Sustainability and the Logistics Service Industry – Red thread from a Workshop

Abstract:

Sustainability in business is clearly recognized as a very important topic which is intensively discussed in theory and practice. (When it comes to the social and ecological aspects of sustainability, the logistics and transportation industry is often considered one of the prime suspects to be identified as a major polluter reluctant to implement changes and improvements.

A workshop was designed and organized in the fall of 2011 to start a discussion on the role that the logistics service industry plays or should play in the sustainability business. The clear objective was to work on the issue – not from the viewpoint of politics and society, not from the viewpoint of industry and the retail sector, and not from that of academia - but from the view of the logistics service providers. In other words, the workshop was designed to help develop a clear statement of the role of the logistics industry. A statement of the logistics industry's role as the logistics industry understands it.

This short paper recapitulates the red thread of the workshop discussions and ends with a summary.

This summary is meant as a first draft of a manifest of the industry regarding their view towards the topic of sustainability. It provides statements in response to four basic questions regarding sustainability.
As this manifest is made by a focused, but in size and geography limited group, it is of course not representative. Therefore we would like to encourage everyone from the industry in addition to those from outside the industry to support us with comments. Tell us if and why you agree or not, and how we could improve and augment the statements made.

Günter Prockl

Britta Gammelgaard

And a so far undisclosed group of representatives from the Logistics Service Industry

ØRESUND ECOMOBILITY

EUROPEISKA UNIONEN
Europeiska regionala utvecklingsfonden

Interreg IVA
ØRESUND - KATTEGAT - SKAGERRAK

Copenhagen Business School
HANDELSHØJSKOLEN

LUND UNIVERSITY

Introduction - Setup of a workshop on sustainability in logistics services

The poor image of logistics services as an initial background

Today, there is no doubt about the meaning and importance of sustainability in business. Sustainability, and especially the environmental aspect of it, is seen and discussed as an important and a major objective for economy and society.

Explicit and even more implicit, there is also the notion that industries are not responsible enough for the future. When it comes to the social and ecological aspects of sustainability, the logistics and transportation industry is often considered one of the prime suspects to be identified as a major polluter reluctant to implement changes and improvements. Numbers, which are frequently cited, illustrate the huge impact that is associated to logistics and transportation, when it comes e.g. to environmental impact:

- 34 % of CO_2 emissions are related to transportation; but also 56 % of NO_x emissions are related to transportation (EEA, 2011).
- The "overall impact on CO_2 levels is bigger than that of some countries. The shipping industry's carbon footprint, like that of all large-scale transportation industries, is a contributor to rising global levels of CO_2. The shipping industry's total emissions comprise between three and four percent of global emissions – higher than the nation of Germany. " (Maersk line, 2011)
- The CO_2 emissions of container shipping equal that of the whole country of Germany. However hmeasuring SO_2 they are 15 times as high; measuring NO_x they are 11 times as much (own calculation based on numbers from 2006)
- "Between 1990 and 2007, annual transport energy consumption in the EEA member countries showed continual growth. … Road transport represents the largest energy consumer, accounting for 73 % of total demand in 2009. It has also been the least affected by the downturn, falling by only 2.8 % between 2007 and 2009. Because the recent changes are so closely associated with the economic downturn, the long-term trend is still expected to be an upward one; total transport energy consumption has increased by 32 % between 1990 and 2009" (EEA, 2011).
- 1,62 billion tons of truck emissions in Europe, roughly one quarter are supposed to be caused by trucks running empty - often due to legal requirements (Deutsche Post AG, 2010).

Other issues refer to the long driving times of truck drivers, their working conditions as subcontractors and touch more on the social side of sustainability.

