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Editorial

By Hans Westerheim

In this issue of the L4L newsletter you will find more information from some of the projects that have served as best practices projects for Logistics for Life. The projects are SMARTFREIGHT which focuses on urban freight transport, INTEGRITY which focuses on container supply chains and NS Frits which focuses on interurban road transport and the use of ITS. These three projects serve as good examples on best practices covering issues that can be used by L4L.

In this issue of the newsletter you can also read about the issue of true greenness, and motivations involved in the discussion about green logistics. L4L is involved in the Intelligent Cargo Forum, and the project is using the forum for collecting feedback on workshops and discussion in the project. You can read about this in the newsletter. We also invite you to visit the forum on www.intelligentcargo.eu.

One of the deliverables that has high attention at the moment is the roadmap for future actions and research. Based on the best practices, and the use of ARKTRANS as a taxonomy for the best practices, we are pointing out gaps in knowledge about how ICT can support more efficient freight transport. This will again serve as input for recommendations.

Enjoy the reading.

“True Greenness” – Green Logistics Apart from Process Optimisation and CO2 Compensation

By Wolf Lampe, Moritz Quandt, BLG

Unlike other industries that are in direct contact to their customers, logistic service providers still hesitate to implement sustainable transport offers. Therefore, the BLG LOGISTICS Group started to work with the term “True Greenness” to develop sustainable transport concepts apart from process optimization and CO₂ compensation. The



dimensions of “True Greenness” are shown in figure to the right. Climate protection is an important issue of the 21st century. The rising public awareness concerning ecological and social business practices applies pressure to companies from all business sectors. Moreover, different stakeholders like employees, governments, NGO’s and media make companies accountable for their actions. As a consequence, a lot of companies claim sustainable management by publishing a sustainability report, however, this does not guarantee “real” sustainability. *Cont. on page 3*

Best Practice project:



The SMARTFREIGHT project is co-funded in the European Commission's 7th Framework Programme by DG INFSO, and the project is coordinated by SINTEF. The main objective by SMARTFREIGHT is to support traffic management and freight distribution management in urban areas by means of ICT. The main idea is to facilitate a visibility of individual freight vehicles in the traffic, and to set up a two-way communication with the vehicle in the traffic. The use of technology for doing so is based on the results from the CVIS project and the use of the CALM Mail standard.

When the traffic management knows the freight vehicle, its position in the traffic network, the goods on-board, the destination of the vehicle, and any special needs the vehicle might have in the traffic in real time, the traffic management will be able to support the planning of the route in the urban area. This can support both a better route for the individual freight vehicle, but also a better complete traffic situation in the urban area. The possibility to identify and track the vehicle also gives the traffic management a means to reward "good behaviour" in the traffic, and to punish "bad behaviour". The SMARTFREIGHT solution is based on open ICT services, and can be applied to different city policies. "Good behaviour" can be defined as using vehicles compliant with the best Euro-classes (like Euro5), by having a high load factor, by accessing the urban area outside the peak hours etc.

The SMARTFREIGHT solution also facilitates exchange of information between traffic management and freight distribution management functions. By facilitating this, the planning of the transport and the traffic can be optimised by the better data. The SMARTFREIGHT solution makes it possible to give different parts of the road network different policies for different types of cars. The solution also makes it possible to allow or deny access to these parts of the road network. It is also possible to make parts of the road network bookable, e.g. loading bays. This can also lead us to a situation where the time spent by freight vehicles in the urban area is reduced.

One of the issues covered in SMARTFREIGHT is the possibility to share capacity on freight vehicle within an urban area. The use of ICT can facilitate this, possible reducing the numbers of freight vehicles running in an area by increase the load factor across company boundaries.

The SMARTFREIGHT solution was demonstrated in Trondheim in October 2010, and a short movie from the demonstration will soon be available on the web site.

More information about SMARTFREIGHT can be found on the web site, please visit www.smartfreight.info.

