Trust in procurement-driven distributed PCF Assessments

Florian Ansgar Jaeger

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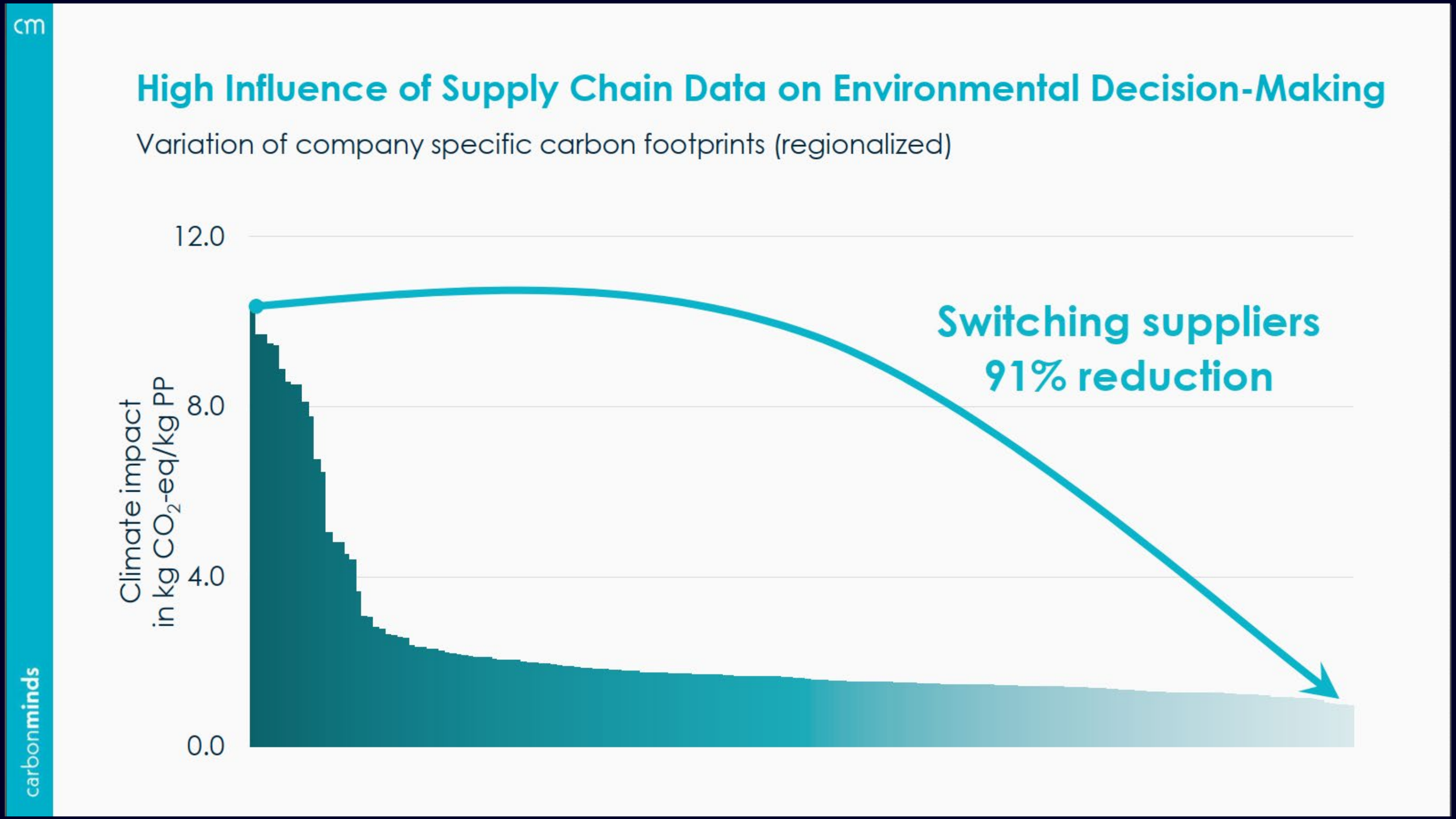
The Motivation “Shadow Pricing”

