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SEVENTH FRAMEWORK PROGRAMME

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Beyond EN 16528 – towards a global standardisation of the calculation of CO2 emissions along supply chains

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7th ECITL

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COFRET
Carbon Footprint of Freight Transport

- The COFRET project
- IWA International Workshop Agreement
- Further steps towards a global standardisation

Background – The COFRET project

- Scope:
  - Use currently available methods and provide solutions for any gaps
  - Transport-related carbon footprint along supply chains
  - Consider all transport modes and all logistics operations
  - Fully comply with the CEN standard EN 16258
- Project Duration: 42 months
- Project kick-off: June 2011

Project partners

Members of the initial Advisory Board

- Connekt (The Netherlands)
- Deutsche Bahn (Germany)
- DHL (Germany)
- Ewals Cargo (The Netherlands)
- Fiege AG (Germany)
- Kühne & Nagel (UK)
- Maersk Line (Denmark)
- Myclimate (Switzerland)
- NTM (Scandinavia)
- Sainsbury‘s (UK)
- Swiss WorldCargo (Switzerland)
- UPM (Finland)

Later joined by (examples)**:**

- Global Logistics Emission Council
- Smart Freight Centre
- Green Freight Europe
- GREEN EFFORTS
- EcoTransIT
- WWF
- World Economic Forum

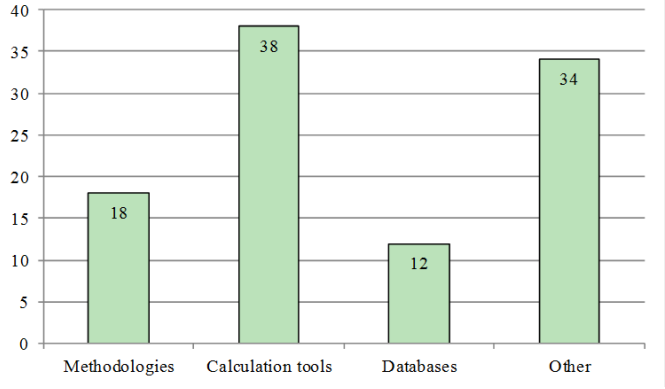
and:

COFRET has been granted project liaison status by CEN

Analysis of existing emission calculation tools

Over 102 items analysed, more than 80 aspects taken into consideration

- expert interviews (29)
- on-line questionnaire (62)
- stakeholder and user workshops



- Identification of most encompassing standardisation approaches

10 real-life test cases

- Identification of most relevant gaps in current standards
- Development of concept for further steps together with advisory board

Towards a Common Approach

ISO 14064-1:2006
considers company perspective including transport and logistics operations

Green House Gas Protocol Scope 3
standard for the corporate value chain

EN 16258 (published December 2012)
transport mode related (freight and passenger)
expected to have a major impact towards harmonisation
could be proposed for development as an international ISO standard

