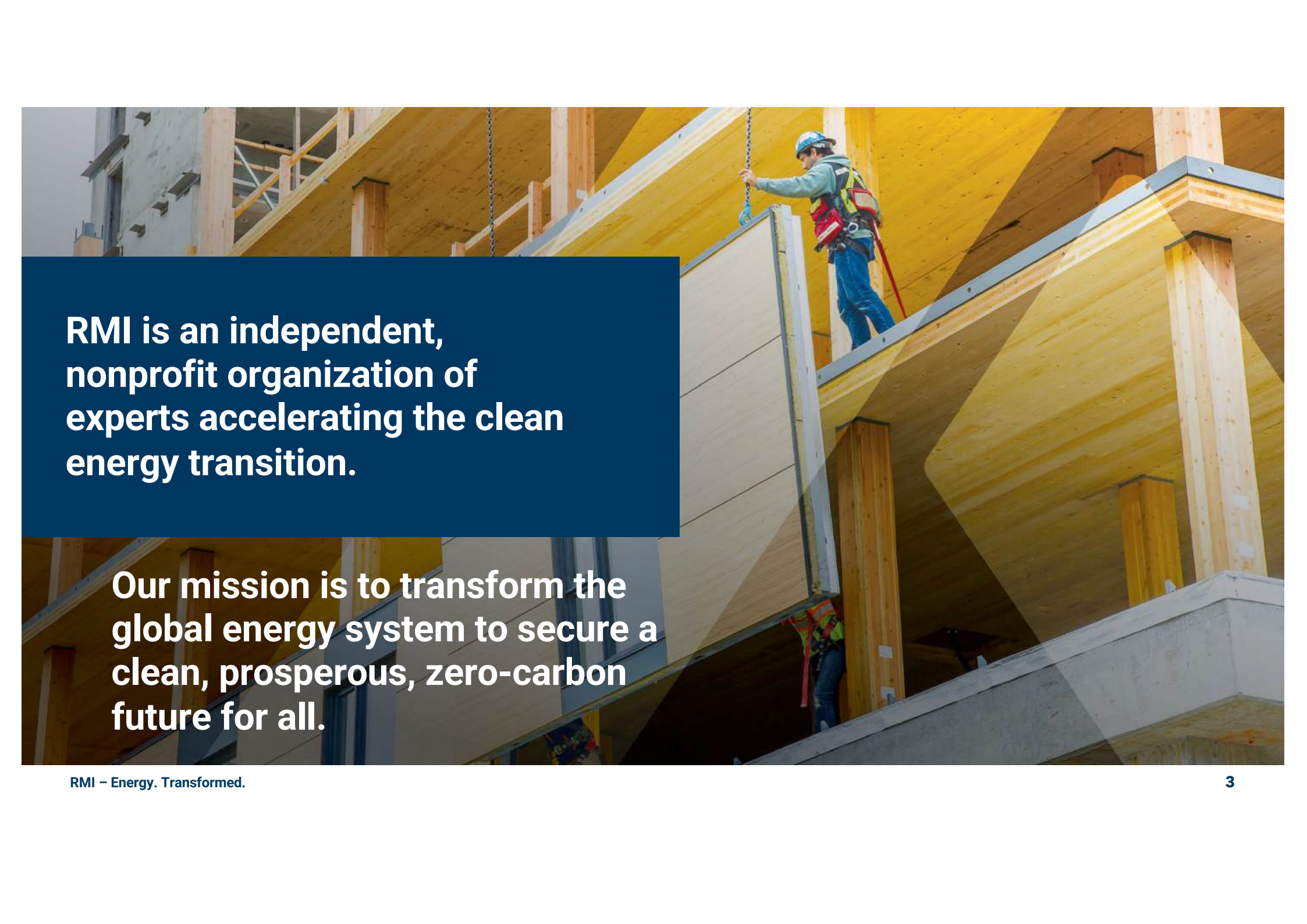


SAP for Process Industries and Natural Resources Conference

June 2024

AGENDA

- 01** Intro & The Scope 3 challenge
- 02** Our work to date
- 03** The road ahead
- 04** Q&A



