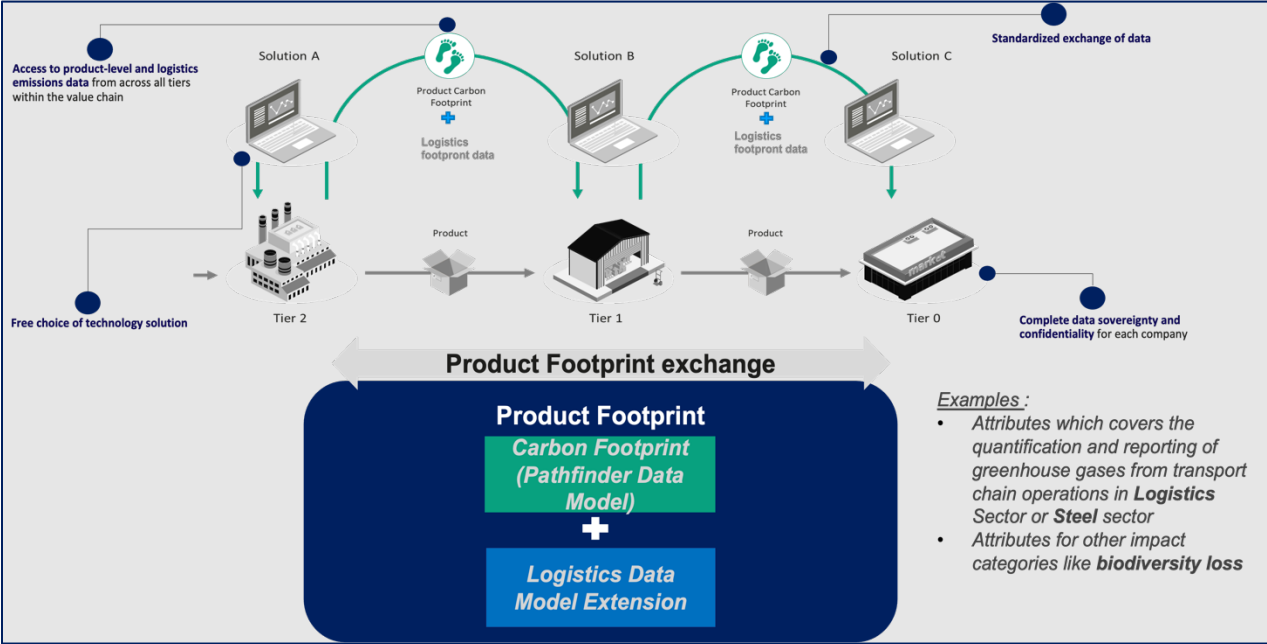# iLEAP – Integrating Logistics Emissions and Product Carbon Footprints

Executive Summary

Logistics represent 20% of the global CO_2 emissions. As these companies (née shippers) are decarbonizing their supply chains, they need more transparency over logistics-related emissions. The iLEAP project is about integrating carbon accounting systems used by shippers with that of companies offering logistics services to shippers. For this, SFC partners with WBCSD PACT and SINE Foundation to connect 90+ leading shippers from PACT with forward-looking SFC members.

The main deliverable of iLEAP will be technical specifications that enable full interoperability between shippers and logistics services companies. The technical specifications will be open and free for every company to implement while being designed to maintain each stakeholder's sovereignty.

Data exchange across the Supply Chain

Project Objectives

The iLEAP project is about integrating shippers' carbon accounting systems with logistics emissions visibility systems. To achieve this, the project will combine the technical specifications from WBCSD PACT project and integrate the SFC Data Model into it. The result of the integration will be an additional technical specifications document co-created by and with the members of the iLEAP project.
The technical specifications will also be tested, and their results integrated into it.

Key Deliverables and Outcomes of the Project

The project team will apply operating principles that have been proven at PACT, including a "lean standardization process" which is optimized for reaching interoperability in a multi-stakeholder setting. The approach has proven successful for gaining consent especially across software vendors and practitioners alike.

