

Welcome to the  
**AT020 Committee „International Trade and Transportation“  
webinar**

**Towards a global emission calculation standard for transport  
chains – international joint efforts for climate targets**

April 23<sup>th</sup> 2019, 12:00 – 13:00 pm CT



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Dept. Environment & Resource Logistics



# Towards a global emission calculation standard for transport chains – international joint efforts for climate targets

## Objectives of the webinar

- Understand US researchers' perspective and needs in the context of the standardization efforts
- Create interest in GLEC and LEARN
- Gain support for ISO initiative
- Discuss joint next steps

## Structure

1. Short introduction & video
2. Core findings of the LEARN project regarding standardization of emission calculation and identified next steps
3. Discussion



# The LEARN project



- Joint industry/research/politics project
- European Commission funded with a global scope
- 13 partner consortium, with **advisory board** with representatives from **industry, government and civil society**
- **Objective:** empower businesses to reduce their carbon footprint across global logistics supply chains through improved emissions calculation and reporting
- October 2016 – March 2019 (30 months)



LEARN Advisory Board	
US EPA	GREENFREIGHTASIA
DB SCHENKER	KLU KÜHNE LOGISTICS UNIVERSITY
ERTICO	ADEME
HEWLETT PACKARD	

# The LEARN Project at TRB

## TRB Workshop January 13<sup>th</sup>, 2019

- “Standardizing calculation and reporting of freight transport emissions on a global scale – Needs, achievements and perspective of a successful industry/research cooperation”
- Speakers:
  - Sophie Punte (Smart Freight Centre, NL)
  - Graziella Siciliano (Environmental Defense Fund, USA)
  - Igor Davydenko (TNO, NL)
  - Cari Anderson (California Air Resources Board, USA)
  - Buddy Polovick (US EPA)
  - Suzanne Greene (MIT)
- Discussion of advantages, challenges, achievement and future developments are needed



# International Workshop of LEARN Project

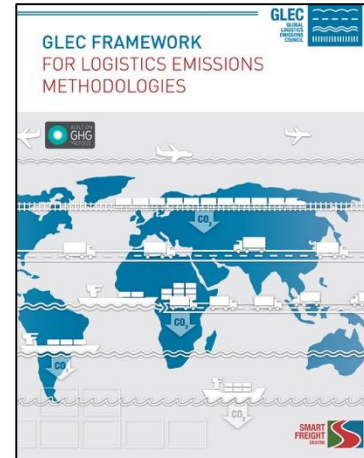
Final Workshop February 6<sup>th</sup> - 7<sup>th</sup>, 2019

The event demonstrated results from the LEARN project, in particular:

- practical examples of companies that have tested emissions calculation, assurance and reporting in practice, and recognize achievements.
- Together we explored how to support business beyond the LEARN project through policy, research, training and a growing network of programs and initiatives.
- Video
  - <https://www.youtube.com/watch?v=oHOMOB48x84>



