German, Italian & Latin American consortium for resource efficient logistics hubs & transport

Alliance for Logistics Innovation through Collaboration in Europe

SUSTAINABILITY AND GHG PERFORMANCE AT LOGISTICS HUBS

Joint webinar of the GILA project and ETP ALICE
12 October 2023 | 15:30 – 17:00 CET

- GHG emissions quantification of logistics sites aligned with ISO 14083
  Jan-Philipp Jarmer, Fraunhofer IML
- Annual market studies & overall GHG performance indicators for logistics hubs
  Andrea Fossa, GreenRouter & Kerstin Dobers, Fraunhofer IML
- Possible solutions for decarbonising logistics hubs
  Sara Perotti, Politecnico di Milano
- Sustainability of hubs: a key driver for maintaining value over time
  Scarlet Romano, Arcadis Germany


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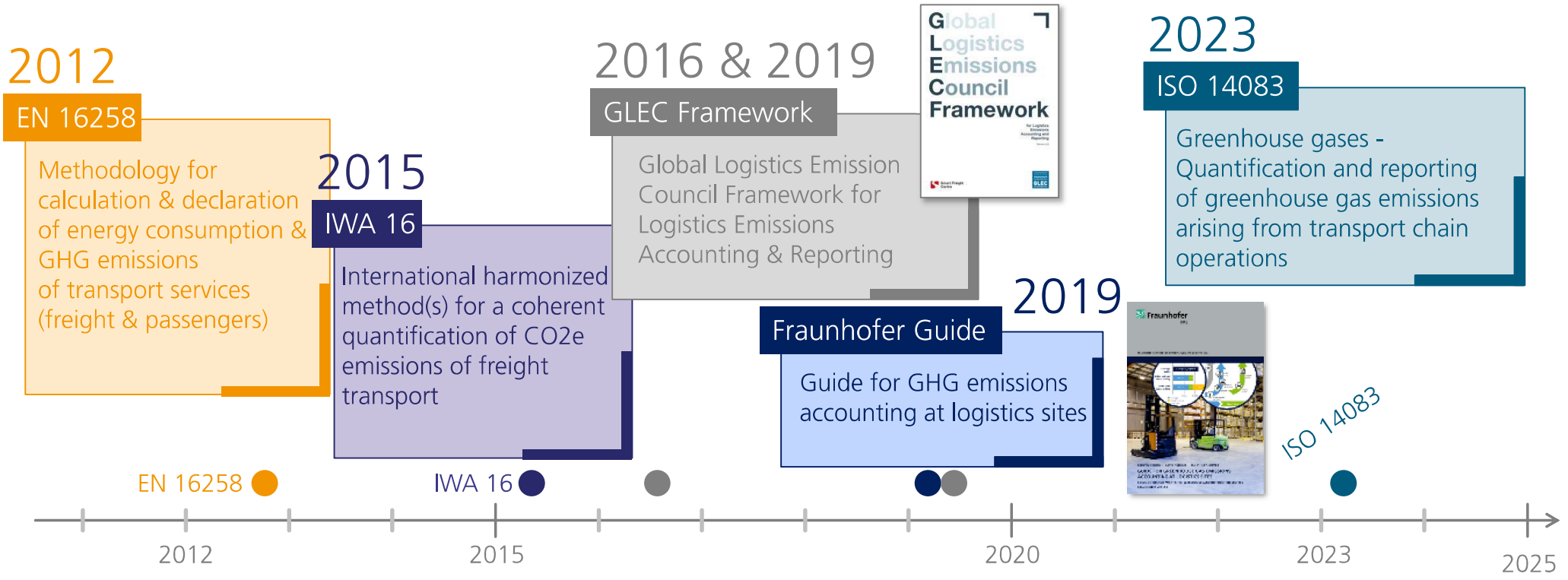
Calculation of GHG emissions from logistics chains

The path to an international standard



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Calculation of GHG emissions from logistics chains

Status quo and future developments

ISO 14083:2023 ***Greenhouse gases - Quantification and reporting of greenhouse gas emissions arising from transport chain operations***