Specifically, key deliverables and actions of the project will include but are not limited to the following:

1. **Asserting logistics emissions data** (the SFC data model) **is fit for integration into carbon accounting at product level** (PACT's data model and Pathfinder Framework as accounting guidance and foundation)
2. **Creation of a Data Model Extension** and subsequent **Release in the PACT Catalog**, an online service from PACT where accepted technical foundations are published**.**
   The Data Model Extension will be licensed in an open way to support global acceptance and implementation by every interested company and organization
3. **Operating a joint pilot between SFC members and PACT members** to assert the fitness and readiness of the specifications for real world adoption.
4. **(Depending on available budget) Conformance Test Automation**: Automation of conformance testing process through software with regards to the data model extension, in order to streamline and simplify the conformance procedure while lowering costs for implementers of the technical specifications.
5. **(Depending on available budget) Diffusion and adoption**: SFC, WBCSD and SINE will work towards wide diffusion and adoption of the Data Model, organizing joint remote workshops and engaging with relevant initiatives, such as Green x Digital (JEITA) and Catena-X, in the different project phases.

Project and Cooperation Principles

The project will be co-led and facilitated by Smart Freight Centre (SFC) and SINE Foundation together with the WBCSD Project "Partnership for Carbon Transparency" (PACT).

About Smart Freight Centre

Smart Freight Centre is an international non-profit organization focused on reducing greenhouse gas emissions from freight transportation. Smart Freight Centre's vision is an efficient and zero-emission global logistics sector. Smart Freight Centre's mission is to collaborate with the organization's global partners to quantify impacts, identify solutions, and propagate logistics decarbonization strategies. Smart Freight Centre's goal is to guide the global logistics industry in tracking and reducing the industry's greenhouse gas emissions by one billion metric tons by 2030 and to reach zero emissions by 2050 or earlier, consistent with a 1.5°C future.

About the WBCSD Partnership for Carbon Transparency (PACT)

The Partnership for Carbon Transparency (PACT) aims to speed up decarbonization by promoting transparency in emissions across the value chain. PACT brings together businesses, technology players, initiatives, standard-setting bodies, reporting organizations, and regulators to address this challenge collectively. The PACT community collaboratively develops and shares the required methodologies and technologies for exchanging emissions data, integrating existing standards and approaches to establish a reliable foundation.

PACT is hosted by the World Business Council for Sustainable Development (WBCSD) – the leading voice of business for sustainability.

About SINE Foundation

SINE Foundation is a non-profit organization which fuses governance and technology principles to empower people and organizations to maintain our planet within safe limits. To achieve this, SINE partners with leading organizations such as WBCSD and SFC to support them in defining and delivering the technical foundations. These can be open technical standards, digital public goods and services or open-source software to enable sovereign data collaboration across companies.

Timeline

We propose the following timeline:

Date	Milestone	Key Result
Beginning of October	**MoU's signed by iLEAP Participants**	Participating companies are known (see below for kinds of engagement)
November	**Business Needs Definition**	After 3 business workshops with iLEAP contributors, piloters and implementers, business needs for data collection as well as simplified data transactions are defined
Beginning of February	**(draft) Data model extension v1**	After 2 workshops with iLEAP contributors, piloters and implementers, a first version of the tech specs draft is shared with iLEAP piloters implementers for implementation
Mid February	**Interoperability Testing Starts**	Interoperability testing of iLEAP piloters and implementers' implementation commences
Mid April	**(draft) Data model extension v2 & iLEAP Progress Workshop**	First progress and "lessons learned" report shared with iLEAP project members. If needed, tech specs are amended following lessons learned. A second version of the tech specs draft is shared with iLEAP piloters implementers for implementation
Beginning of May	**User Testing**	iLEAP piloters and implementers test the applicability using either synthetic or real-world data. Key objective is to assert accounting system's integration indeed works
Beginning of September	**Beta Release 1 of Data Model Extension**	The tech specs are released as a beta version at the PACT Online Catalog. Meanwhile, additional awareness is raised within SFC and PACT beyond iLEAP participants
Mid September	**Fit-for-purpose Testing**	Testing is extended with non-iLEAP members using either synthetic or real-world data. Key objective is to assert accounting system's integration works
Mid November	**Beta Release 2 of Data Model Extension**	Based on Fit-for-purpose testing, the data model extension is updated (optionally) and released at the PACT Catalog
January 2025	**iLEAP Workshop; Report Publication**	Project key learnings are published as part of a shared workshop between SFC and PACT

Note: where "workshops" are stated it will be primarily a remote workshop unless decided otherwise.