# GLEC Global Logistics Emissions Council



Council  
Established in 2014

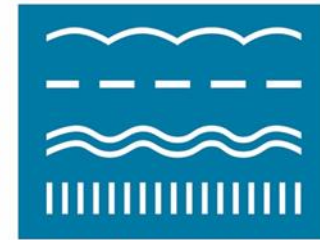
Framework v1.0  
Launched in 2016

revised version 2.0  
Planned June 2019

# GLEC Global Logistics Emissions Council

GLEC is industry led & backed by experts

**GLEC**  
GLOBAL  
LOGISTICS  
EMISSIONS  
COUNCIL



LED BY SMART FREIGHT CENTRE

## GLEC Members

Companies	
Programs	
Associations	

## GLEC Consultees

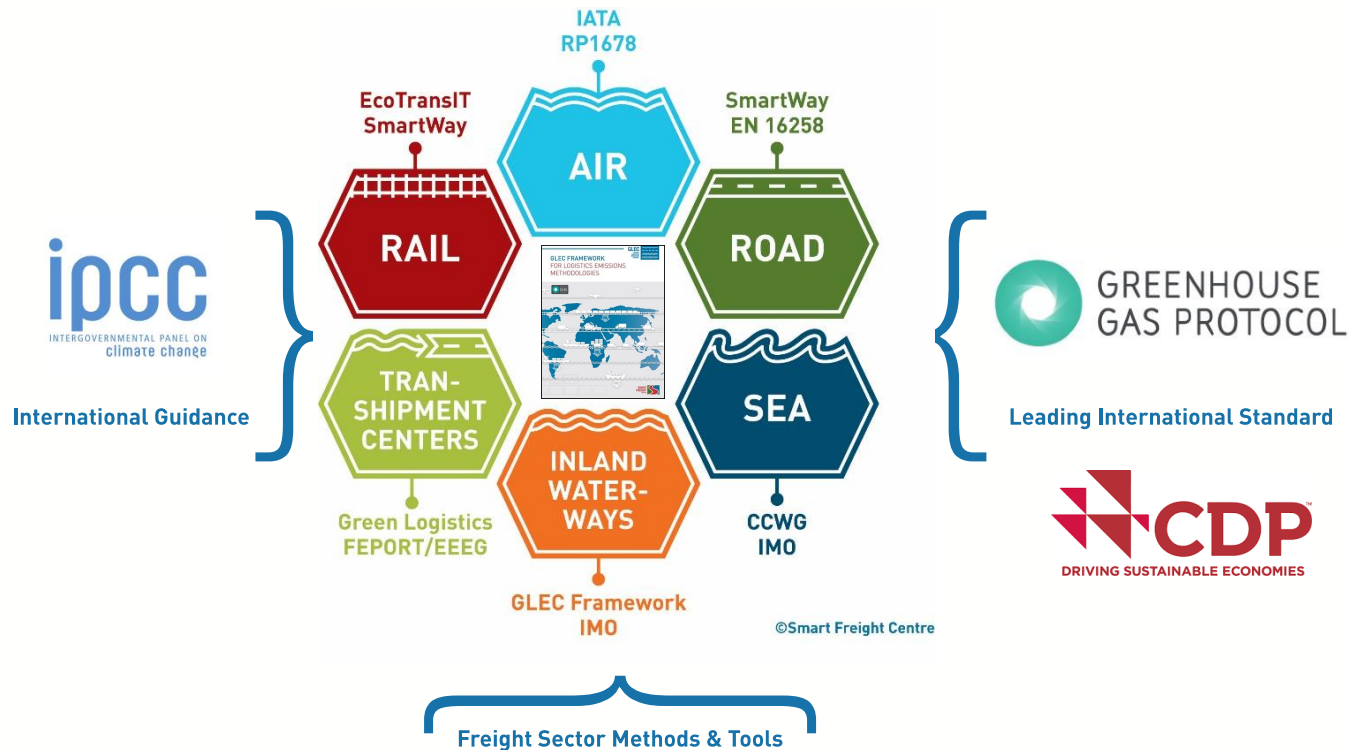
Companies	
Programs	
Associations	
Organizations	