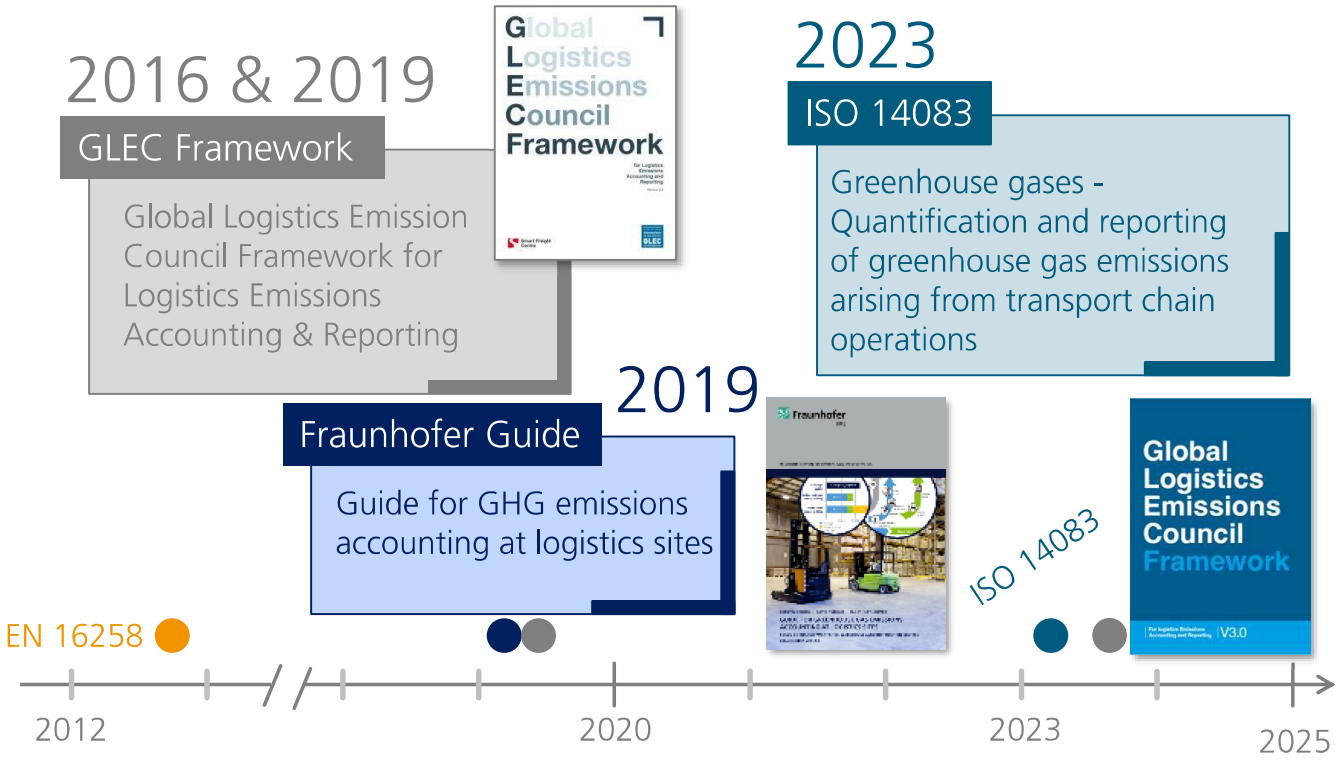
- Published in March 2023 and replaces EN 16258:2012
- Translations, e.g. in German (DIN EN ISO 14083)

GLEC Framework (Version 3)

- Publication was at the end of September 2023

Fraunhofer Guide on logistics hubs

- The update is scheduled for the end of 2023



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GILA

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There is a knowledge gap for logistics hubs regarding environmental performance, GHG emissions & reduction potentials

Thanks to all participating in and supporting this market study!

Let's overcome this gap!