Example: of Polypropylene PCF from Chinese manufacturing sites



Source: Raoul Meys (Carbonminds)

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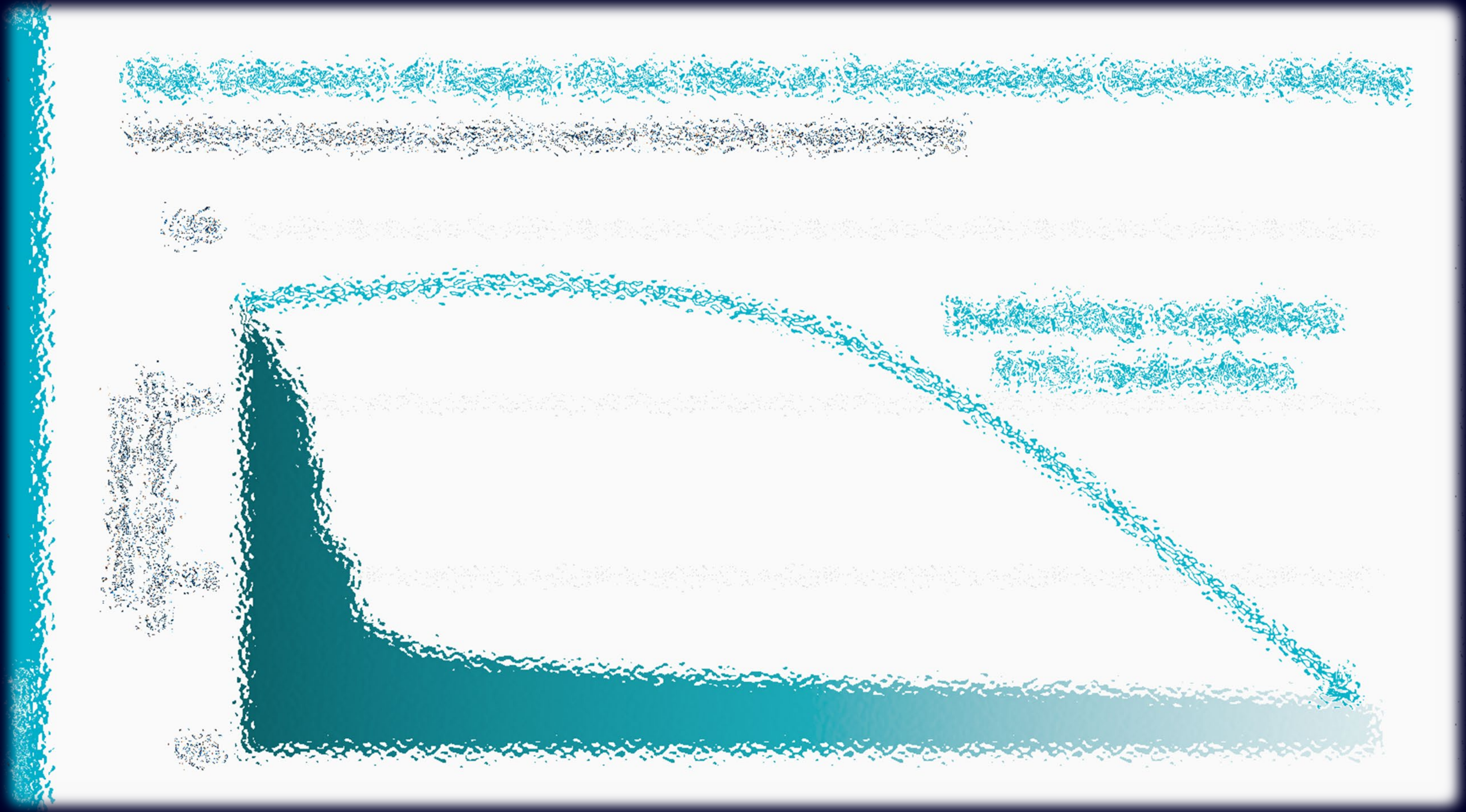
The Reality