## GLEC Experts

Experts	<p>Buddy Polovick (US SmartWay), Colin Smith (EST), Jens Froese (Jacobs University), Kerstin Dobers (Fraunhofer IML), Marc Cottignies (ADEME)</p>
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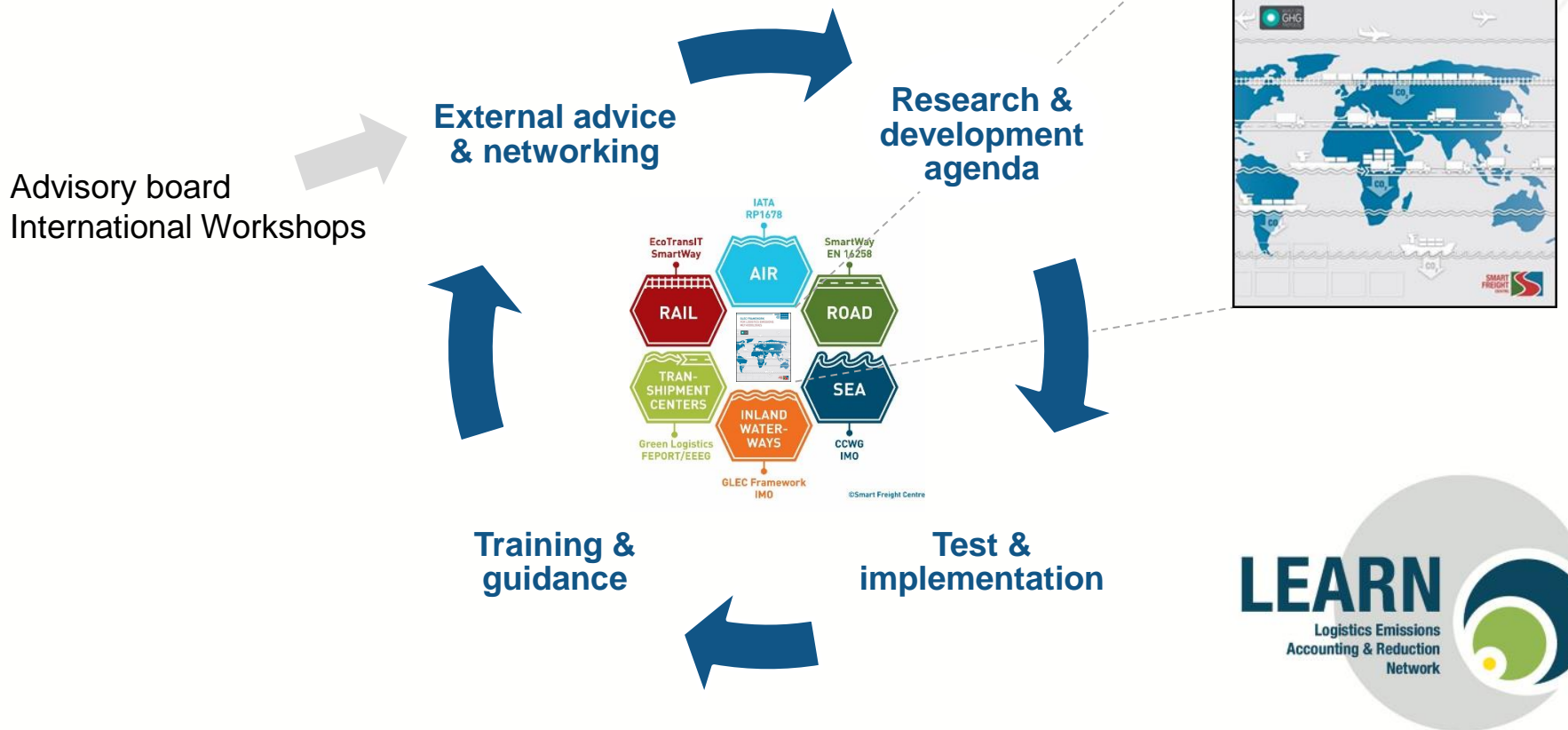
# GLEC Framework – some background information

The first universal and transparent way of calculating logistics emissions across the global multi-model supply chain



# The LEARN Project and the GLEC Framework

Empower businesses to **reduce their carbon footprint** across their global logistics supply chains **through improved emissions calculation, assurance and reporting**



# Achieving the LEARN objective

1. Companies can declare the reliability of logistics emissions data
2. Companies can get knowledge and training to build confidence and improve
3. Companies see their needs reflected in research, policies, standards and ICT
4. Companies are better connected to each other and other stakeholders



**LEARN**  
Logistics Emissions  
Accounting & Reduction  
Network



# 1. Companies can declare the reliability of logistics emissions data



- Guidelines for assurance and reporting of emissions



- Declaration:
  - Level of GLEC Framework adoption
  - Maturity and credibility of input data
  - Correct and consistent calculations



- Use by companies, programs, reporting initiatives, indices, labels



Other...