ØRESUND ECOMOBILITY
EUROPEISKA UNIONEN Europeiska regionala utvecklingsfonden
Interreg IVA ØRESUND - KATTEGAT - SKAGERRAK
Copenhagen Business School HANDELSHØJSKOLEN
LUND UNIVERSITY

In other words, when it comes to the social and environmental side of the industry, the image is not the best. The image of the logistics service industry, especially in regards to transportation, appears on the contrary as such: ships use the poorest quality fuel and poison the air along the coastlines: planes leave chemical trails in the sky: streets are jammed with trucks driven by exhausted and reckless drivers, and there are no demands for more sustainable modes of transport such as trains.

In summation, this representation is of course still gloomy in the black and white picture that it paints - and it is exaggerated. But it reflects a threat to the logistics industry: to assume the role of whipping boy for sustainable supply chain management.

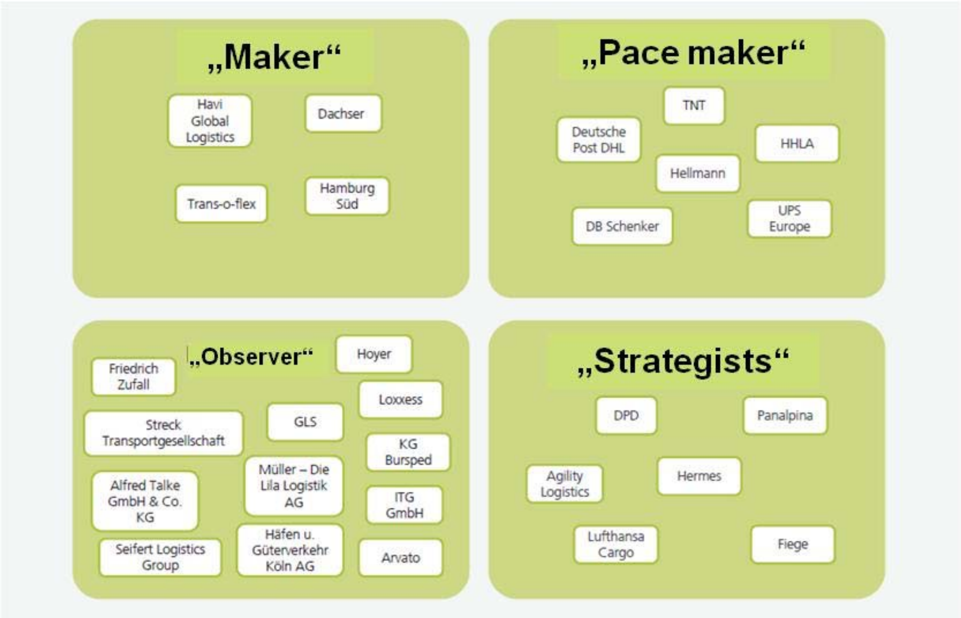
As a consequence, this role has led to a situation of claims that the industry clearly needs to do more with respect to sustainability.

- E.G. EEA (2011) reports that the EU has committed to achieving a 30 % reduction in total GHG emissions in the event of an ambitious and comprehensive global agreement, and a 20 % reduction unilaterally by 2020 (from 1990 levels).
- In consequence the "… transport GHG emissions are to be reduced by 20 % from 2008 levels by 2030, and by at least 60 % from 1990 levels by 2050; maritime bunker emissions are to be reduced by 40 % on 2005 levels by 2050" (EEA, 2011).
- 63 % of business customers believe that logistics will become a strategic lever for CO2 abatement. (Deutsche Post AG, 2010)

However, recent studies indicate that only a handful of the big players in the European industry seem to care and report, not to mention act, on sustainability issues. The sustainability index for Germany, made by Fraunhofer, (2010) classifies four categories (see figure 1). The category of the Observers is clearly dominant while the Pace maker group is constituted only by big international names.

