



LEARNING FROM EXPERIENCES IN SUSTAINABLE TRANSPORT PRACTICE: GREEN FREIGHT EUROPE AND THE IMPLEMENTATION OF A BEST CASES DATABASE

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ABSTRACT. Background: For many logistics service providers and shippers sustainable transport is still a relatively recent issue, even if almost every transportation company is engaged in sustainability. Each has had different experiences with making transportation more sustainable. By looking at the efforts and successes of others sharing these experiences could help shippers and logistics service providers to obtain new innovative ideas of how to become more sustainable. The certification organization Green Freight Europe (GFE) wants to develop a database for these types of experiences in order to encourage its members to generate sustainable initiatives.

Method: In support of this plan, we interviewed several logistics service providers and shippers and conducted a brief survey among GFE members.

Results: Sustainability forms one of the goals for all interviewed companies mainly based on cost reduction but followed closely as a tool to attract new customers. At the moment, the information obtained to keep updated on sustainability comes mainly from truck producers and not from information from best cases from other logistics service providers.

Conclusions: We have found that there is a willingness to submit best cases, but also a fear that the submitter will miss his competitive advantage by telling others about his innovations.

Key words: sustainability; green logistics; green freight Europe.

INTRODUCTION

Sustainability plays an important role in the mission of organizations [McDonough, Braungart 2002, Maloni, Brown 2006]. Sustainability also has become an integral part of the mission of both logistics service providers and shippers [Uitenboogaart et al. 2010, Ploos van Amstel 2008, Pieters et al 2013]. However shippers do not consider sustainability to be a prime aspect of when choosing logistics service provider. A recent study shows that price got the highest index score of 100%, followed closely by reliability -

94 % and sustainability only with - 45 % [Van der Meulen, Kindt 2010]. Using this index, it is understandable that shippers take into account the first two criteria. Sustainability is a question of minor importance when looking for a suitable logistics service provider as well as for sustainable solutions in the transport sector. This image also emerges from the interviews we have conducted with logistic managers of nine companies. These companies were five logistics providers, the three shippers and one private carrier. They all linked sustainability directly to cost reduction with continued reliability. We also found that the interviewed companies had no fixed standards

for the integration of sustainability into concrete operational projects. Companies, but also governments and other stakeholders e.g. non-governmental organisations (WHO, OESO, Greenpeace etc.), each have a different vision of what sustainability is and how it actually materializes. In fact, sustainability is a "wicked problem" [Dentoni et al. 2012] to which no uniform approach can be applied.

We formulated a hypothesis that both shippers and carriers could use experiences of other companies. These experiences could improve their sustainable performance or could gain inspiration for new sustainable alternatives in creating sustainable solutions and initiatives in the field of sustainable physical distribution. The question was how shippers and carriers want to obtain these experiences of other companies; as described in best cases or worst cases, during company visits, in seminars, or by do's and don'ts. In principle, the industry can bring such experiences together in order to obtain new insight. The transport industry often focuses on the development of infrastructure, dedicated public policy or alternative fuels when working out new strategies in the field of sustainability [Piecnyk, McKinnon, 2010]. However business experiences and scenario techniques can broaden the scope of possible sustainable solutions. Scenarios, specifically with regard to the impact of sustainability on the physical distribution market, are developed by using the Delphi method [Von der Gracht, Darkow, 2010].

The tactic of best and worst cases is often used to develop a planning scenario [Schwartz, 1998]. Regarding planning scenario specific to the logistics market little research has been done so far. Usually a holistic approach to the supply chain as a whole is chosen [Von der Gracht, Darkow 2010]. The scenarios that Deutsche Post AG in 2012 drafted for the future of the postal services industry are a good example of such a holistic approach. Sustainable logistics as a specific, independent theme in these scenarios was not presented. Curiously, the same organization in 2010 presented its vision on sustainable logistics but this was not any further elaborated. In 2012 Green Freight Europe (GFE) was established

to unite shippers and carriers in order to promote sustainable logistics. GFE is planning collaboration between GFE Members, manufacturers, knowledge partners and other external stakeholders to develop test protocols, review strategies and verify the performance of management and operational practices, networks, vehicles, technologies and equipment that have the potential to reduce greenhouse gases from freight transport. GFE has the ambition to establish credible performance criteria and review test data to ensure that such practices, vehicles, equipment and technologies will help fleets improve their efficiency and reduce emissions. The aim is to create a pan-European standard similar to the program of SmartWay Partnership in the USA [website GFE]. The 100th GFE member was welcomed on March 27th, 2013. The goal is to have 250 company members at the end of 2013 [website GFE].

Starting 2014, GFE would like to create a database filled with experiences of members with successful projects to assist other GFE members in setting up suitable projects to make transport more sustainable [GFE 2012]. This should aid members to gain inspiration for building innovative approach to sustainable logistics of their own. What form should these experiences have in order to help GFE members make the best use of such a database?