## 2. Companies can get knowledge and training to build confidence and improve



- 20+ company case studies across modes / transshipment centers on:
  - The practical application of the GLEC Framework
  - Reliability of calculated data
  - Use of results for reporting and decision-making
- Training course for road freight carriers on emissions accounting
  - English, Spanish and Romanian
  - Classroom and webinar
  - Consistent with GLEC Framework



### 3. Companies see their needs reflected in research, policies, standards and ICT



- Research Agenda to fill methodology gaps
- Policy Agenda to make emissions accounting and reduction more consistent and easier for companies
- ISO Standard: logistics element based on GLEC Framework
- CO<sub>2</sub>e emissions included in logistics ICT developments

AEOLIX

SELiS



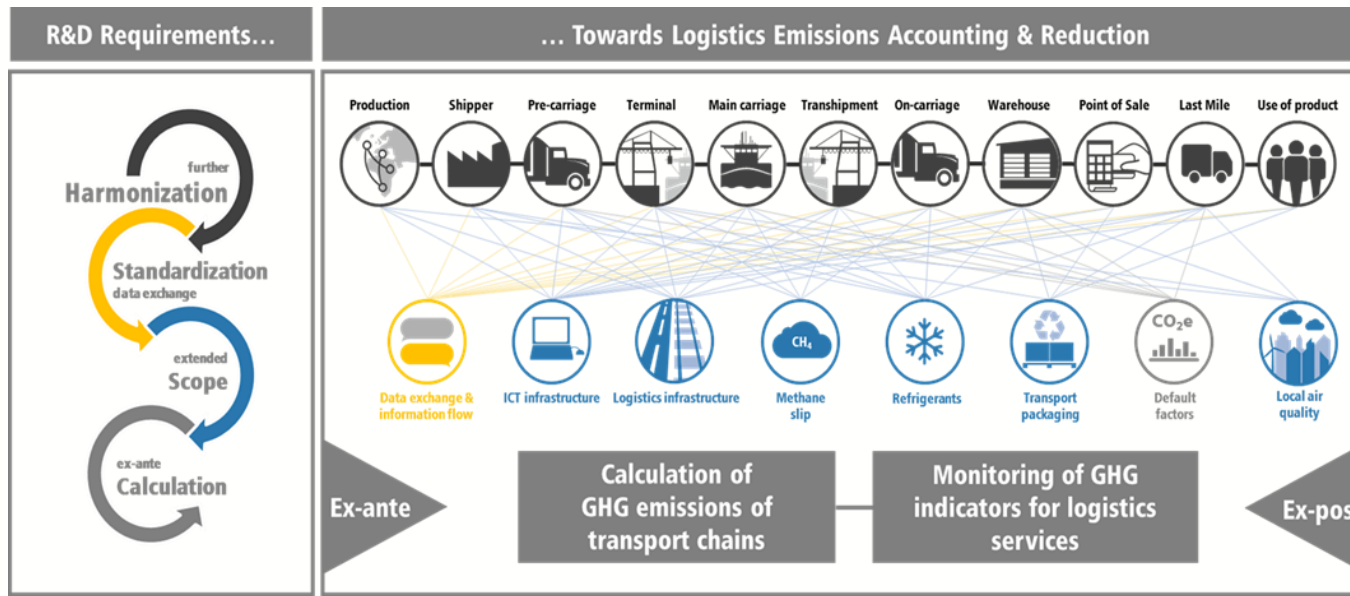
## 4. Companies are better connected to each other and other stakeholders

- Developing a 'network of networks'
- Establishing annual event on logistics accounting and reduction