**RMI is an independent,
nonprofit organization of
experts accelerating the clean
energy transition.**

**Our mission is to transform the
global energy system to secure a
clean, prosperous, zero-carbon
future for all.**

RMI's Formula for Impact

Scaling Solutions
Around the World



BY Decarbonizing Key Sectors



Electricity



Buildings



Transportation



Industry

USING Powerful Market Catalysts



Capacity Building
+ Education



Policy



Technology



Communications



Climate
Intelligence



Climate Aligned
Finance



The Scope 3 challenge

The pressure and challenges to address upstream supply chain emissions

Corporates increasingly need product-level emissions data

Pressures are increasing from regulatory activities like CBAM and SB 253

EU's CBAM

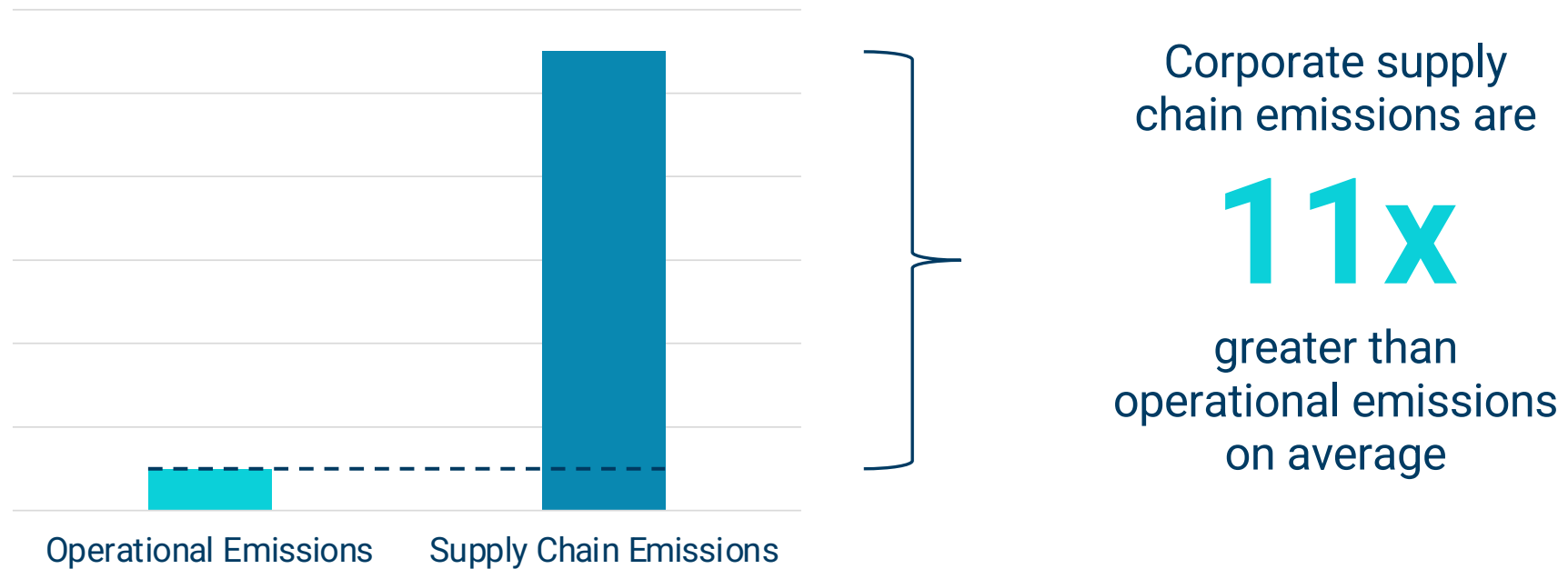
Importers of goods to report embedded carbon at the product level

