

CO³ POSITION PAPER:

ADDED VALUE OF ICT IN LOGISTICS HORIZONTAL COLLABORATION:

IDENTIFYING THE NEED FOR AN INTEGRATED APPROACH

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The research leading to these results (Deliverable D4.4) has received funding from the European Union's Seventh Framework Program ([FP7/2007-2013- SST-2011-RTD-1-7.6]) under grant agreement n°284926.

Deliverable D4.4
March 2013

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Executive Summary:

This position paper describes and evaluates the role and added value of ICT in creating sustainable transport and logistics horizontal collaboration. It is based on the current insights and experience of Giventis and TRI-VIZOR, who together with ITENE, act as neutral trustee and matchmaker within Work Package 4 (also called WP4 or the “logistics laboratory”) of the CO3 consortium.

WP4 uses a straightforward, 3-phased methodology to identify, prepare and operate collaborative test cases from scratch with real market actors and logistics flows. Specific ICT tools are being tested and validated in each of the 3 phases.

Phase 1: Identification

In the first phase of the CO3 methodology, the neutral trustee identifies different companies and networks that are open for horizontal collaboration. The structural freight flow data of these companies are collected and analysed. In this phase, the added value of ICT will come from automated freight flow data visualization, “Big Data” analytical capability and matchmaking.

Phase 2: Preparation

In the preparation phase of the CO3 methodology, the neutral trustee will help the candidate partner companies to build profitable business cases and to quantify the benefits of the collaboration scenarios from 3 perspectives: total logistics cost savings (efficiency), reduction in greenhouse gas emissions (sustainability) and service level improvement (effectiveness). In this phase, the added value of ICT can come from various decision support tools that help to evaluate the logistics synergy potential, apply fair gain sharing mechanisms such as the Shapley value, calculate carbon footprint savings, etc.

Phase 3: Operation

In the operational phase of the CO3 methodology, the neutral trustee coordinates and synchronizes the actions and shipments of the collaborating supply chains in real-time. In this phase, the added value of ICT comes in the shape of a “collaborative control tower” and various social network tools that facilitate the community communication processes.

By applying the 3-step methodology and by supporting it with specialized ICT tools, neutral trustees can create from scratch sustainable and scalable horizontal collaboration communities that operate with “fewer and friendlier kilometres”, benefiting at the same time shippers, logistics service providers, consumers and the environment.

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CO³ Project: Background

The EU-funded project CO³ (Collaboration Concepts for Co-modality) aims to develop, professionalise and disseminate information on the business strategy of logistics collaboration in Europe. The goal of the project is to deliver a concrete contribution to increasing vehicle load factors, reducing empty movements and stimulate co-modality, through collaboration between industry partners, thereby reducing cost and transport externalities such as congestion and greenhouse gas emissions without compromising the service level. The project will coordinate studies and expert group exchanges and build on existing methodologies to develop legal and operational frameworks for collaboration via freight flow bundling in Europe. Furthermore, the project consortium of knowledge institutes and specialised industry players will develop new business models for logistics collaboration. The developed tools, technologies and business models will be applied and validated in the market via pilot studies. Finally, the CO³ consortium will promote and facilitate matchmaking and knowledge-sharing through conferences and practical workshops to transfer knowledge and increase the market acceptance of collaboration.

The core of the CO³ project is what is referred to as the *applied research cycle*. This cycle has been set up as a continuous learning and feedback loop between the models and tools needed for supporting collaborations, the most suitable business models for groups of companies wanting to collaborate and finally the actual test cases for collaboration. These elements are developed under individual work packages as shown below.

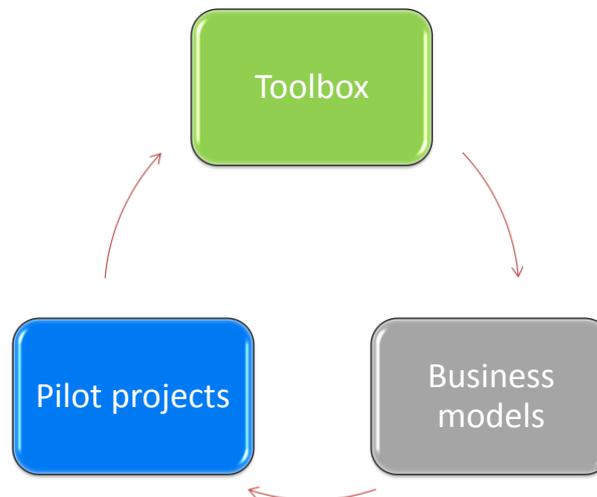


FIGURE 1: THE CO³ APPLIED RESEARCH CYCLE

CO³ Project Consortium

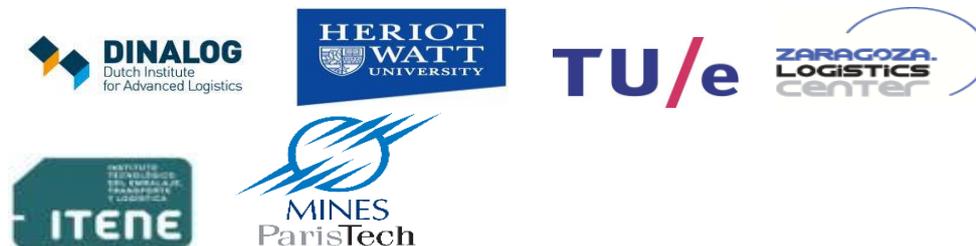
Coordination:



Tools and techniques: Strengthen the operational and legal framework



Identifying appropriate Collaborative business models:



The Logistics Laboratory: Case studies (CO³ Trustee)



Knowledge transfer and networking