# Core findings

## Further research needs



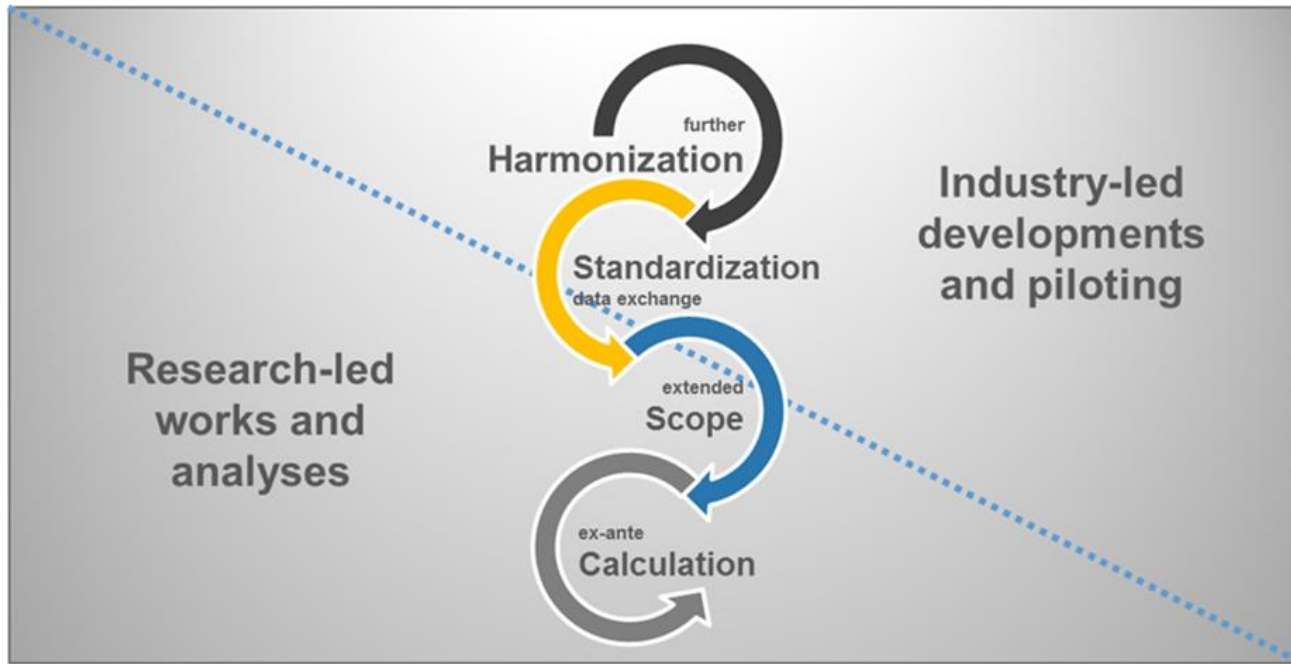
Ehrler, Dobeis, Davydenko

- Still varying levels of calculation “maturity” exists
- No common data format / exchange protocol / platform
- Focus on material flow; information flow and ICT infrastructure excluded
- Emphasis on greening of transport and logistics



# Core findings

## Cooperation format



# Core findings

## Motivation of industry

- Opportunities for improved operational efficiency and thus reduced costs in combination with reducing emissions
- Requests from customers, which are expected to increase in the future
- Existing or expected legal requirements, for example, mandatory disclosure of GHG emissions or reduction targets



# Core findings

## Obstacles for industry

- Steep learning curve for starters
- Lack of detailed fuel emission factors & default consumption factors
- Lack of automation
- Costs of implementation
- Assurance of data & calculations
- Limited improvement potential in already optimized transport chains
- TTW vs WTW emission factors
  
- **Shippers:** complexity of the chains and lack of LSP's data, region-specific conventions
  
- **Carriers:** need to track weight & distance, subcontractors' data, commercial sensitivity, levels of aggregation



# Core findings

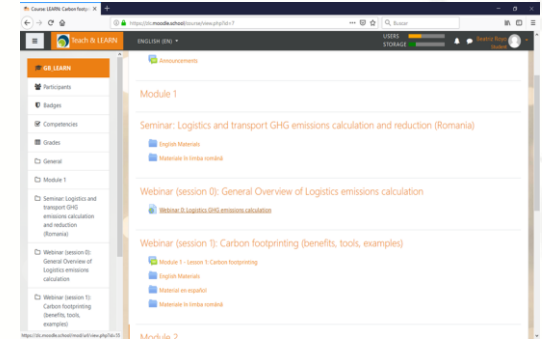
## Enablers for industry

- Previous experience with carbon footprinting methods & tools
- Data availability & access
- Automated data collection & computation processes
- Common default consumption factors & guidance how to handle data gaps
- Detailed understanding & knowledge of logistics supply chain & operation
- Marketing efforts
- Education, training & guidance