ISO 14067
considers carbon footprint of products

ISO TR 14069
covers general principles of carbon footprinting

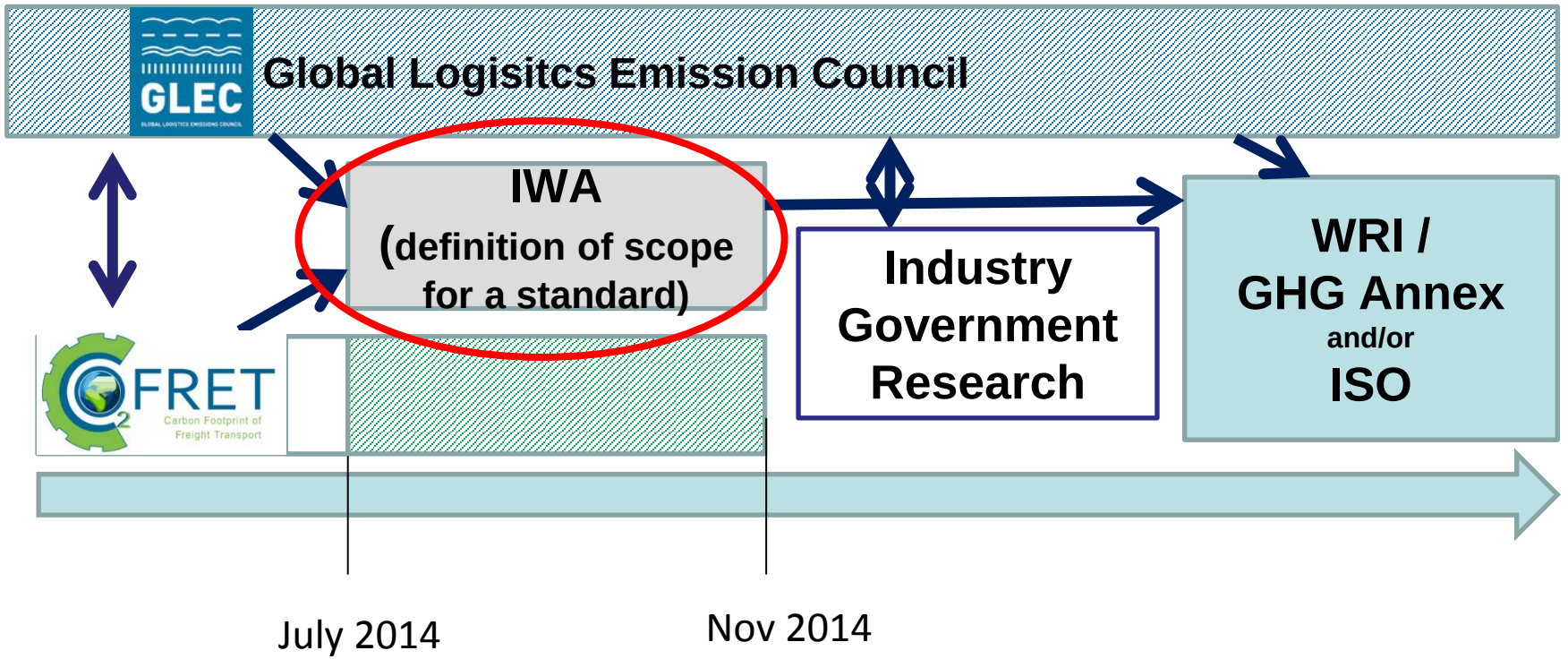
Various international organisations and projects: Smart Way US, GFE. GFA, CCWG, WEF, ECOTransIT, Green Efforts and many more

However…..

- Developed approaches still allow for alternative ways of allocating and calculating emissions, within certain boundaries, and the use of different sources of default data

- Standards do not consider either the full logistics operations or all transport elements of a supply chain, e.g. EN 16258 does not cover terminals

IWA as a starting point



IWA scope

This International Workshop Agreement (IWA) defines the framework for methods for coherent quantification of CO2(e) emissions of freight transport (total and intensity) on the following three levels:

1. Level of operation specific emission calculation;

2. Level of network emission calculation including company level;

3. Level of cargo emission.

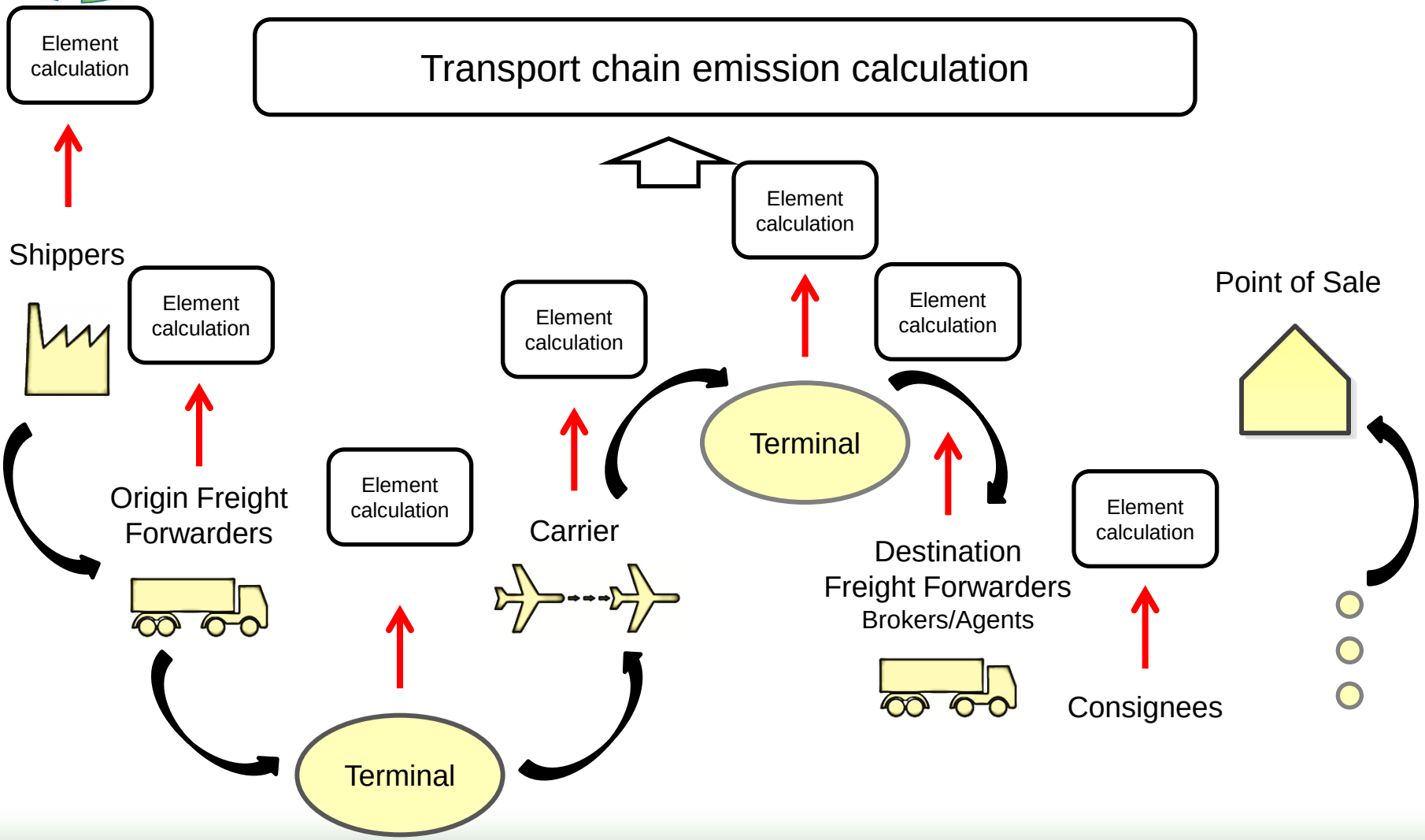
In a first step gaps for each level will be mapped out, in a second step suggestions for closing the identified gaps are given.

Consideration needs to be given to the usefulness of the outputs to the potential user groups of the output, particularly transport service providers and the shippers of goods.

IWA structure

- Transport Chain Elements TCE
- Mode specific gap analysis:
  road, rail, inland waterways, sea, logistics hubs
- Analysis of specific aspects
  Starting point(s)
  TTW / WTW
  CO2 / CO2e
  Allocation units in general
  Specific allocation units
  Energy consumption of auxiliary processes
  Processes included
  Allocation notes
  Procedure for measured data
  Procedure for absence of measured data
  Fuel-based vs activity based
  Data sources (default data)
  Specific factors (if not Annex A/EN 16258)
  allocation unit and intensity
  calculation of distances
  Reporting
  Accuracy labels

Transport Chain Elements



Mode Specific Gap Analysis

Example Road

	Transhipment Centres		
Starting point(s)	Green Efforts	Green Logistics	**Identified Gaps**
TTW / WTW	WTW	WTW	
CO_2 / CO_2e	CO_2 (e)	CO_2 (e)	
Informative: other air pollutants		NOx, CO, NMVOC, …	Particulates are considered a major issue for ports due to the concentration of vehicle movements to serve the port lanside as well as the emissions from heavy duty vessel engines and the effect of high sulphur marine fuels.
Allocation units in general	TEU throughput	transshipment centers: allocation based on weight (tons) warehouses: allocation based on space use (average stock level)	no harmonized allocation units Need to distinguish between transshipment centers & warehouses Consistency of reporting (metric vs imperial)
Specific allocation units	Green Efforts has focused on maritime container terminals The focus has been on throughput rather than a measure of dwell time or number of processes within the terminal due to practicality considerations	Green logistics project has considered a range of logistics facilities (air freight terminals, letter/parcel sorting centers, storage/transhipment centers for general cargo)	Allocation rule for temperature control / refer of high practical relevance; should be consistent to maritime.
Energy consumption of auxiliary processes	generally included, depending on what data are available	electricity, heating, packaging materials, refrigerants	Treatment of temperature control / reefer to be consistent across all modes.
Processes included	No reliable method for the consumption by reefers while at the terminal as yet	all warehouses/transshipment centers of logistics network	