It is also noteworthy, that the four types cover only those Logistics service providers that had been willing to participate in measuring their activities. 37 % of the Top 150 German Logistics Providers were not interested in participating. 41 % said that they were not participating at the moment, as the topic was still under development. Additionally, the Fraunhofer study mentions that 60 % of the involved service providers (Top 150 measured in revenues) do not (or rather limited) report on the topic of sustainability. At least with respect to reporting and transparency, the situation in Denmark appears somewhat different due to different legal requirements.

Figure 1: Four patterns of behavior towards sustainability – Source: Adapted from Fraunhofer 2010.



Discussion with a homogeneous group of logistics service providers

Against this background, a workshop was designed and organized in September 2011 to start a discussion on the real role that the logistics service industry plays in the business arena on sustainability. The explicit objective was to work on the issue – not from the viewpoint of politics and society, not from the viewpoint of the industry and the retail sector, and not from that of academia. The clear objective was to work on the issue from the view of the logistics service providers. In other words, the workshop was designed to help in developing a clear statement of the logistics industry's role as the logistics industry understands it.

To achieve this objective, a small number of high ranking executives from the logistics industry met at Copenhagen Business School for a workshop. The agenda did not include the logistics service providers making or listening to speeches'), but to meet and discuss and to work "hands on" with questions on sustainability. The professors, Günter Prockl and Britta Gammelgaard, stepped back and just provided the setting, prompted with some questions, and documented the process and results.

The workshop was prepared, moderated and documented, based on the Future Workshop concept that typically consists of a "Critique phase", a "Fantasy phase", and an "Implementation phase”. However, as the clear goal was to follow the discussion of the participants, there have been break outs from the strict scheme of the workshop concept whenever appropriate.

Four basic question blocks, proposed by the design team of the workshop, provided the framework for the discussion during the workshop. The four blocks were:

1. What is the Meaning of the term Sustainability and the related role of the Logistics Service Industry
    a. For you personally?
    b. And for you representing the Logistics Service Industry?

2. How do you see the Image of the Logistics Service industry towards Sustainability?
    a. What image/role do the LSP have today in society and economy?
    b. What image – do you think – would reflect their real role?

3. What are the Action(s) of the logistics industry towards Sustainability?
    a. What are you doing?
    b. What should be done?

4. Assessment of the impacts of potential actions and also the question on requirements, i.e. what would you need to realize your plans for action?

The expected result – a first text towards the sense of a manifest

Following the concept of the workshop and the four content blocks, the desired outcome for the workshop was a preliminary formulated text - a type of manifest that provides a more or less clear statement on the image, role and action plans of the logistics service industry toward the issue of sustainability. Such a statement should provide a basis to clarify the positioning of the industry but might also provide a basis for controversial discussion and further refinement. The intention was to acquire a more detailed

- Statement on **what sustainability** is and **what it means for the Logistics Service Industry;**
- Statement on the **role of the logistics service industry** towards sustainability
    - What is a **fair view** on the role;
    - In what terms will you be measured/recognized for your behavior;
- What **actions could/should be taken** to prove the intentions;
- What are the **restrictions** that should be addressed – maybe together with other actors?

The discussion of the four question blocks

What does Sustainability mean for you (as a logistics service provider)?

According to the agenda, the first block deals with the understanding of the term sustainability. It seems in fact, that no one can really reject the ideas of sustainable business - we briefly discussed the question “if one could say ‘no’ to sustainability”. However, there might be different understandings in what it really means in detail, and where to draw the boundary between sustainable and not sustainable action.

There was then also the comment, that the actions or in better words “non-actions” of some players showed their reluctance. They apparently say ‘no’. This was in reference to the financial side of sustainable actions which may be in conflict to environmental or social aspects. In case of such a conflict, it may in the end come down to the financial bottom line only. The current discussion about the hypothesis that the economical crisis has reduced efforts on pursuing sustainability might be seen as another indication for this issue.

The first step in the discussion thus referred to the clarification of the term and its meaning.