# Next steps

- Online platform with training & teaching material
- Training course on emissions accounting
- Guide & web-tool for GHG accounting at logistics sites\* as part of GLEC Framework
- Guidelines for Validation/Assurance
- Calculation tools info sheets
- Input for further development of GLEC Framework v2.0 & beyond
- Policy recommendations to EU
- Research & Development Agenda & Policy Recommendations
- GLEC Declaration for external reporting
- ISO initiative based on industry request



\* <http://publica.fraunhofer.de/documents/N-532019.html> & <https://reff.impl.fraunhofer.de/>

# Discussion

- Feedback on core findings
- What are relevant next steps regarding enhanced carbon accounting of global logistics & formal standardization (additional? Other prioritization?)
- Who are relevant US players to be involved in future steps (e.g. not present or volunteers)?
- Whom to put on list regarding ISO process



# Further Information on: www.learnproject.net

## 5 Challenge cases

**1. Challenge cases for GLEC Framework implementation by businesses**

### ADOPTING THE GLEC FRAMEWORK IN COMBINATION WITH EXISTING METHODOLOGIES AND TOOLS

A strong contribution by the global freight and logistics sector to the Paris Climate Agreement goals is critical. Pressure from customers, governments and investors on business to take action will continue to grow. Businesses are looking to optimize operational efficiency and minimize their carbon footprint at the same time.

The GLEC Framework allows businesses to calculate and report their logistics emissions consistently across their multi-modal supply chain. Results can be used to inform stakeholders and improve business decisions and actions. Challenge cases support businesses to implement the GLEC Framework through five steps:

1. Support GLEC Framework
2. Integrate into business processes
3. Challenge existing
4. Obtain customer and report
5. Use results to refine operations and reduce
6. Improve supply chain efficiency, reduce carbon footprint

**About LEARN and the GLEC Framework**  
The project Logistics Emissions Accounting and Reduction Network (LEARN) mobilizes businesses to reduce their carbon footprint across the global logistics supply chains through improved emissions calculation and reporting. LEARN partners work closely with related organizations, initiatives and already existing networks. This includes the Global Logistics Emissions Council (GLEC), a voluntary partnership that was established by Smart Freight Centre together with companies, industry associations, programs and experts. The LEARN project builds on and seeks to improve the GLEC Framework for Logistics Emissions Methodologies based on existing methodologies. The GLEC Framework makes carbon accounting work for industry. For the first time, emissions can be calculated consistently at the global level across all transport modes and logistic sites. The LEARN consortium is led by Smart Freight Centre and includes the following partners:

For more information: [www.learnproject.net](http://www.learnproject.net) or [info@smartfreightcentre.org](mailto:info@smartfreightcentre.org)

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 732884.

## Videos from LEARN International Workshop



## 5 Summaries of project & deliverables

### RESEARCH AND DEVELOPMENT AGENDA

Supportive research is important to inform and advance action by industry. A Research and Development Agenda was developed as part of the LEARN project to advance logistics emissions accounting and disclosure, including through the GLEC Declaration that provides companies with a standard template for reporting emissions information to customers and the public. The R&D Agenda can be used by those who fund research, make use of research results or conduct research in this area: primarily national governments and the European Commission, as well as research institutes, industry, policy makers and civil society. The GLEC Framework and the G20 International Workshop Agreement WA 18-2019 served as a starting point. The R&D Agenda was developed based on findings from a gap analysis, stakeholder workshops, test cases from over 30 companies and training sessions with industry partners that were carried out under the LEARN project.