Next Steps

13./14. November final workshop in Berlin:

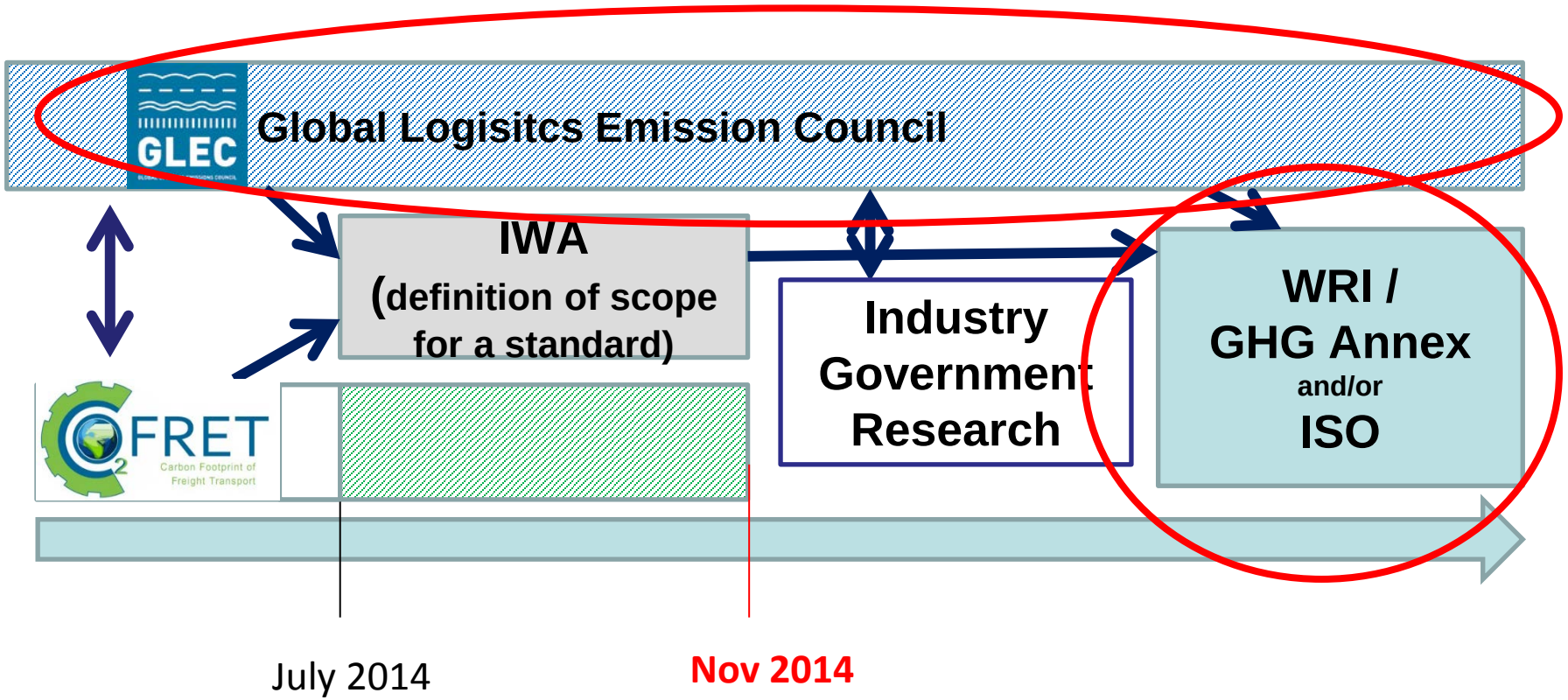
- Finalisation of
  - IWA Wording
  - Transport mode specific gap analysis
  - Normative references and recommended standards per mode
  - Recommended next steps (organisation, stakeholder)
- Voting on IWA

Publication of IWA

IWA contribution and achievements

- Results achieved jointly by industry and research within COFRET project are raised onto an international level
- Extended neutral platform for exchange of experiences with emission calculation tools and standards of industry, research and other stakeholders
- Internationally recognised format for further development of global standard for the calculation of emissions of transport chains

Handing over



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