California SB 253

Businesses in California to report their emissions comprehensively, including scopes 1, 2, and 3

Carbon accounting solutions that help to ease the reporting burdens of supply chain and product-level emissions data are going to be a necessity for companies

Corporates must reduce Scope 3 supply chain emissions to deliver on sustainability targets



Measuring and managing Scope 3 is complex and resource intense

Common challenges

- **Data is often incomplete and inaccurate**
 - Information is siloed, and it is difficult to engage Tier 2+ suppliers
 - Lack of supplier-specific data; most is estimated at the corporate level
- **Data is incomparable**
 - Different data formats and software systems inhibit interoperability
- **Gaps remain in translating data to action**
 - There remains a lack of clarity on emissions sources, action to take, and metrics to track

Industry needs

Suppliers require resources and knowledge to calculate and report product emissions

Buyers require clarity on using data to inform decarbonization strategy



Our work to date

Driving decarbonization through
more accurate and transparent emissions data of products



Emissions Transparency



Product Level
GHG Accounting Guidance that
provides specific metrics targeted
for decarbonization actions



Data Interoperability



PACT conformant
data formats which provides
standardization of data
transfer



Pilot Testing

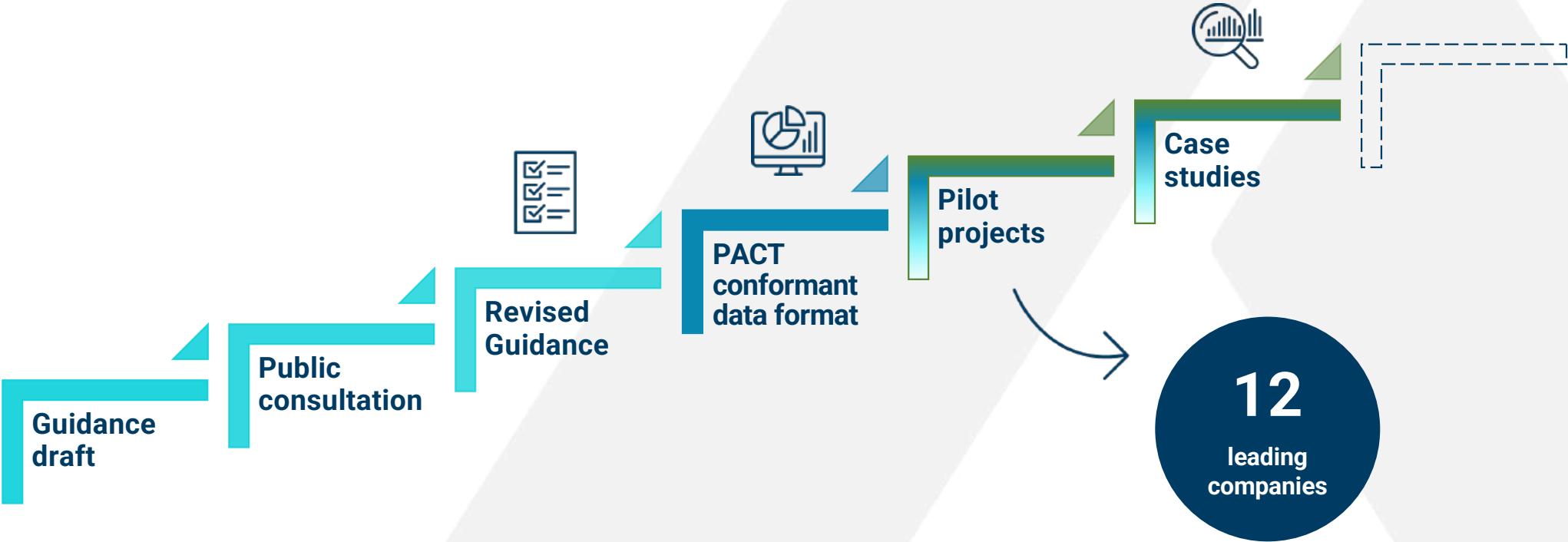


Test our solutions on emissions
accounting and data transfer
with corporate partners in real
world simulations