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Sustainable management is divided into ecological, economical and social sustainability, whereas ecological sustainability is about decreasing the pollutant input and the conservation of non-renewable resources. A special responsibility for the transport sector to find suitable transport solutions to foster climate protection arises particularly from a share of 23% of the total worldwide CO₂ emissions.¹ Therefore, many logistic service providers initiate climate protection programs under the name of "Green Logistics", driven by the rising awareness of sustainability issues. Green Logistics is defined as "sustainable and systemic process for measuring and reducing the emission of hazardous substances and lower the consumption of resources that result from transport and logistic processes in and between companies"². However, some companies use the term Green Logistics for declarations of intent, PR campaigns or promoting their "green" image by sheer marketing operations. On the one hand, process optimisations that are primarily conducted to reduce costs are presented as special achievements for environmental protection. On the other hand, companies pass individual environmental projects off as global company strategy, even if these projects are only a small extract of their business activities. This suspicion of "greenwashing" can only be invalidated by introducing measures that have a positive effect on the environment. In consequence of the rising awareness of ecological sustainability and growing expectations of their customers some logistic service providers try to actively make a contribution to environmental protection. Thus, trucking companies for example implement technical solutions to reduce fuel consumption, improve route planning and provide special training for truck drivers to save fuel. Certainly, it is debatable if the companies' focus is on the ecological sense of responsibility or only economic benefits. During the world economic crisis of 2008/2009 the shipping industry rediscovered slow steaming and extra slow steaming. This simple approach of decreasing fuel consumption by reducing cruising speed arose from the oil crises of 1973 and 1983. Back then, the initial effect was the reduction of fuel consumption before ships were designed and built to be more efficient⁴ [Lan2009, S.40]. Besides the reduction of fuel consumption slow steaming serves to keep more ships in service with the same amount of cargo. Even after the recent crisis the shipping companies draw on slow steaming, because of rising fuel prices and high ship capacities⁵. Nevertheless, even if economic deliberations are obviously the main incentive for shipping companies to implement slow steaming, it also has a great potential to meet tightened environmental regulations. If the cruising speed is reduced from 26 knots to 18 knots, it saves 40 per cent of fuel which directly effects the emission of CO₂, sulphur and nitric oxide.⁶ Another approach of Green Logistics is the compensation of CO₂ emissions caused by a specific transport. Nowadays, route planning tools offer the possibility to calculate emissions of individual transports. The logistic service provider compensates the calculated emissions of the specific transport by investing in environmental protection projects, such as reforestation. On the one hand, the main advantage of compensation is that it can be invested in projects worldwide, because environmental protection is a global issue. On the other hand, compensation does not reduce the total emission of hazardous substances. Apart from the described process optimisations and the compensation approach, the BLG LOGISTICS introduced the term "True Greenness" at a workshop of L4L⁷ in November 2010. "True Greenness" delimits from greenwashing, the attainment of financial benefits by process optimisation and the compensation of already caused CO₂ emissions. "True Greenness" demands a logistic service that focuses on real sustainability instead of primarily economic aspects. The logistic service provider offers to execute a specific transport with reduced emissions or even carbon neutral. In return, the customer accepts potential additional charges. The logistic service provider yields a competitive advantage by offering besides the fastest and the cheapest transport an additional service that is as environmental-friendly as possible⁸. Therefore, the leading thought of "True Greenness" is not the introduction of a completely new, sustainable service, but the distinction of this service from a differently motivated or less suitable approach. True Greenness demands a logistic service that focuses on real sustainability and requires the development of new service characteristics that create demand on a responsible market.

Greenwashing describes the attempt of companies to reach a "green image" by marketing and PR campaigns without implementing appropriate measures in their operations. The term used to refer only to a suggested environmental friendliness is also used for a suggested corporate responsibility.³