Already summarizing some of the key statements we (the service providers) have an understanding of seeing sustainability as the "big hairy" **goal** that must be pursued to keep “the License to operate within the business and also in the future. It affects all industries and partners within - but in particular that of the logistics service providers.

It might be seen as a **claim**, or a mission like approach that is very well **expressed by** the framework of the so called **triple bottom line**. In other words, the traditional style of management which is very much based only on the financial bottom line must be augmented by additional bottom lines that count for the environment and for the social issues in our world as well. So profitability, planet and people should build together the backbone of business and management decision.

By this characterization as a goal with different dimensions, sustainability also touches the problem of its measurement and potential trade-offs between dimensions. It is a known issue that different to the financial bottom lines, the ecological and social “costs” and “revenues” are hard to measure. Carbon footprints for example give only a very limited view on environmental issues. They also frequently do not reflect the whole supply chain or transportation chain but cover only a limited part of it. It appears even harder to find sound, comprehensive and agreeable measures for social responsibility. Without sound measurements however, sustainability is in danger of remaining a catch all phrase without real meaning. As discussed below, politics – and maybe science - might help by defining general measures and requirements that are then equally valid for all players.

With its character as an investment into the future, sustainability is also "Something for continuous improvement" that has to be pursued constantly. The final goal will however never be achieved but only approached.

In summation**: Sustainability appears very well expressed by the Triple-Bottom-Line, which formulates the idea of also** combining **ecological and social aspects with the economical aspects of business into a joint set of management objectives. To transform sustainability from pure idea to application, concrete and robust measures and more detailed objectives are however required. In particular for the logistics service industry, sustainability is a key element of the business which must be managed actively. Seen as the "license to do business in the future" it must constantly be in the focus of management and is not just a marketing issue or fashion term but a subject for continuous improvement efforts.**

The As-Is and Should-Be situation on the image and role of LSP regarding Sustainability

Based on the background of the workshop setup, the discussion was started with the question on the existing image of the logistics service industry in society.

There was more or less unity, that the image in society, less in the business world is not the best. Following the examples, given above in the introduction, there are negative issues such as pollution, accidents, traffic congestion etc. While these negative impacts are very visible, the positive contributions of the logistics industry are less visible. That may be a problem of transparency but also an expression of unfair treatment by media and society as a whole.

The discussion became more controversial regarding the question whether that image is fair and even more, when not fair, how this should be dealt with.

On the one hand there is the clear understanding, that the industry is pushed somehow into the role of whipping boy, as the service provider is not responsible for the usefulness of a transportation act. The service provider just carries it out as this is the basis of their business.

Logistics is also the facilitator for global trade that improves wealth and welfare. Discussions such as that of the "food miles", comparing for instance the production of food in New Zealand to that produced in Denmark or UK, are politically colored and do not really take transportation efficiency into account. Similarly, the last mile from the store to the consumer, which is actually not managed by logistics service provider, is for instance the worst part in the supply chain when it comes to sustainability issues. In summation these examples are indicators for a biased view on logistics and transportation.

Also the issue of a potential in-transparency was not accepted. All of the companies represented in the workshop, which came from Sweden and Denmark, have to prepare sustainability reports and provide them actively on their web pages.

On the other hand, the industry does in fact pollute. There are ships and actors that use the cheapest fuel; there are tired truck drivers that work too long. In other words there is room and need for improvement. Also, when asked about their own role, it appears as an unfair approach to return the responsibility to the customers, the consumers, the technology providers or the governments.

In total, there was agreement that the image does not reflect reality in a fair way; however it is also not a fair or tactically sound approach to complain about it. The better approach would be one that takes the challenge and defines role actively, pushing transparency, arguments and facts for a positive image in society.

The image that refers better to the logistics service industry is of actors that recognize the challenge of sustainable business and actively takes steps to combat it. The LSP are thus not only part of the problem but an active and essential part of the solution. They are an important element for making "the world better by facilitating trade and global division of labor".