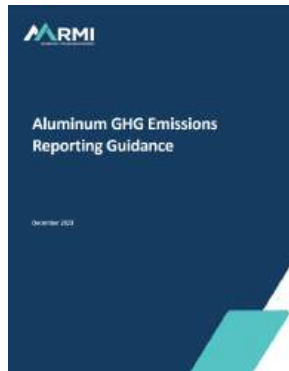
RMI'S EMISSIONS TRANSPARENCY WORK

Solutions developed with industry stakeholders

Organizations engaged through working groups, 1:1 meetings, public consultations, and pilots



Product-level GHG accounting forms the basis for low-emissions product markets



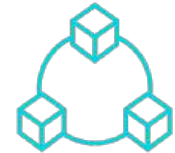
1 PRIMARY EMISSIONS DATA

Shift from estimation to collection of supplier-specific data



+
2 CONSISTENT SYSTEM BOUNDARY

Measure product-level emissions and enable comparability



+
3 MEASUREMENT FOR MARKETS

Ensure incentives drive direct decarbonization



=

CLIMATE-DIFFERENTIATED MARKETS



Steel

Reporting Interventions

RMI's Steel Emissions Reporting Guidance requires reporting on:



A product level, from individual facilities



A fixed boundary, from cradle-to-gate, with hot rolling as the comparison point



Emissions credits, separately from total emissions intensity



The total emissions intensity and share of metallic inputs



The fraction of primary data used



The abatement technology label

Data formats provide standardization

Our open-source solutions utilize existing systems to enhance data accessibility and traceability



DATA STANDARDS

- Describe **sector specific product-level emissions** using PACT-compliant standards: defined, agreed-upon, and machine-readable schemas



INTEROPERABILITY

- Allow software systems to communicate seamlessly
- Vendors: single format for multiple customers
- Buyers: able to compare vendors apples-to-apples



TRACK & TRACE

- Allow for tracking of data across multiple supply chain stages and links

WORKSHOP: Convening technology providers and ISVs to discuss the state of the industry, learn from each other's experiences, and explore opportunities to accelerate the growth of the carbon accounting technology ecosystem



PILOTING: Accounting guidance, data transfer and usage

Climate metrics in Pathfinder-aligned data format with RMI's steel and aluminum extensions

[Check our latest piece on Technology Ecosystem for Carbon Accounting](#)

RMI – Energy. Transformed.