Types of Engagement

We differentiate between 4 levels of engagement:

a) **Contributor** (lowest commitment): companies participating in online workshops to clarify integration-related technical questions. Enterprise or IT Architects, Software Developers, Carbon Accounting and/or LCA specialists are especially suited for this.
   Commitment: Contributors participate in 2+ integration & online alignment workshops

b) **Piloter** (medium commitment): companies willing to test iLEAP-conforming software and to give feedback. *Optionally*, a Piloter engages with external companies to participate during the Fit-for-purpose testing.
   Commitment: same as Contributor's commitment *plus* active participation in Fit-for-purpose Testing

c) **Implementer:** companies implementing the iLEAP technical specifications – either for in-house solutions or as a software provider offering services to iLEAP members and others.
   Commitment: Piloter-like commitment *plus* active participation in technical specification definition process: 2+ online workshops plus asynchronous reviews at GitHub

d) A**dvisor:** The advisor will stay apprised of the project's advancements and interim outcomes, participate in ad-hoc tasks that involve offering comments or insights on specific topics. Unlike the roles involving active engagement, the advisor is not required to partake in all project-related activities and workshops, nor is there an expectation to engage in testing activities.
   Commitment: Lighter than contributor's commitment

Resources and Time Commitment Overview

Stakeholder // Engagement	Contributor	Piloter	Implementer
Shipper	**People**: Enterprise / IT Integration expert & LCA / Carbon Accounting Expert **Time**: 2 x 4h online workshops + preparation	**People**: Same as Contributor-level, plus Product and Software Expert(s) **Time**: Same as Contributor-level plus approx. 15 days in for piloting + learnings	**People**: Product and Software Expert(s), LCA / Carbon Accounting Expert(s), Sustainability professionals **Time**: Same as Piloter-level plus 5-10 days for tech specification development + software implementation efforts
LSP, Carrier, etc.	**People**: Enterprise / IT Integration expert(s) **Time**: 2 x 4h online workshops + preparation + any Ad hoc sessions	**People**: Same as Contributor-level, plus **Time**: Same as Contributor-level plus approx. 15 days in for piloting + learnings	**People**: Product and Software Expert(s), LCA / Carbon Accounting Expert(s), Sustainability professionals **Time**: Same as Piloter-level plus 5-10 days for tech specification development + software implementation efforts
Software Provider	**People**: Product, Enterprise / IT Integration expert & LCA / Carbon Accounting Expert **Time**: 2 x 4h online workshops + preparation + Working Group participation + Tech Spec feedback and updates	**People**: Same as Contributor-level, plus **Time**: Same as Contributor-level plus approx. 15-20 days in for piloting + learnings + any additional integration support + Tech Spec feedback and updates	**People**: Product and Software Expert(s), LCA / Carbon Accounting Expert(s), Sustainability professionals **Time**: Same as Piloter-level plus 5-10 days for tech specification development + software implementation efforts

Please note that the resource and time commitments are indicative and subject to variations. With such projects approval from Management teams is also usually required.

Ready to join iLEAP?

If you want to join our project, please get in touch with:

	Violetta Matzoros *Technical Manager, Digitalization Lead* Smart Freight Centre	**violetta.matzoros@smartfreightcentre.org**
	Gabriela Rubio Domingo *Jr Technical Manager* Smart Freight Centre	**gabriela.rubiodomingo@smartfreightcentre.org**
	Prasad Tilloo *Technical Project Manager* S—I—N—E	**prasad@sine.foundation**

Commitment

Signature:	
Name:	
Title:	
Organization:	
Type of Actor:	
Level of Engagement:	
Financial Commitment (optional - review section T&Cs):	
Date:	

Appendix: Funding Terms & Conditions

Financial commitments are completely voluntary and have no bearing on the outcome of the project which is collaborative, and consensus driven. The decision making of the process lies within the project team and the input from all participants, irrespective of what contribution each of them makes.