For improving their image in society, facts that support this endeavor, need to be delivered in a more active way. For instance, more messages such as the following are needed:

DB Schenker wants to train around 30,000 truck drivers all over Europe in energy-saving driving before the end of the year. Less fuel consumption and wear, and consequently saving of expenses were the goal, said trainer and driving instructor Frank Nirk on the sidelines of a training course in Kassel-Lohfelden. The way of driving of the drivers is analysed following a theoretical part in the seven hour course, tips for saving fuel follow later. (DVZ, 2011)

In total, it might be concluded, that regardless of the question, whether the role model is fair or not, the logistics industry has to take on the role of "manager of sustainability within the supply chains" more actively. Logistics is a significant part of the economy providing the mobility of goods, allows better division of labor, and competences and thus contributes to the wealth of communities. But by its sheer operations, logistics also has social and environmental impacts. These impacts must be aligned according to the above mentioned goal of all three bottom lines and the negative sides must be avoided, reduced and mitigated as much as possible. There are already considerable actions undertaken by the logistics service industry. But there is still a lot more that can be done. It appears insufficient to conduct the required sustainability reporting itself, but the efforts that are taken and the benefits that are delivered to society by logistics need better communication with more transparency.

The question on the actions towards Sustainability

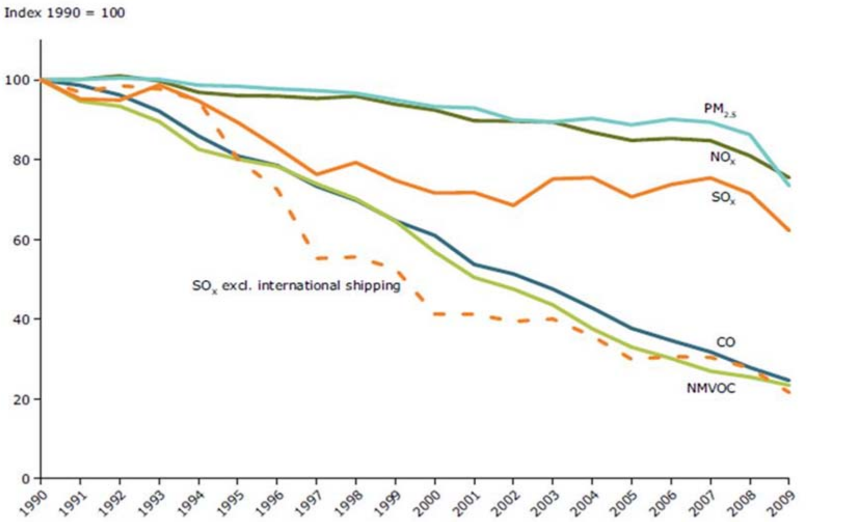
Following the discussion on the image and transparency of sustainable action, the next logical question is that on current and future actions.

The following sub questions have been used to facilitate discussion:

- What are you doing towards sustainability;
- What are the key levers for doing something? ;
- What is done and what are the right things to be done?
- What are potentials for future plans ;
- Setting the frame for future plans; On what actions should you be recognized?
- What ideas do you have to achieve the role you want to be in?

During this discussion a number of measures and instruments were presented and discussed. Wrapping up, there was clearly the argument, that industry is "making huge investments and spending significant money in cleaner technologies". Beyond this statement, published data (see e.g. figure 2 on emissions) support this claim.

Figure 2: Change in emissions of main air pollutants 1990–2009 (EEA-32) – Source: EEA 2011.



Note: SO_x (upper line) excludes emissions from international shipping for Spain due to a time-series consistency issue in the reported data. Spain will recalculate emissions from this source in their next inventory submission.

Source: EEA, 2011.

ØRESUND ECOMOBILITY · EUROPEISKA UNIONEN Europeiska regionala utvecklingsfonden · Interreg IVA ØRESUND - KATTEGAT - SKAGERRAK · Copenhagen Business School HANDELSHØJSKOLEN · LUND UNIVERSITY

According to EEA (2011), the application of technology has been the primary means of reducing the environmental impacts of transport in the last two decades.