Five areas were identified for future research priorities:

- Further harmonization of existing approaches
- Standardization of data exchange
- Extension of the calculation scope
- Support of excise calculation
- Implementation of the GLEC Declaration

It is emphasized that efforts should involve industry, accompanied by pilots for testing and validation in cooperation with research institutes.

## Website



### LEARN activities for MRV at scale

LEARN empowers business to reduce their carbon footprint across their global logistics supply chains. Logistics emissions measurement, reporting and verification (MRV) is improved and accelerated in four ways:

- Support to Companies
- Testing & Validation
- Policy & Research
- Network Engagement



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LEARN project: <http://www.learnproject.net/>

GLEC: <https://www.smartfreightcentre.org/en/smart-freight-glec/>



# LEARN

Logistics Emissions  
Accounting & Reduction  
Network



This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 723984.



# Backup slides



Sust. Investment/rating	Int. orgs	Associations	Sust. bus. networks	Other
 DRIVING SUSTAINABLE ECONOMIES   SUPPLIER SUSTAINABILITY RATINGS   FTSE4Good   Gartner Supply Chain Top 25   INTERNATIONAL GREEN AWARDS	 Dow Jones Sustainability Indexes   ETHIBEL   EURONEXT   UNITED NATIONS   THE WORLD BANK	 EE  cefic   CLECAT  ebu   Clean Transport Action  ECTA  ESC   FTA  FEPORT  IATA   IAPH  ICHCA  RU   UPU UNIVERSAL POSTAL UNION  OESO	 WE MEAN BUSINESS   BSR  CDP   THE B TEAM  Ceres   THE CLIMATE GROUP   THE PRINCE OF WALES'S CORPORATE LEADERS GROUP  UN GLOBAL COMPACT   wbcSD	 Breakthrough Fuel  CALSTART   C40 CITIES  CP LC CARBON PRICING LEADERSHIP COALITION   GREENHOUSE GAS PROTOCOL  GRI   GEMI Global Environmental Management Initiative  icct THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION   ICLEI Local Governments for Sustainability  TRANSPORT & ENVIRONMENT   ROCKY MOUNTAIN INSTITUTE DRIVING AMBITIOUS CORPORATE CLIMATE ACTION   SCIENCE BASED TARGETS   SUSTAINABLE PURCHASING LEADERSHIP COUNCIL

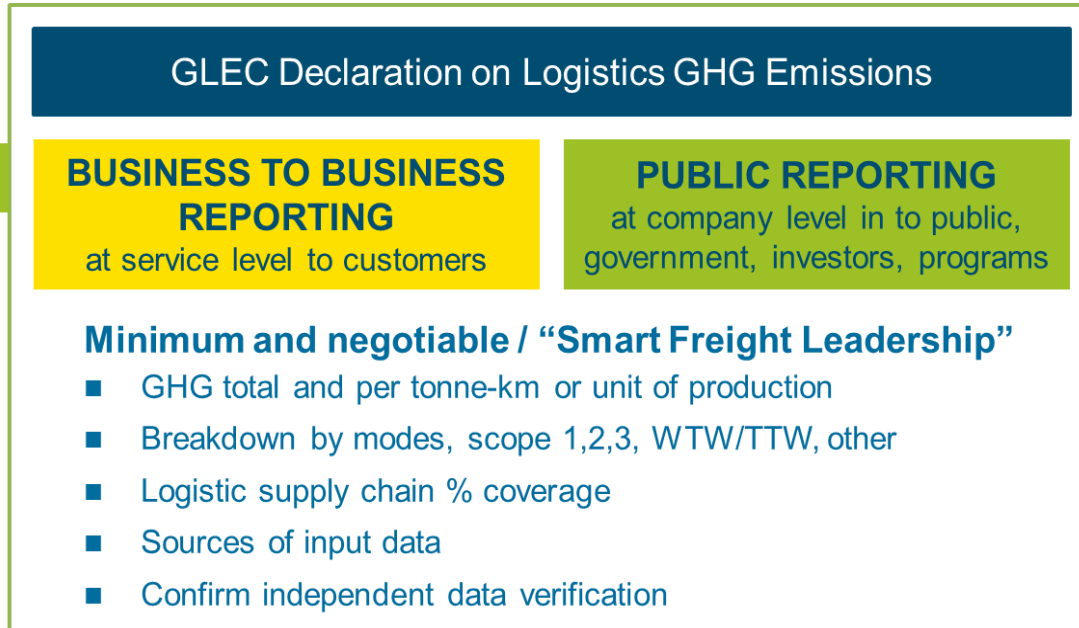
Initiatives relevant to zero-emissions logistics