CURRENT EXTENSIONS AVAILABLE



Aluminum



Steel

 PACT Catalog^{beta}

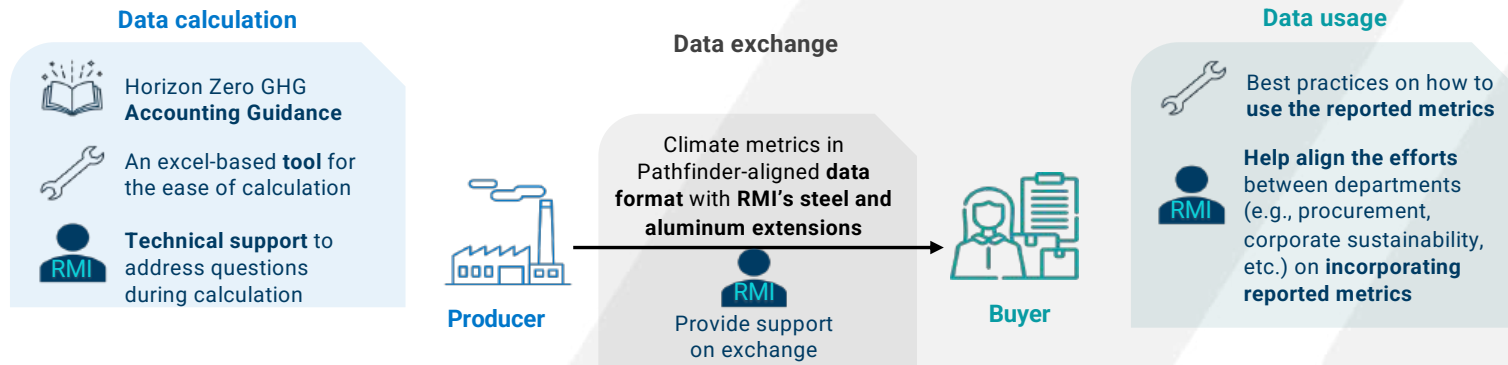


Petrochemicals

<http://github.com/RMI>

Pilot testing our solutions

Ensuring feasibility across industries and exploring decarbonization scenarios



Aluminum: Hydro and US Electric Vehicle Manufacturer

Comparable and transparent climate data metrics drive potential changes in the buyer's supplier engagement for more responsible sourcing practices.

Aluminum: Alcoa, Oldcastle BuildingEnvelope, Arup, and BXP

A collaborative model between an aluminum producer, curtain wall manufacturer, building façade designer, and property manager to enhance emissions transparency across the buildings value chain.

Steel: ArcelorMittal and Toyota

Clearly defined boundaries and calculation rules enables emissions comparability among steel products.

Tata Steel UK and Jaguar Land Rover

Calculating and transferring product-level data, and exploring how the reported data could be utilized to facilitate procurement of low GHG emissions steel.

Steel: Chinese Steelmakers and Automakers

A standardized data format facilitates the uniform presentation of product climate data throughout the supply chain, streamlining the reporting process for suppliers and simplifying data collection for buyers.

Case studies show impact of data-driven action

Pilots demonstrated that improving data transparency can incentivize decarbonization action

STEEL: AUTOMOTIVE PILOT 1

- Reported **PACT-aligned data format** with **RMI's steel data metrics** that enabled standardized data exchange, improving supply chain data transparency and transfer
- Attained valuable insights into the **potential applications of data in Scope 3 emissions reporting**, the revision of Scope 3 target setting, internal carbon pricing, and green procurement

