

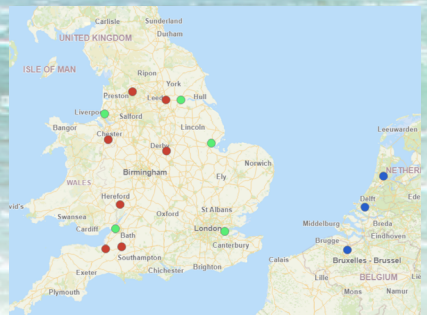
Nr. 10 Simulating Transport in a Collaborative Co-Modal Logistic Environment

Background:

Estimations for 2010 indicated that more than one billion tons of cargo were transported resulting in more than one billion tons of CO₂ being emitted. Furthermore in 2011 the transport industry accounted for 20.5% of the total emissions produced by all industrial sectors in Europe. Comodal transport has a high potential for reducing CO₂ emissions in the logistic chain. This potential is based on the significant differences in the environmental impact of different transport modes; sea or rail transport is considered more eco friendly than road transport. Both platforms support the EU 2050 Climate Roadmap, which has set a target to reduce the anthropogenic emission of greenhouse gases from transport by 60% by 2050.

Content:

The project has resulted in two deliverables; an innovative web based routing optimization platform and an off-line simulation engine. The two simulation engines are combined in a toolbox which can support companies in simulating possible supply chains across different modes of transport. An entire logistics chain can be simulated in a way that allows the user to determine the environmental impact, costs and delivery times of transport by ship, truck or rail. As real-life use-case the transport of Orange Juice throughout Europe and specifically to the United Kingdom has been used to validate and test the models.



Leadpartner:



Co-partner:



www.marigreen.eu



Results:

A prototype (software toolbox) was built with the following specifications*:

- Innovative web based routing optimization platform
- Off-line simulation engine

*all details with reservation

The toolbox can be used for simulations for all conceivable goods and transport routes. It not only helps to simulate the various effects of possible transport routes, but also to minimize emissions and reduce transport costs.

Advantages:

- Implementation of parameterized simulation engines
- Shifting from trucks to more eco-friendly intermodal transport
- Greening the freight transport

Partners:



blue architect

Maik Springer
Pilot Services



Contact:

University of Applied Sciences
Emden / Leer

Dr. Stefan Kotzur

Telefon: +49 4921 8204951

Email: stephan.kotzur@hs-emden-leer.de