Market studies in the project GILA on energy efficiency & GHG emission intensities at logistics hubs

- Identify main influencing parameters on energy efficiency and GHG emissions at sites
- Elaborate average GHG emissions intensity values for sites and a reasonable classification scheme for sites

Project **GILA - German, Italian & Latin American consortium for resource efficient logistics hubs & transport**
07 / 2020 – 07 / 2023
Project lead: Fraunhofer IML

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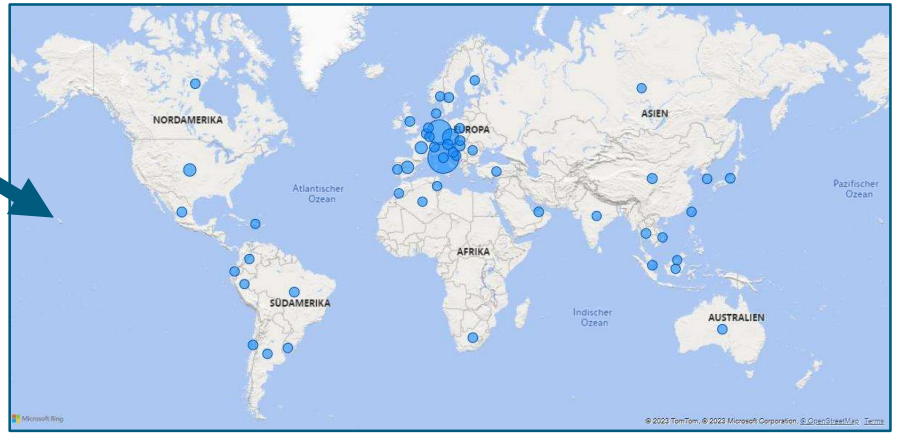
Market studies in GILA project

Extension of global coverage

1st study (2021)

2021	2023
159 hubs	843 hubs
14 countries	33 countries
93% in Europe	85% in Europe



after 3rd study (2023)

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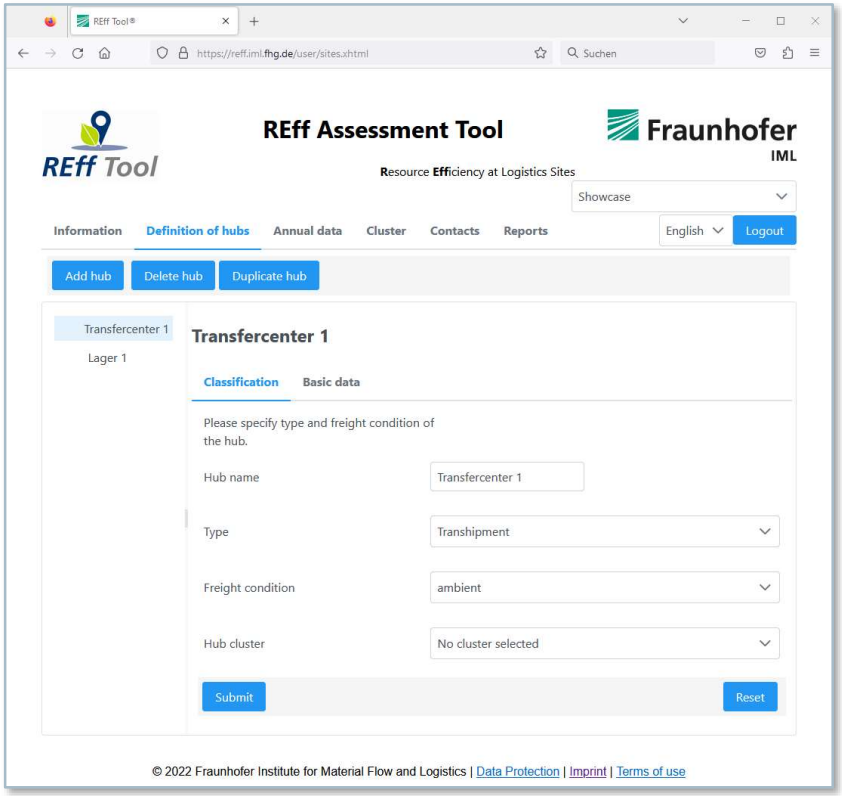
KPI for companies and individual logistics hubs