Example: of Polypropylene PCF from Chinese manufacturing sites



Source: Raoul Meys (Carbonminds)

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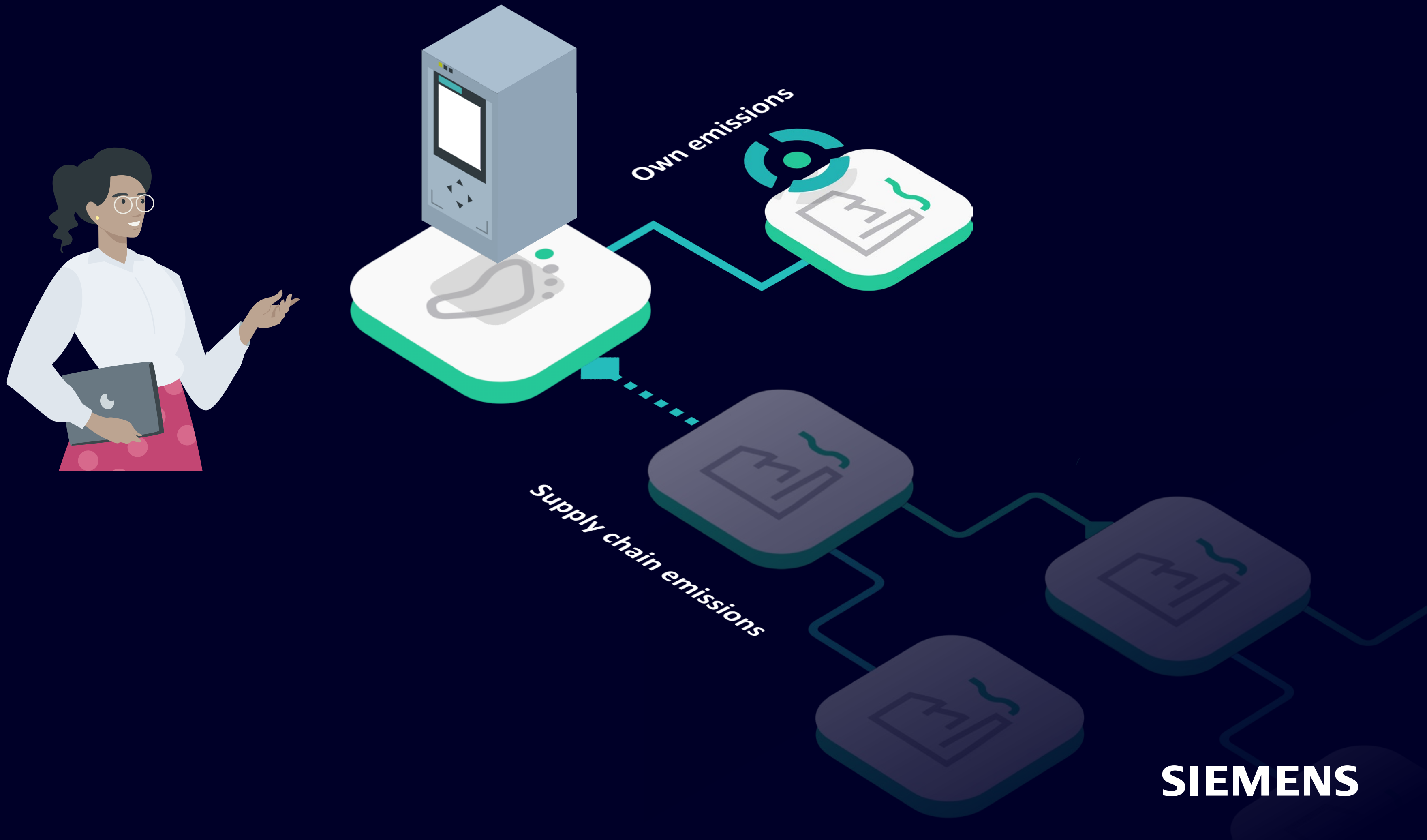
PCF fit for procurement