¹PriceWaterhouseCoopers. (2009). *Land unter für den Klimaschutz? Die Transport- und Logistikbranche im Fokus*. 25. 11 2010 from PriceWaterhouseCoopers - Website: http://www.pwc.de/files/EmbeddedItem/klimaschutz_final.pdf?docId=e5085400be2fed6&componentName=pubDownload_hd;² Wittenbrink, P. (5 2010). Green Logistics führt zu Kosten- und Wettbewerbsvorteilen. *Internationales Verkehrswesen*, p. 16-20.³ Lin-Hi, N. (2010). *Gabler Wirtschaftslexikon*. 25. 11 2010 from <http://wirtschaftslexikon.gabler.de/Definition/greenwashing.html>; ⁴Lange, B., Eyring, V., Isensee, J., & Schenzle, P. (2009). Klimaschutz im Seeverkehr - Potentiale erkennen und handeln. Bremen. ⁵Täglicher Hafenbericht (THB). (2010). Grenze für Extra Slow Steaming. *Deutsche Schifffahrts-Zeitung - Täglicher Hafenbericht (THB)*. ; ⁶Greenpeace Magazin. (26. 11 2010). Greenpeace-Magazin.de. 16. 12 2010 from <http://www.greenpeace-magazin.de/index.php>; ⁷Logistics for LIFE. (2010). *Logistics for LIFE Homepage*. <http://www.logistics4life.eu>;⁸ Ruppert, S. (18. 4 2009). Imagegewinn durch grüne LKW. *DVZ*, p. 8.

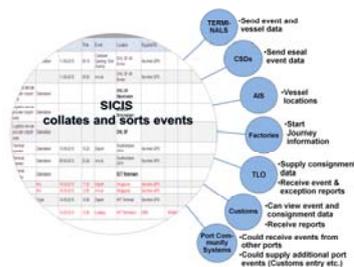
Best Practice project: **INTEGRITY**

The project INTEGRITY (Intermodal Global Door-to-door Container Supply Chain Visibility), co-funded in the European Commission's 7th Framework Program and coordinated by the Institute of Shipping Economics and Logistics (ISL), Bremen/Bremerhaven, aims at creating Supply Chain Visibility by providing a basis for economic optimisation and securing of international intermodal door-to-door container chains.



Integrity uses ICT in order to improve the transparency and efficiency of global supply chains by achieving a seamless information flow for all stakeholders. As explained below, Integrity contributes to all three sustainability dimensions important for energy efficient freight transport. The solution is transferable and applicable in each and every supply chain and can take the different ICT readiness of stakeholders into account. Major "clients" of the approach are the commercial participants in the chain such as 3PLs, cargo owners, exporters, transport and port operators, and authorities, mainly Customs, creating a win-win situation for both of these groups. The approach focuses both large and SME players in the container business – both groups are represented by the project partners DHL and BAP Group Ltd, amongst others.

The international intermodal container transport is defined by two main perspectives: On the one hand there are new security rules and regulations for fighting against terrorism which have to be implemented. On the other hand the complex logistics processes have to be optimized in order to cope with rising cargo volumes. This is a challenging task, because the requirements of authorities, mainly Customs, and logistics service providers are different and often contradictory. This situation can be solved by consolidating all relevant information concerning the container and its transport, such that it can be easily retrieved if necessary, for instance for Customs' risk analysis purposes. Further-



more, the logistics process should be controlled by monitoring the container on its journey during the whole intermodal chain. The full-scale integration of IT systems along the chain facilitates the development of the open so-called Shared Intermodal Container Information System (SICIS) containing either the data itself or links to the data providers, allowing fast and reliable access to the planning data and status information of selected transports. By combining container tracking data provided by container security devices (CSDs) with information from container terminals' operating systems and vessel tracking information obtained via vessels' AIS transponders, SICIS is the first tracking system worldwide which ensures a seamless monitoring of the complete door-to-door logistics chain. SICIS is an open IT platform. It can easily be adopted to any tradelane worldwide. Due to its sophisticated interfacing possibilities, there are practically no limitations in data exchange with other systems like port community systems or existing legacy systems. In order to ensure data security at any time, the data owner has the full control of granting access concerning information on "his" transport to relevant partners in the chain.

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organize its return to the planned route. Today, if it appears that a container was transported to the wrong destination or unloaded from the vessel in the wrong port, even additional shifts by the logistics provider's employees are necessary on short notice in order to solve the situation. SICIS will assist here, because it provides a detailed picture of the container's route and pro-actively informs the user in case of deviations, such that the plans can easily be adopted. This is only one example demonstrating the societal dimension of SICIS.