supported by REff Tool®

Online tool for GHG assessment with primary data	Generally, use at no cost possible https://reff.iml.fhg.de/ Each company uses its individual database
Surveys for data collection	Updated surveys per site type for manual data input online
Aligned with ISO 14083	GHG emissions aligned with international harmonized method regarding scope, emission factors and reports
Data base with more than 900 sites	Annual market studies and update of average KPIs with anonymised data base of logistics sites worldwide



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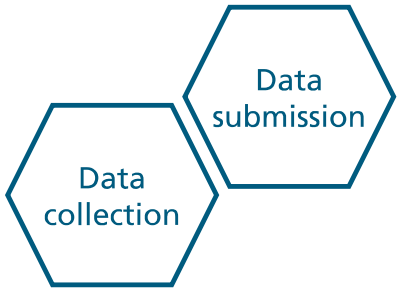
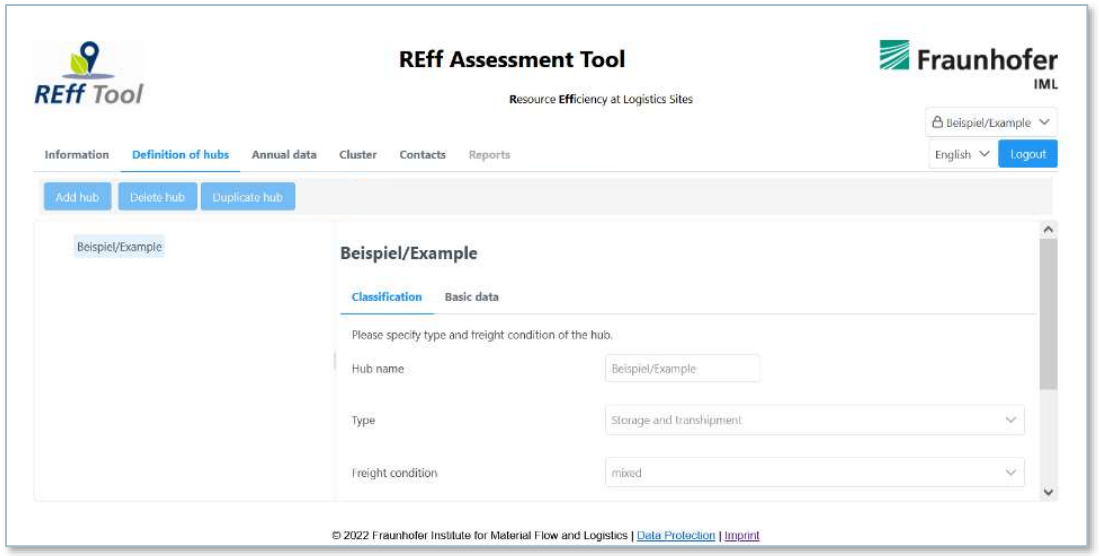
Input data needed

Online platform REff Tool®





Classification of site

- Type
  - Transhipment, warehouse, storage and transhipment, container terminal, liquid bulk terminal etc.
- Temperature level
  - ambient, chilled, frozen, mixed

Basic data

- Location (country), building year, size, operation

REff Tool® is available via: https://reff.iml.fraunhofer.de/

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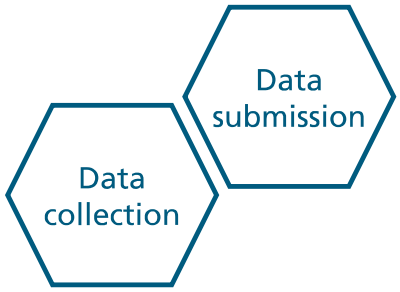