How do we make LCA/PCFs fit for procurement

- Supply chain specific
- Consistent
- Comparable
- Reliable
- Available
- Scope 3 compliant …



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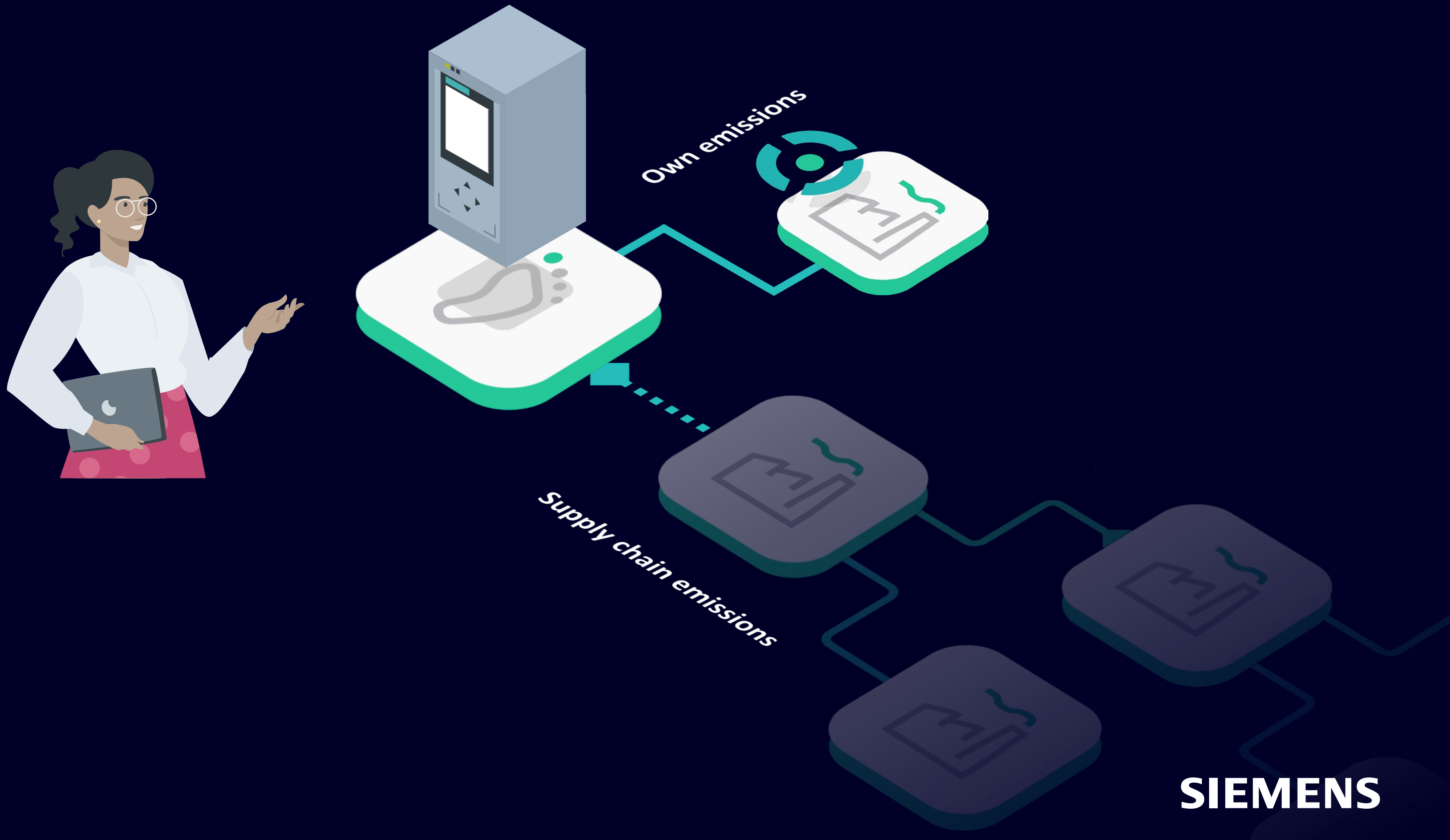
How do we make LCA/PCFs fit for procurement

- Supply chain specific
- Consistent
- Comparable
- Reliable
- **Low manual effort**
- Scope 3 compliant ...