Of course, this is also the joint effort of different stakeholders such as the suppliers of vehicles and equipment, public institutions, infrastructure providers, research, the logistics service providers, and politics. And not all measures are taken voluntarily by the industry. But there are also a number of measures that go beyond the necessary and there was also a clear statement within the industry that regulations which support more sustainable business are very welcome – as long as they affect all players and do not blur competition.

Moreover, it is certainly true that many of the technical innovations and the resulting improvements have been often realized not only for ecological reasons but for higher economic efficiency. However, this is not an argument against but rather speaks for sustainability in terms of a triple bottom line. Actions that are both, ecologically and economically advantageous, are not necessarily less "heroic" than those that target exclusively on environmental improvements.

The same applies to the instrumental use of sustainability as a competitive tool. Particularly for large suppliers, sustainability is a topic that is increasingly and actively marketed. Regarding competition, the sustainability issue is a field that might be used to differentiate companies from others.

With respect to environmental issues, "the companies do not only compete" they also "work together and cooperate". The logistics providers in the workshop cited numerous examples of their work life showing how they work together with their subcontractors and their customers in improving sustainability issues. The above mentioned example of Schenker's training of drivers is a supporting example, as Schenker does not primarily employ its own drivers but subcontractors. The group clearly made the point that industry is willing to cooperate on sustainability not only vertically in the chain but also horizontally among the different actors.

Summarizing the discussion, the group of logistics providers within the workshop explicitly agreed that "logistics service providers are ready to act as the pacemakers of change" and that they should take on that role.

The group explicitly made the statement that they are willing to "take the lead towards policy makers and regulators to establish a playing field that contributes towards sustainability". Also there was a clear statement that "this group of 7 has agreed on setting aggressive targets within their companies for sustainable business".

The issue of requirements and requests toward more sustainability

Finally, just as for most businesses, the sustainability business cannot be accomplished without the support of business partners. However, in the preceding discussions around the first three question blocks, there was almost a notion of an unstated rule of not blaming the other actors in the transport and supply chains.

For the final discussion, this rule was dropped and the questions explicitly addressed the requirements and claims toward others. There are numerous stakeholders that may contribute to more sustainability. There are the consumers, the source of all economic demand, and the shippers as the direct customers of the logistics service industry. There are also the equipment providers that potentially provide better technology, and last but not least the politicians and governments that setup the rules.

Regarding consumers, we already discussed the image of logistics service providers that might not fairly take all the facets equally into account. Although the logistics service industry – as mentioned above – understands this responsibility and it is a fact that logistics services have significant impact on the environment, it is also a fact that logistics is a basic source for welfare and quality of life in modern societies. This is also true in the global context as one participant stated: "LSP make the world better by facilitating trade and a global division of labor". The positive side of logistics needs more active communication – going beyond the required reporting. A more fair treatment of the industry instead of being treated as the "whipping boy" would be on the wish list towards a newer societal perspective.

It appears obvious, that with the more direct clients, the shippers would be willing to reward the initiatives of service providers and in consequence also include all three bottom lines, i.e. financial, environmental and social issues, into their business practices when it comes to tendering, negotiations and provider selection, and in consequence the more that dynamic initiatives flow into the sustainability topic, the more that can be done and pushed forward, even by the smaller actors in the industry.

Technology has been already identified as one of the major facilitators of more sustainability. Innovation must continue.

A wish list to the politicians would contain a request for setting the "right" standards and incentives by using traditional regulation instruments (Emission standards; speed limits; Fuel efficiency standards…) Economic instruments (Emission trading; Carbon taxes …) and Infrastructure instruments (physical transport structure …) and apply them in a fair way.

