



COFRET is co-financed by the
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The COFRET project & GLOBAL perspectives

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Introduction

The COFRET project

COFRET is a collaborative research and demonstration project part-funded by the European Commission, which will deliver a **methodology for the calculation of the carbon footprint along the full supply chain**.

COFRET objectives:

- To establish a complete GHG emission calculation methodology and framework in the context of complex supply chains based on available methods, calculation tools and databases.
- To cover all transport and logistics along the supply chain (including terminals and nodes) at shipment and company level.
- To provide a methodology that is applicable for supply chains within the EU as well as in the global context.
- To embed practical exploitation as a key element of the technical work programme to maximise the eventual uptake of the methodology.

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Introduction

Approach

What we feel is important:

- Work with the existing initiatives & close co-operation between the COFRET team and industry stakeholders.
- Full compliance with the CEN standard (EN 16258) to be published in 2012. → Extended approach for freight, covering all supply chain elements.
- Test the methodology in real supply chain applications (2013).
- Work to maximize the eventual uptake of the COFRET methodology.

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COFRET consortium

COFRET research partners

- CERTH-HIT, Greece
- DLR, Germany
- IFSTTAR, France
- ITSW, Poland
- Marlo, Germany
- NEA, Netherlands
- PTV, Germany
- RAPP, Switzerland
- TNO, Netherlands
- TOI, Norway
- TTR, UK
- TUDO, Germany
- VGTU, Lithuania
- VTT, Finland

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Extended COFRET consortium

COFRET Advisory Board

- Connekt (The Netherlands)
- Deutsche Bahn (Germany)
- DHL (Germany)
- Ewals Cargo Care (The Netherlands)
- Fiege AG (Germany)
- Kuehne + Nagel (UK/ Switzerland)
- Maersk Line (Denmark)
- myclimate (Switzerland)
- NTM (Scandinavia)
- Sainsburys (UK)
- Swiss World Cargo (Switzerland)
- UPM (Finland)
- WWF International.

Links to other initiatives

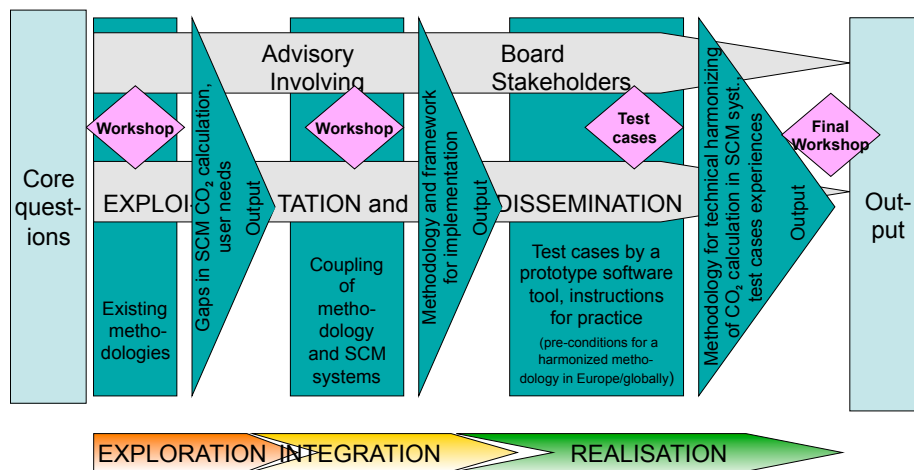
- World Economic Forum: Consignment Carbon
- Green Freight Europe
- CEN/TC 320 “Transport – Logistics & services”
- EcoTransIT
- ...

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COFRET workflow



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Status of the project

Current Progress

Review of existing resources and user needs

- Complete – results transferred to next stage

Methodology development

- Beta version about to be completed

Prototype and test cases

- First steps are taken, further preparations underway

Exploitation and dissemination

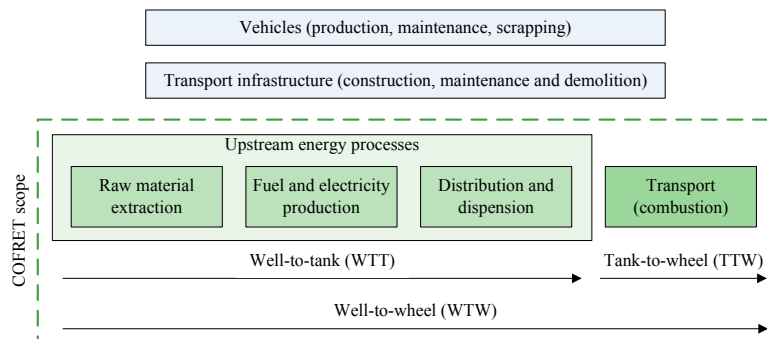
- Continuous interaction with stakeholder groups

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COFRET scope: life cycle approach