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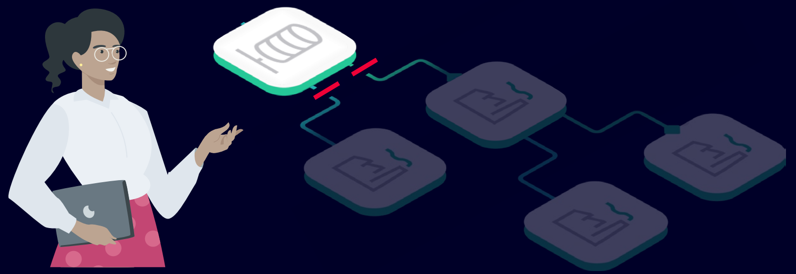
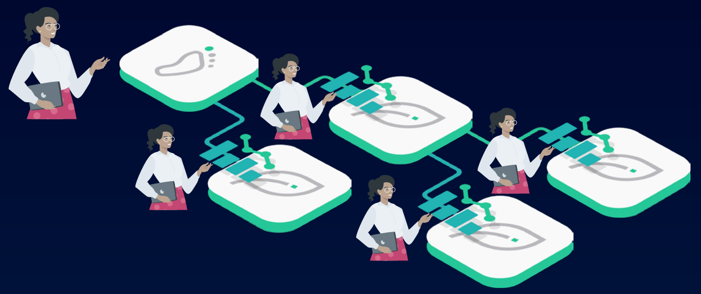
Supply chain specificity (how can that be reached)

"Conventional" LCA
Location based, data base based



- One practitioner → easier to make consistent
- Location based → procurement measures irrelevant
- Mass balancing proportional attribution

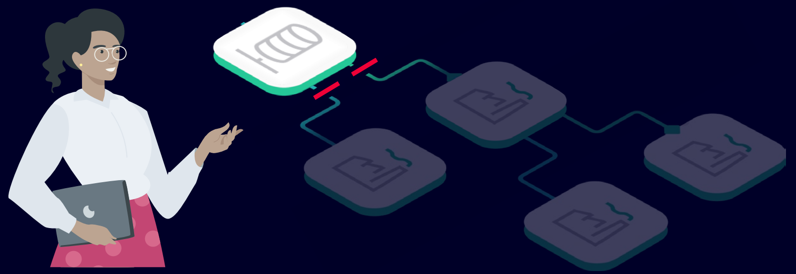
Supply chain specific PCFs
Market based, supplier PCF based



- Many practitioners → consistency challenge
- Market based → procurement sensitive
- Mass balancing non-proportional attribution

Supply chain specificity (how can that be reached)

"Conventional" LCA
Location based, data base based



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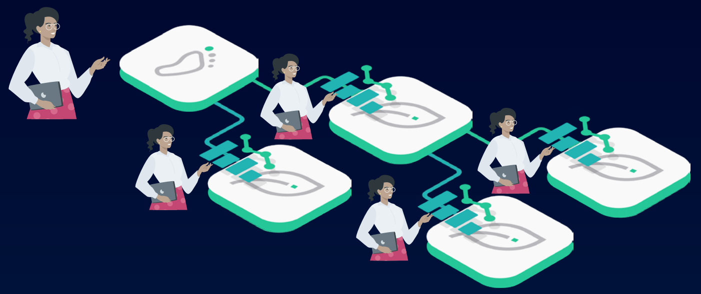
→ Auditing a model

Supply chain specific PCFs
Market based, supplier PCF based



- Many practitioners → consistency challenge
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→ Auditing a network