Beyond this, there is also the wish that politicians should include the expertise of the logistics industry more when it comes to decision making on transport infrastructure and alike. The transportation industry operates daily on roads and rail tracks, but they feel not involved enough into decision making regarding the setup of such infrastructure. Of course the industry has its representatives, but the knowledge that is compiled from daily operations is not requested frequently enough from the individuals that have to master the challenges.

In summation, there is a clear statement for greater involvement towards all the stakeholders in the supply and transportation chain.

It is obvious, that sustainability "cannot be accomplished by one actor alone". It is an issue that requires the involvement and "partnership" of all actors – as a "joint effort". The logistics service industry is transparent and willing to be more transparent: the logistics service industry involves their partners and subcontractors and willing to involve them even more.

The service providers invite all stakeholders to participate: "Join us, being transparent". We are measuring the contributions"

Summary of the key messages - "The Manifest"

These four key statements, as a summary of the major results of the workshop build the pillars of the manifest so far. Further discussion is explicitly wanted!

Statement 1 - What is sustainability for the Logistics Service Industry:

Sustainability appears - for us as Logistics Service Providers - very well expressed by the Triple-Bottom-Line, which formulates the idea of combining ecological and social aspects with the economical aspects of business into a joint set of management objectives. To transform sustainability from the pure idea to application, concrete and robust measures and more detailed objectives are however required.

In particular for the logistics service industry, sustainability is a key element of the business which must be managed actively. Seen as the “license to do business also in the future”, it must be constantly in the focus of management and is not just a marketing issue or fashion term but a subject for continuous improvement efforts.

Statement 2 – What is the Role of the Logistics Service Industry towards sustainability:

Regardless of the question, if the role model is fair or not, the logistics industry has to take on the role of “manager of sustainability within the supply chains” more actively. Logistics is a significant part of the economy providing mobility of goods, allows better division of labor and competences and thus contributes to the wealth of communities. But by its sheer operations, logistics has also social and environmental impacts. These impacts must be aligned according to the above mentioned goal of all three bottom lines and the negative sides must be avoided, reduced and mitigated as much as possible. There are already considerable actions undertaken by industry. But there is still a lot more that can be done. It appears insufficient to conduct the required sustainability reporting itself but the efforts that are taken and the benefits that are delivered to society by logistics need better communication and more transparency.

Statement 3 – What about actions of the Logistics Service Industry toward sustainability:

The group of logistics providers within the workshop explicitly agreed that “the logistics service providers are ready to act as the pacemakers of change” and that they should take that role.

The group explicitly made the statement that they are willing to “take the lead towards policy makers and regulators to establish a playing field that contributes towards sustainability”. Also there was a clear statement that “this group of 7 has agreed on setting aggressive targets within their companies for sustainable business”.

Statement 4 – Some requirements and requests out of the Logistics Service Industry:

It is obvious, that sustainability “cannot be accomplished by one actor alone”. It is an issue that requires the involvement and “partnership” of all actors – as a “joint effort”.

The logistics service industry is transparent and willing to be even more transparent and the industry already “involves their partners and subcontractors”. The service providers invite all stakeholders to participate: “Join us, being transparent. We are measuring the contributions”.

References:

Carter, C.R. and Rogers, D.S. (2008), ”A framework of sustainable supply chain management: moving toward new theory”, *International Journal of Physical Distribution & Logistics Management*, Vol. 38 No. 5, pp. 360-387.

n.a.: Laying the foundations for greener transport - TERM 2011: transport indicators tracking progress towards environmental targets in Europe, EEA, Report No 7/2011, Copenhagen 2011.

n.a.: The new normal - a manifesto for changing the way we think about shipping, Maersk line, Webpage.

Deutsche Post AG: Green Trends Survey, Bonn 2010.

DVZ Deutsche Logistik-Zeitung 09-08-2011/p. 12, Hessisch-Niedersächsische Allgemeine 09-08-2011/p. 9.