Furthermore, SICIS also contributes to environmental sustainability, for the first time providing complete and reliable data about the container transport. Quite often a vessel is delayed or a container is late in being released. Today, a truck sent to the container terminal based on the planned schedule in order to pick up the container in these cases returns empty. In contrast to that, SICIS provides updated information about vessel arrival and the status of the container, enabling an exact planning of pre- and on-carriage based on this data. This will prevent from unsuccessful pick-up attempts of containers by trucks, to mention only one example, and accordingly reduce the carbon footprint of the supply chain.

In September 2009 - after a project duration of one year - SICIS started to track containers along the entire logistics chain by consolidating all relevant data and related events which are generated during the transport. Since then SICIS regularly monitors containers and so far tracked more than 2000 boxes during their door-to-door transport from Hong Kong and Yantian, China, to Europe, namely Felixstowe, Southampton and Rotterdam. Negotiations with additional trade lane owners are in progress in order to further extend the user community which benefits from SICIS's unique capabilities.

Please find more information about INTEGRITY and SICIS on www.integrity-supplychain.eu.

First round of feedback from the Intelligent Cargo Forum

As a more complete version of the Logistics for LIFE Framework has been made available in November 2011, a workshop has been organized in Bremen in conjunction with the 3rd ECITL Conference, to involve the industry representatives in working groups discussing the key strategic, operational and technological elements of environment-friendly logistics. Further feedback has been collected from the Intelligent Cargo Forum through on-line discussions and sessions held at the ECITL 2010 Conference.

On strategy and policy aspects the main identified issues concern transparency of environmental performances, both external, as a means of communication to customers and other stakeholders, and internal, as a means of benchmarking and process improvement. This is seen as an enabler of new "green" logistics services, offering certified and measurable environment-friendly transport options to customers. Also, this enables continuous improvement of operations based on environmental parameters measurements, leading to cost savings as well as meeting certification objectives. The most important requirement at this level is availability of common approaches and standards for environmental performances assessment.

On organizational aspects, the received feedback points out the need to include in the reference model all the stakeholders, functions and roles that are involved in planning, execution and monitoring of the logistics activities. The model should not be restricted to transport operators only, but should cover the entire supply chain, i.e., including the actors and functions responsible for "sourcing", "making" and "distributing" the goods.

On processes and functions, the working group examined the main functions and decisional steps affecting environmental performances in the planning, sourcing and execution of a logistic process. The main identified need is that of absolute measurements valid across different sectors and types of services. These absolute measurements should be defined on several different operational levels, across the various logistic process phases, to provide relevant measures affecting all the involved functions.

The working group discussing Information and Communication Technologies focused on key enablers, i.e., technological capabilities, required for environment-friendly logistics. At a lower level these include standards, both for communication and for information exchange, identification and security technologies. At a higher level, key enablers have been identified as Intelligent Cargo, Cooperative Systems and "transparency" solutions in general, denoting all solutions enabling monitoring and visibility of transport events and operations across the supply chain. More information on www.intelligentcargo.eu

Best Practice project:*North Sea Freight Intelligent Transport Solutions*

North Sea Freight Intelligent Transport Solutions - NS FRITS is set to improve accessibility for the road freight sector in the seven countries of the North Sea Region by improving safety as well as efficiency and reducing the risk of accidents and security threats for drivers of Heavy Goods Vehicles.

The first project of its kind, NS FRITS will provide live in-cab communications in a series of languages of drivers, transport managers and freight handlers. The system will help:

- improve traffic flow within major transport corridors
- address logistical problems around congestion and freight volumes
- improve driver safety by highlighting poor weather conditions, road accidents, traffic disruption and local driving conditions
- reduce carbon emissions by encouraging better driving and avoiding extensive engine idling times
- reduce the risk of security threats, for example through providing information about crime hotspots, secure parking locations and local policing practices

The Interreg IVB North Sea Region Programme is co-funding the project. It is a public/private sector partnership drawn from the UK, Germany, the Netherlands and Sweden find the remaining 50% of the project costs and bring together representatives from high-tech communications, logistics, crime reduction, education, policing and transport planning.