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Auditing a network

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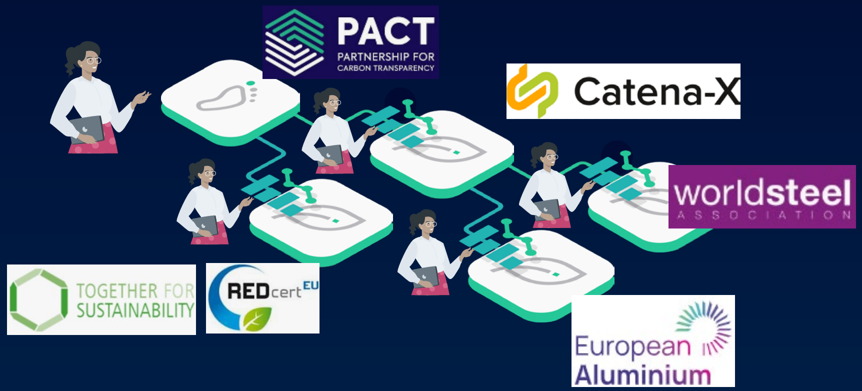
Frameworks and organizational aspects necessary for network auditing

Supply chain specific PCFs
Market based, supplier PCF based



- Many practitioners → consistency challenge
- Many certifiers/verifiers → consistency challenge
- Market based → procurement sensitive
- Mass balancing non-proportional attribution → short term incentives

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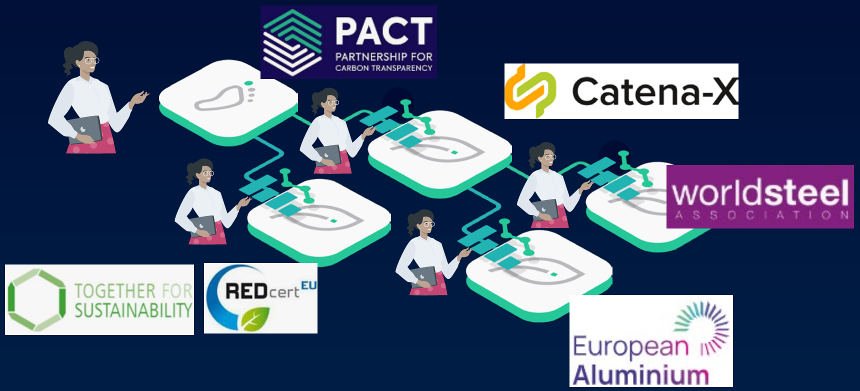
Frameworks and organizational aspects necessary for network auditing

Supply chain specific PCFs
Market based, supplier PCF based



- Many practitioners → consistency challenge
  - Procurement focused calculation frameworks with little freedom for methodological choices (on sector & product level)
  - Mutual acceptance agreements between PCRs or system of MRMPs (Machine-Readable Methodological Profiles) for all PCRs to check compliance against one-another
  - Acceptance definition of COCs (chain of custody programs)
  - Cross-industry data models for PCFs and declarations of conformance
  - Digital sharing infrastructure with data sovereignty
- Many certifiers/verifiers → consistency challenge
- Market based → procurement sensitive
- Mass balancing non-proportional attribution → short term incentives

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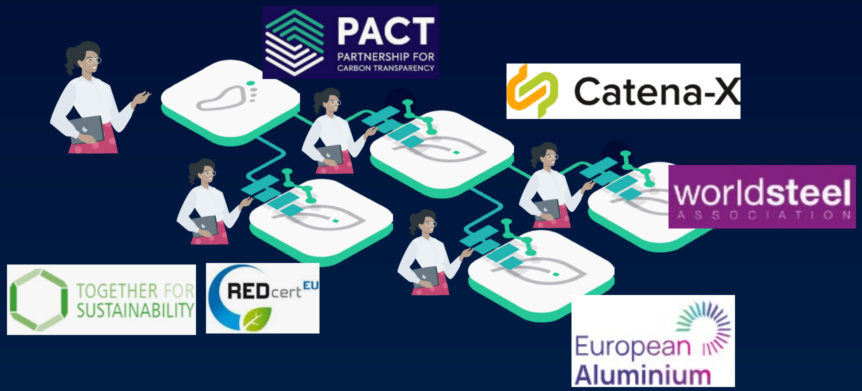
Frameworks and organizational aspects necessary for network auditing