STEEL: AUTOMOTIVE PILOT 2

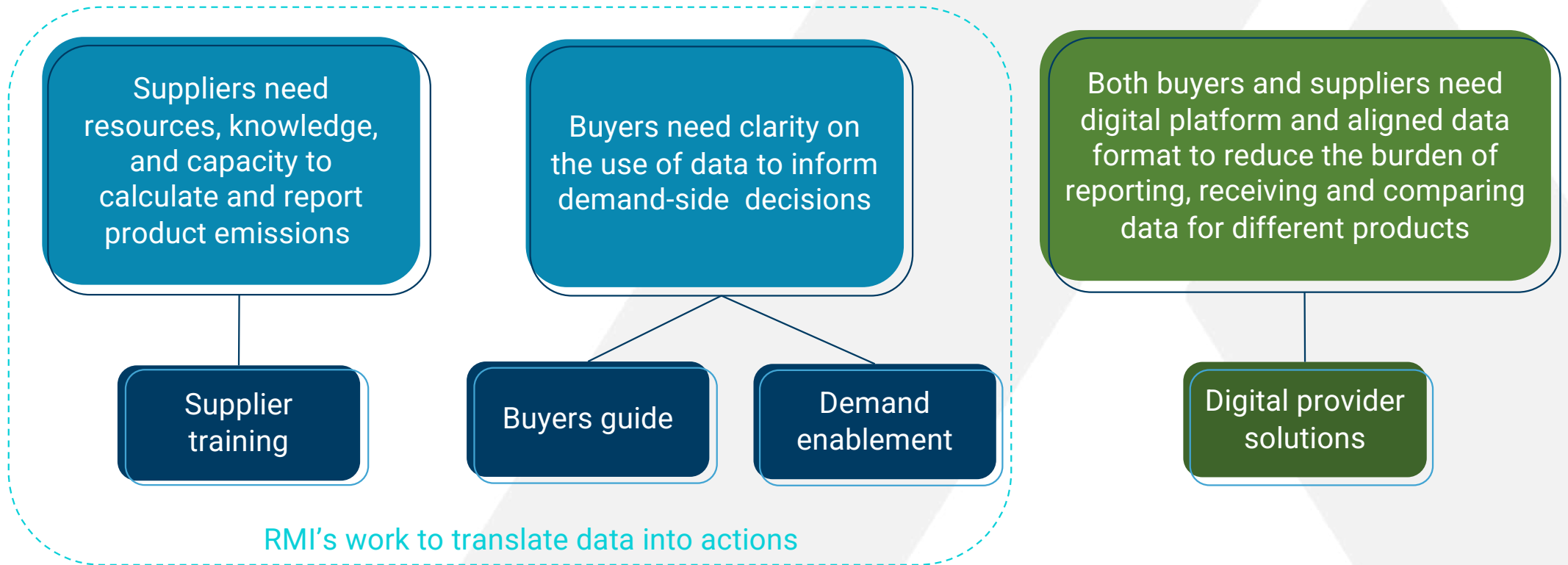
- The additional metrics included in RMI's Guidance could improve **procurement strategy**
- Recommended **additional metrics** for the supplier questionnaire to provide further transparency on suppliers' abatement actions

Example: Standardized data formats incorporated into a software platform to transfer emission data

Product name	Product ID	Company Name	Cradle to Gate Emission	Benchmarking boundary Emission	Scrap Ratio	Technology Label	Credits (by-products)	Primary Data share	Valid Period	Status	
产品名称	产品型号		边界1碳排放强度 (摇篮-大门)	边界2碳排放强度 (摇篮-比较点)	废钢比例	低碳技术标签	共生产品抵扣	实际场地数据比例	有效期	状态	具体表单信息
热镀锌用钢	DX51D+Z		2.74tCO2e/t	2.27tCO2e/t	18%	未使用	0tCO2e/t	65%	2021-01-01到 2021-12-31	提交	详情 导出
xx汽车高强度钢	HC340LAD+Z		2.51tCO2e/t	1tCO2e/t	20%	绿氢 绿电	0.74tCO2e/t	65%	2022-01-01到 2022-01-01	提交	详情 导出
热镀锌钢板	CS250L8		2.4tCO2e/t	2.1tCO2e/t	15%	碳封存 碳捕捉	0.36tCO2e/t	70%	2022-01-01到 2022-12-01	提交	详情 导出
热轧酸洗板	CX78ALT		2.33tCO2e/t	2.2tCO2e/t	15%	未使用	0.23tCO2e/t	85%	2022-01-01到 2022-12-01	提交	详情 导出
热镀锌钢板	HC340LAD+Z		2.51tCO2e/t	2.39tCO2e/t	5%	未使用	0.74tCO2e/t	79%	2022-01-01到 2022-12-31	提交	详情 导出

*Note: the data display are mock values

Pilot testing and localization works reveal remaining gaps to fill to accelerate changes



We are always exploring different ways to collaborate with key stakeholders

Time to **pilot test a digital solution** developed for secure emissions data sharing with **producers and buyers!**

RMI has demonstrated **proof-of-concept of emissions data calculation and explored ways to incorporate the data into procurement** decision-making and scope 3 reporting

Now, through a joint pilot, RMI aims to help our partners understand the **potential scalability benefits**, such as multi-tier data traceability, data comparability, and increased emission transparency across various products



Thank you!



Xiyuan Liu
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Q&A



Thank you!



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a difference. Make yours today at:
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