Your fund to support cost-intensive pillars will be especially dedicated to the work which are crucial for the long-term success of the iLEAP:
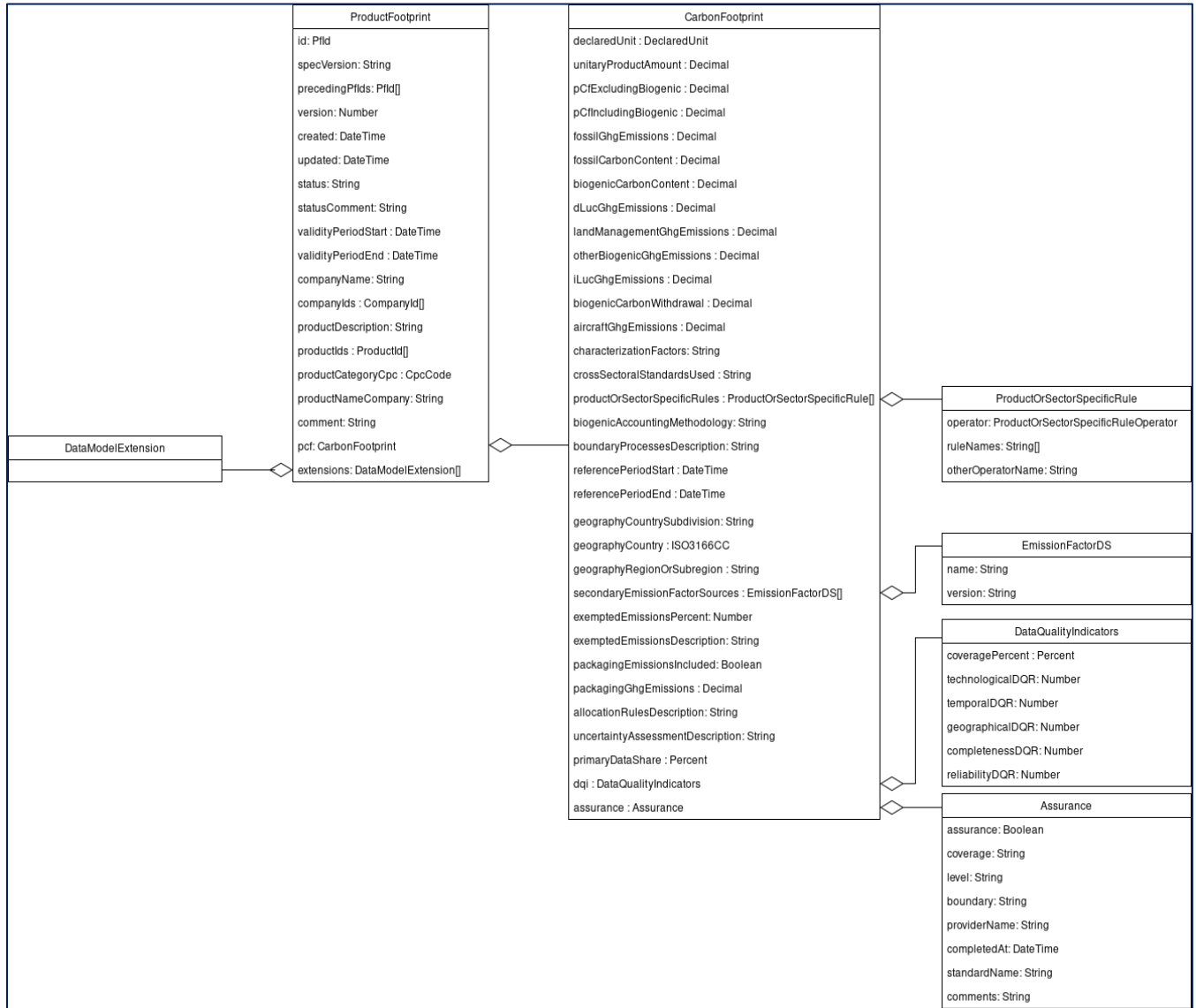
1. to drive diffusion and adoption of the data model extension (deliverable #2) by presenting and engaging at conferences, integrating with related initiatives, and other activities to drive adoption during and after the technical specification phase.
2. to cover the cost of implementing software for automating the conformance testing process. This is as strategic investment into the software and solutions ecosystem and generally the diffusion of the SFC standards by significantly driving down the cost for implementing conforming solutions globally

Any money raised will be used to support project activities and primarily testing. In case of receiving more funds, we will implement measures to fast track the outcome.

Appendix: Further Reading Material

1. https://www.smartfreightcentre.org/en/ileap/
2. Link to GLEC Framework Data model
3. Pathfinder Technical Specifications Version 1.0.1

4. Pathfinder Technical Specifications Version 2.0.1
5. Link to PACT
6. PACT Data Model ERD (refer the diagram below)
7. Data Model Extension Guidance from PACT
8. PACT Catalog

PACT Data Model ERD