Supply chain specific PCFs

Market based, supplier PCF based



- Many practitioners → consistency challenge
- Many certifiers/verifiers → consistency challenge
  - Certification and verification frameworks (not only what but also how)
  - Several assurance levels (single assurance & system assurance) for low entry hurdle & scalability
  - Rules how to combine assurance levels
  - Transparent appointment processes/accreditation for auditors
  - Cross industry/cross organization repository for auditors
- Market based → procurement sensitive
- Mass balancing non-proportional attribution → short term incentives

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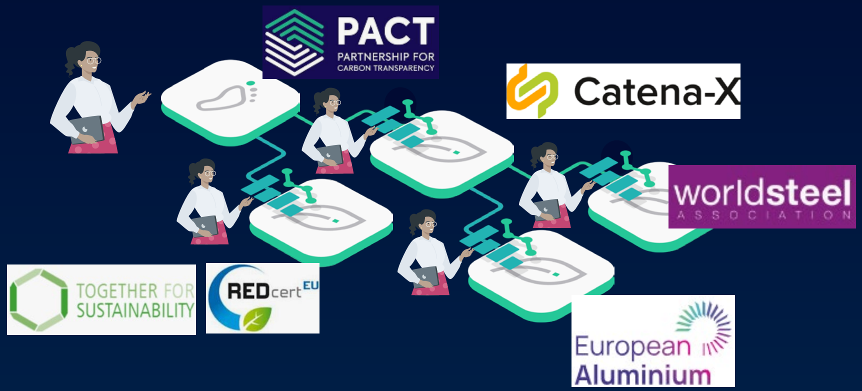
Frameworks and organizational aspects necessary for network auditing

Supply chain specific PCFs

Market based, supplier PCF based



- Many practitioners → consistency challenge
- Many certifiers/verifiers → consistency challenge
- Market based → procurement sensitive
  - Consistent “Renewable Energy Certificates” across the globe (with central registries)
  - Consistent criteria of additionality
  - Availability of residual grid mixes & their consistent application
- Mass balancing non-proportional attribution → short term incentives
  - Acceptance by product and corporate accounting frameworks
  - Consistent criteria of additionality
  - Availability of accepted Cain of Custody Programs