 ecovent   EcoTransit   LogEC BearingPoint.   Green Router   Lean analytiX   NTM  TK Blue   Via Green institute   UPU UNIVERSAL POSTAL UNION	 globalgreenfreight.org   Clean CARGO Sustainable Transportation   SmartWay  PLVB   LEAN & GREEN  Objectif CO2  FRET 21   Eco Drivers Program   CLERS   GREEN FREIGHT ASIA  CHINA GREEN FREIGHT INITIATIVE  GREEN FREIGHT INDIA	 SMART FREIGHT CENTRE  GLEC GLOBAL LOGISTICS EFFICIENCY COUNCIL   BICEPS NETWORK  Clean Shipping Index  GLOBAL MARITIME FORUM   IFRTY  SRF The Centre for Sustainable Road Freight   RTMS Road Transport Management System   Future of Fuels   alice Alliance for Logistics Innovation through Collaboration in Europe  European Logistics Platform	 EcoMobility A Project of ICLEI - Local Governments for Sustainability   International Transport Forum Decarbonizing Transport   LowCVP Low Carbon Vehicle Partnership   MOVIN'ON by WBCSD   RIGHTSHIP  APPMG   Sustainable mobility FOR ALL  TRANSPORT DECARBONISATION ALLIANCE   WPSP WORLD PORT SUSTAINABILITY PROGRAM  Partnership for Sustainable Low Carbon Transport	 AEOLIX   AEROFLEX   LEARN   NextTrust   SELiS
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Tools	Green freight programs	Sust. freight	Sust. transport initiatives	EC Projects
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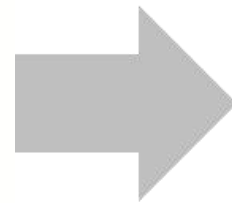
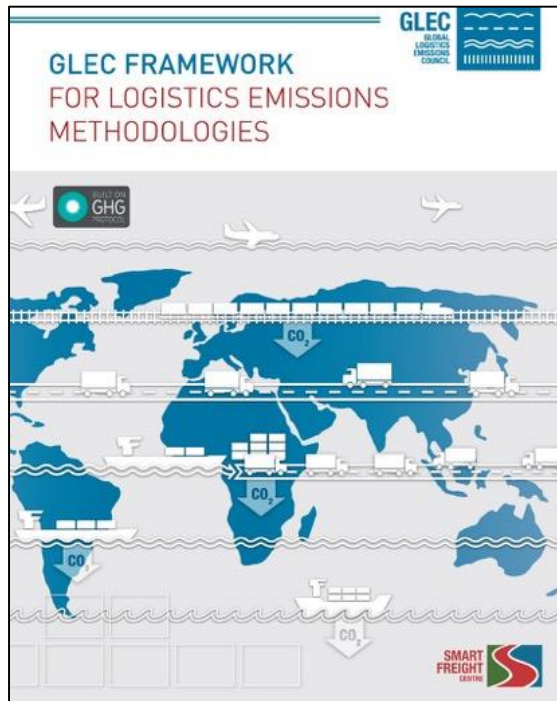
# GLEC Declaration: dramatic scaling of logistics emissions reporting

Request from subcontracted carriers for shippers; reports; logistics decisions and collaboration



# Main Results Exploitation

## Input into ISO development



Adopted by

29 Multinationals

Recommended by



Endorsed by



Incorporated in guidelines of industry associations, green freight programs and calculation tools



Plans to develop / update standards based on GLEC Framework for