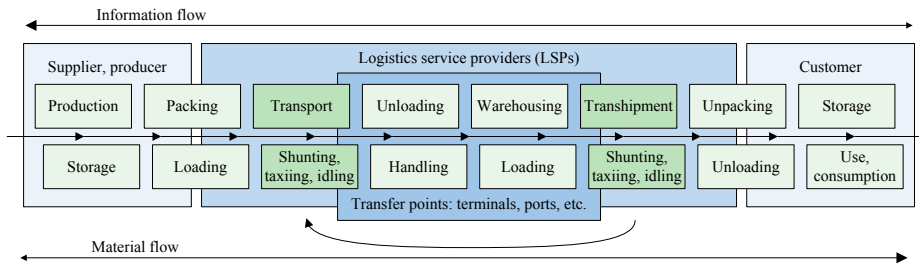
Life cycle phases of transport services. Phases denoted in green (upstream energy processes and transport) are within the scope of the COFRET project.

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COFRET scope: transport and logistics



Logistics operations as elements of the supply chain, a generic example.

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State-of-the-art review, introduction

Review of existing resources and user needs

State-of-the-art study to support COFRET methodology development (WP2).

The main tasks were to identify, review and assess:

1. existing methods, tools and databases
2. user needs, practices and experiences
3. future technologies and innovations

in the context of freight transport carbon footprint calculation.

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1. Existing methods, tools and databases

A total of 102 items were identified as relevant to the COFRET project. Review and assessment was carried out using a structured review template.

Four types of items:

- carbon footprint methodologies
- carbon footprint calculation tools
- emission factor databases
- other activities and initiatives.

Assessment criteria:

- transport modes, vehicles and equipment covered
- supply chain elements and logistics operations covered
- emission compounds and life cycle phases covered
- geographical and methodological approaches and data sources used, etc.



Name	Method	Tool	Databases	Other
Bilan Carbone [1]	X	X	(X)	
CENEX [7]		X		
DEFRA guidance [18] [19]	X	(X)		
DSLVL guideline [68]	X			
EcoTransIT World [38]		X		
EN 16258 [26]	X			
GHGProtocol [85] [84]	X	X		
Grønn godstransport (Green Freight Transport (GFT)) [66]	X	X		
HBEFA [46]			X	
IPCC [43] [42]	X		(X)	
JEC [44] [45]			X	
L4LIFE [59]				X
LIPASTO [56]			X	
NTM [58]	X	(X)	X	
SmartWay [71]		X		
SmartWay Europe [70]				X
TREMODO [49]			X	
Versit+ [53]			X	
Vestlandsforskning [80]			X	
ZichtopCO2 [16]	X	X	(X)	

Summary of the most important items (as ranked by the project partners regarding the COFRET project objectives) by relevant category or categories.



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Results

2. User needs, practices and experiences

Subtasks:

- in-depth interviews (29 interviews)
- on-line survey (62 answers)
- stakeholder workshop (17 external participants) in Berlin January 2012.

Stakeholders involved include transport and terminal operators, logistics service providers, manufacturers, wholesalers, retailers and consumers, researchers and policy makers.

Topics covered:

- motivations to carbon footprinting
- current practices: use of calculation tools and results
- current shortcomings
- future needs and expectations, etc.

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Results

3. Future technologies and innovations

Review of potential solutions to improve measurement or calculation of carbon footprint.

Focus on future technology development and system integration opportunities with carbon footprinting.

Three main areas of interest:

- supply chain and transport planning systems (e.g. multimodal routing systems)
- information and communication systems (e.g. positioning and internal vehicle systems)
- business applications (e.g. enterprise resource planning and fleet management systems).

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Accomplishments

Contribution to the COFRET project

Main contribution areas of the state-of-the-art review:

- up-to-date knowledge base of existing methods tools and databases: consistent but vague methodological base, wide variability and fragmentation in tools and data
- identification of the most relevant methods, tools and databases from the COFRET point of view
- clarified user needs: strong pull for harmonisation
- potential to employ future technology systems identified
- confirmation to the COFRET objectives (methodology to cover all transport and logistics along the supply chain)
- cooperation with stakeholders and parallel development activities established.

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Accomplishments

Next steps

Issues to be addressed along the COFRET project, most importantly in the COFRET methodology development phase underway:

- catering to user needs and expectations: balancing simplicity ↔ flexibility ↔ accuracy
- cooperation around best available methods, tools and databases, as well as technology systems
- compliance with leading standards and programmes (EN 16258)
- numerous technical details to be investigated: application areas, inputs & outputs, allocation, time averaging, data acquisition, system boundaries, uncertainties, etc.
- inclusion of terminal processes
- involvement of all relevant actors along the supply chain.

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Conclusion

Thank you!

State-of-the-art review

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Information and project reports

<http://www.cofret-project.eu>