The core of this project is the ICT solution for the real time data collection as well as a user centric information analysis. The German pilot scenario deals with the validation of the system for improvements regarding the truck flow control at the container terminal in Bremerhaven in the northern part of Germany-

ISL will design the Bremerhaven pilot supported by Bremen Senator for Science and Education and Bremen Senator for Economy and Ports. The scenario will contain the following key tasks:

- Analysis of existing approaches regarding truck pre-notification and regulation such as
- Pre-notification at terminal (e.g. the Southampton bonus malus system with peak and off-peak time windows, no-show fee)
- Information of the terminal about estimated waiting time

- Secure space at pre-stacking area (interface to SETPOS project, which concerns to installation and booking possibilities of secure space)
- Conceptual design of the Bremerhaven pilot (harmonized with approaches in other regions) implicate factors like business processes/ work flow, technology/ supporting IT methods, pricing model, bonus malus system, possible system operators, View benefits of all stakeholders.

To get consent of the concept the stakeholders in Bremerhaven are involved with an active role. That are at least terminals, truckers, haulage contractors and port authorities.

There are several reasons for why NS Frits is chosen to be a best practice within L4L, but some main points are: NS Frits uses ICT in order to improve the energy efficiency of freight transport. NS FRITS aims to improve accessibility, contribute to sustainable economic development and growth and improve the quality of life and job opportunities for people living and working in the North Sea Region. An Intelligent Transport Solution (ITS) will be developed to provide live in-cab communications to HGV drivers about conditions in a region or country they are about to enter. Its solution has a positive impact on the environment, since the driver can react on real time events, like traffic jams or accidents. The system increases the transparency and safety along the supply chain.

Please visit the project web site for more information: www.nsfrits.eu

Dissemination: L4L at

L4L was one of the organizer of the ECITL 2010 on Nov.4 and 5. in Bremen Germany. It was a very successful event fostering information exchange and discussion among industry, research and authority. The main organizer from L4L consortium was Karin Feurstein from FHV. She will also be involved in the organization of the next ECITL in Thessaloniki.

More information: <http://www.ecitl.eu/index.php>

Henrik Sternberg from Chalmers attended the annual WASD (world association on sustainable development) conference in St. Lucia last November. He presented a paper on "Waste in Transport"

You can find an abstract of the paper at <http://www.worldsustainable.org/index.php/res-tracks/264-transport-studies>

On November, 30 Chalmers participated in workshop in Oslo, Norway, with Norwegian authorities and infrastructure. One objective was to discuss the impact and relevance of the L4L project.

On December, 1 Chalmers hosted a workshop dealing with green and intelligent logistic. The workshop was visited by industrials and researchers who had a fruitful exchange on this topics. Additional to Chalmers, BIBA and Sintef were represented.

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Upcoming events with L4L involvement

L4L will be present at the Transport Logistic 2011, in Munich, Germany from May 10.-13. L4L will be at the booth from Regione Friuli Venezia Giulia and will be organised together with the EURIDICE project.
<http://www.transportlogistic.de/>

As the coordinator of L4L, Insiel, is invited to take part at Bridging ICT4EE R&D Approaches and Communities: a challenge for FP8" workshop. Paolo Paganelli and Margherita Forcolin will talk about "ICT in Energy Efficiency Logistic" and the "Intelligent Cargo Forum and the Logistics for LIFE showcase". This half-day event is held in conjunction to the "Sustainable Energy Week" from 11 - 15 April 2011 in Brussels.

Andres Pichler from Gebrüder Weiß will present the L4L and EURIDICE consortium at the Duisburg Logistic Forum 17.03.2011 in Duisburg. He will present results from the Gebrüder Weiß Pilot in the EURIDICE project. www.bvl.de/veranstaltungen

Jukka Hemilä and Jannicke Baalsrud Hauge will attend the ISL 2011 in Berlin this year. They will both have presentations on logistics and energy efficiency.
www.isl21.net