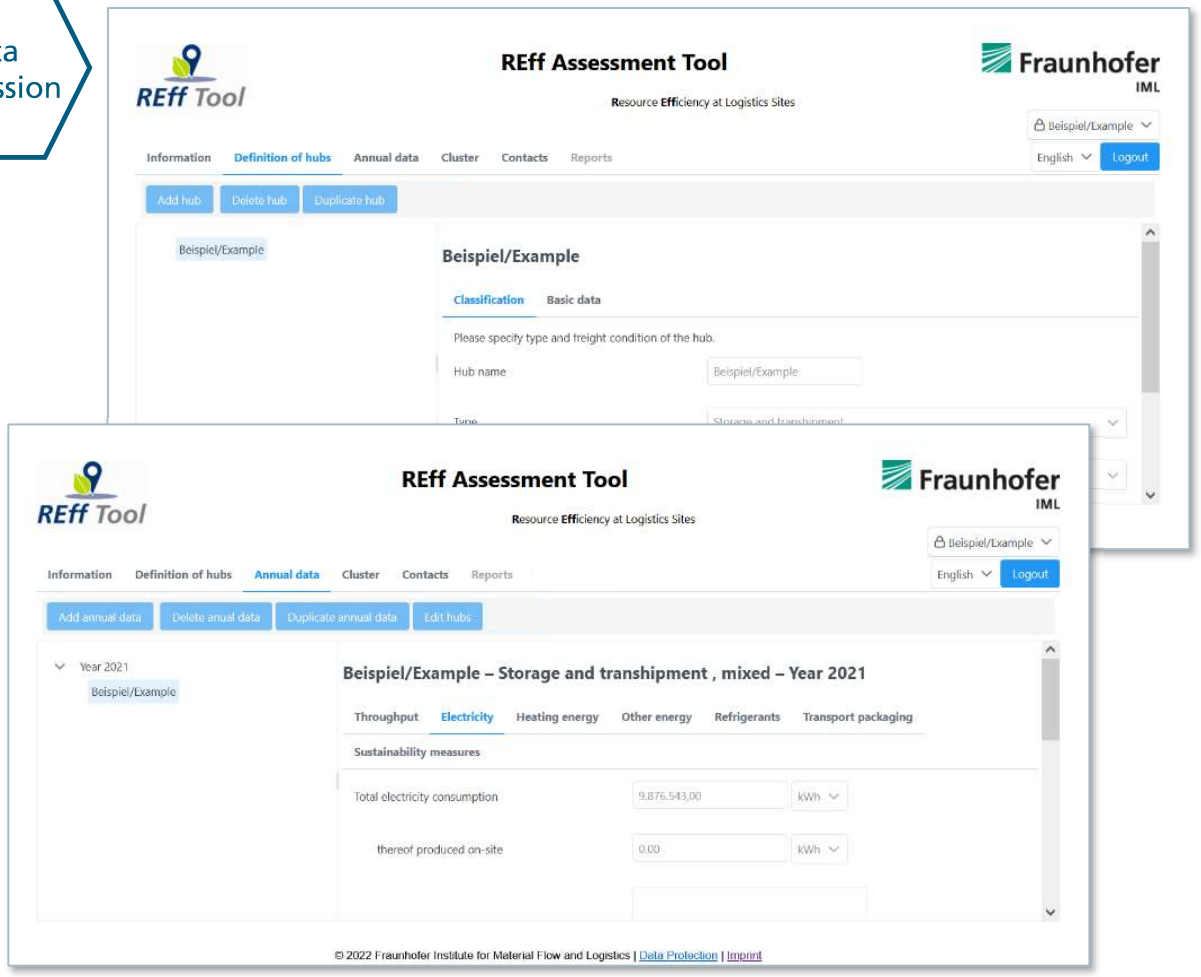
Classification of site

Basic data

Annual data
- Throughput (tonnes or alternative unit)

Annual consumption
- Electricity,
- Heating energy (natural gas, district heating, steam etc.)
- Other energy (diesel, petrol, LPG etc.)
- Leakage of refrigerants (estimated by annual refill)
- Optional: transport packaging

Sustainability measures
Implementation or priorities of 31 measures



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