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Examples

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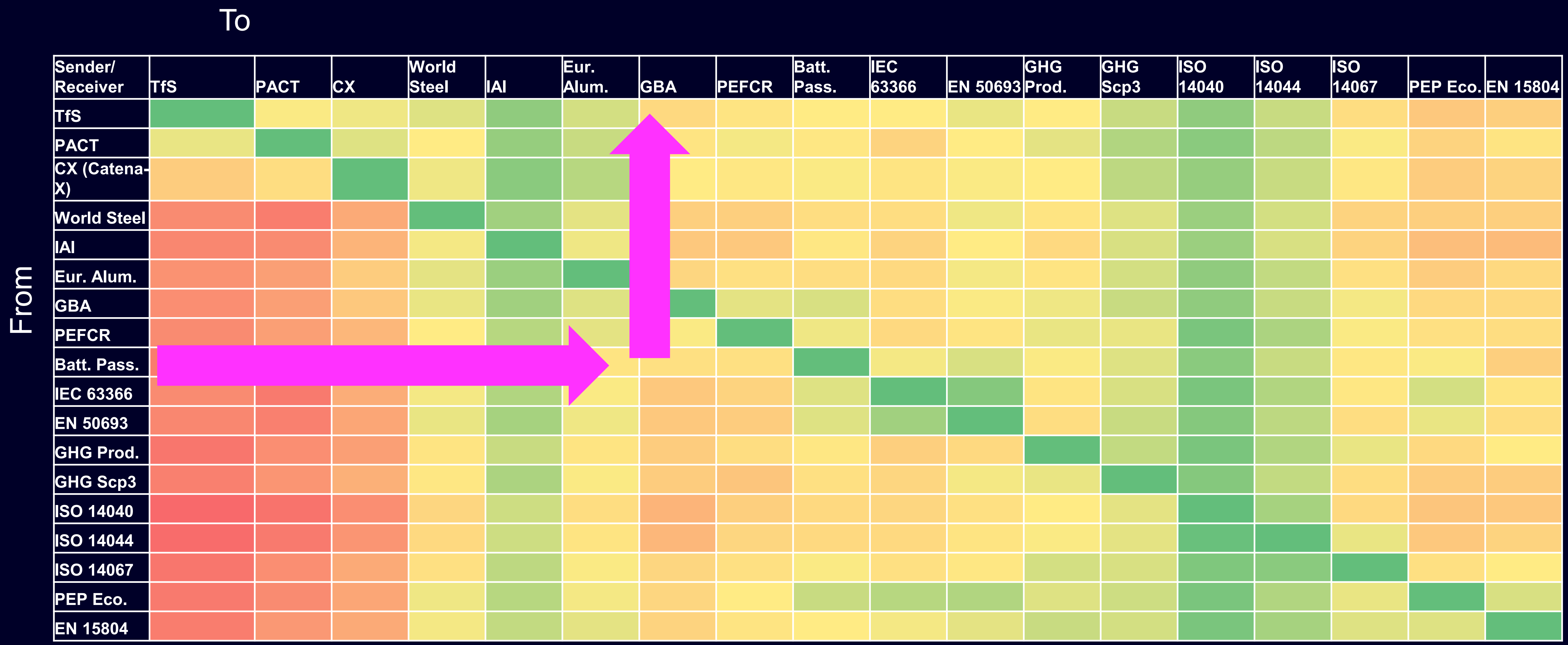
Example for digitization of methodologies

Visualization of the compatibility of Standards based on Machine Readable Methodological Profiles (MRMP)

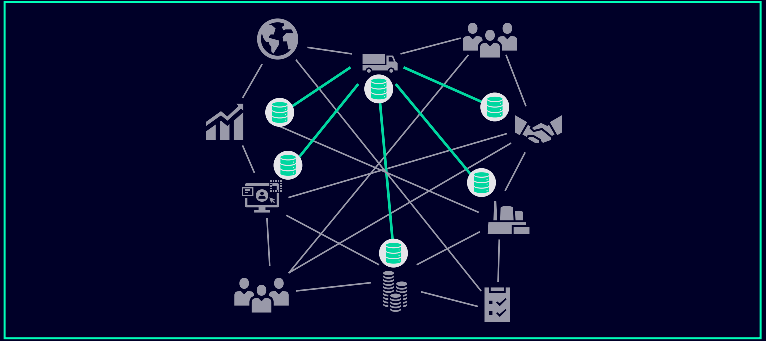


Generated on basis of the Comparison Matrix with Gemini Splash 3

Examples for digital certificates (technical infrastructure)

TSX Trustworthy Supply Chain Exchange

Bilateral Trust



- **Expensive**
  Agreements with many partners necessary
- **Inefficient**
  Duplication of data and potential disputes; outdated technologies (CSV+FTP, PDF+Mail)
- **Vulnerable**
  Own data on partner's infrastructure

Centralized Trust

- **Expensive**
  Fees for intermediary services
- **Loss of data control**
  3rd party custodian, imbalance of information
- **Single point of failure**
  Intermediary subject to failure, or isolation (technical, regulatory)

Decentralized Trust

- **Shared, immutable "truth"**
  Records of decentralized applications stored on immutable ledger
- **Confidentiality preserving**
  Access to data on need-to-know basis

Example ESTAINIUM

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Conclusion

- Supply chain specificity and market based assessments bring upon trust & auditing challenges, we need to overcome by

→ Digitization/Digitalization of

  - Methodological requirements
  - PCF Declarations
  - Certificates & declarations of conformance

  → Scalability → low effort → availability of PCFs

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No more “it depends”

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