METHODOLOGY

To gain insight into this question we talked to five logistics service providers, a private carrier and three shippers. All nine companies describe themselves as active pioneers in the field of sustainable transportation. Three of them (two shippers and a logistics service provider) are members of GFE and participate in the Lean and Green program; five companies (one private carrier and four logistics service providers) are participants of the Lean and Green program. One shipper is not involved in any of these programs, but does proudly mention on its website that its logistics service provider is a participant of the Lean and Green program. From these interviews we obtained an idea of how these interviewees did learn from the experience of

others, and what they wanted to share with others. Based on this, we prepared a questionnaire which was distributed during the first open day of the GFE members in Heddesheim (FRG) on July 3rd, 2013. Twenty-two of the 70 members that were present in Heddesheim, filled in this questionnaire. Because respondents were not asked to indicate their organizations to which they belonged and the total number of GFE members already exceeded 100, no general conclusions can be drawn from the results of the questionnaire. On the other hand, the information obtained from both the questionnaire and the interviews may give us a good insight of the direction GFE should take when developing a database of best cases. This best case database may help GFE members in turning their individual experiences into specific case studies which can inspire other GFE members [Eisenhardt 1989, Eisenhardt, Graebner 2007, Yin 2009].

THE INTERVIEWS

The interviews were conducted at the location of each company, in an informal form in order to exchange opinions. Sustainability issues were discussed at six organisations with a person who had a good understanding of all aspects of sustainability in transport. At one shipper (number 2) we talked to all seven stakeholders within the organization. We wanted to know more about the following aspects:

1. How did the company position itself in the field of sustainable logistics?
2. What experiences it had in setting up projects regarding sustainability?
3. How do they obtain knowledge in the area of sustainable transportation?

Ad 1) All interviewees named sustainability as one of the goals of the organization. All respondents saw sustainability in the context of corporate social responsibility [Maloni, Brown 2006], but two respondents (shipper 2 and 3) mentioned sustainability in connection with the continuation of the organization. Obviously there is a wide variety of ideas among respondents as to what sustainability actually is and how it could be addressed best. This

confirmed the view that sustainability is a "wicked problem" [Dentoni et al. 2012].

Logistics service providers 1: Our employees think differently about sustainability. It varies from specialist to specialist. For example, the planners have less to do with sustainability as the sellers. The sellers consider sustainability to be important.

Shippers make a choice for sustainable performance primarily based on cost reduction, they don't consider it a goal in general. This view was also confirmed by all carriers we interviewed. This is in compliance with the findings of Van der Meulen and Kindt [2010].

Logistics service providers 2: Internally no one gets excited by greener transport which at the same time is 100,000 euro more expensive.

Logistics service providers 4: People often think and expect that cheaper transport and sustainability go together. Cost increase even by 5% due to a sustainable solution is not acceptable for the customer.

Despite these opinions there are also signs that organizations want to be sustainable rather on account of other reasons as purely financial reasons.

Logistics service providers 1: The measures in the field of sustainable performance that we take don't directly influence the process of recruiting new customers, but it ultimately has a positive impact on our commercial activities. Sustainability is just embedded in our organization. We distinguish ourselves from competitors by being the leader in this field. Because of this we are often one of the first to try a new sustainable initiative. We also have an edge in knowledge and experience.

Ad 2) In terms of experience with setting up projects for making transport more sustainable, it is striking that the shipper takes the initiative. Hereby those solutions come forward that are tailored to the needs of this specific shipper. Logistics service providers also have their own ideas, but they reach only a small number of their customers. For

example, logistics service providers 1 launched a program that allows the shipper to compensate CO2 emission with a small surcharge per trip, to accumulate money for planting trees. However, only 50 of the approximately 3000 customers of logistics service providers 1 choose this option. Moreover, they are not the largest customers and make up only 2% of sales.

Shipper 3 participates in a project where the transportation capacity is shared with third parties, even with a competitor. The fact of sharing the capacity with a competitor caused an emotional response with the other two shippers. These two indicated that they prefer not to share a truck with a competitor:

Shipper 1: If we work with a competitor, sharing the same truck, then there is a risk that emotions will prevail. It will probably become a sensitive matter for us.

Shipper 2: Sharing a truck with competitors gives us a cost advantage, but also is profitable for our competitors. Even if we achieve more benefit than our competitors, we would prefer to do nothing to give them a cost advantage.

We could wonder whether the shipper is absolutely sure about not sharing the transportation capacity with competitors. Both the general manager and marketing manager of shipper 2 had the same opinion: never. However, the financial director of shipper 2 indicated that their logistics service provider has shared transportation space with competitors for many years and due to this fact its clients obtained a cost advantage.

Ad 3) The logistics service providers obtain their knowledge on sustainability especially from the truck producer. Hereby, they work together on specific projects that are tailored to the needs of the logistics service provider. All respondents mention Lean and Green as a source of inspiration, but also state that having the Lean and Green Award is not a distinctive aspect anymore.

Shipper 1: Many logistics service providers have already joined Lean and Green. It would amaze me if someone is not a member yet.

Logistics service provider 2: In my eyes there are too many companies that have connection with Lean and Green. Not everyone is as active as they should be and that is 'killing' for the group. The newly introduced Lean and Green stars could give a boost to continue working on improving sustainability in transportation. These stars could distinguish yourself from others.

None of the respondents share experiences with each other. In a transport market where one tries to get the most out of a competitive advantage this is an understandable attitude. The interviewees often talked about the "uniqueness" of their organization and situation and they therefore requires customization. It remains unclear to what extent the experience gained by such a customization project could also be transferred to competitors and customers.

THE QUESTIONNAIRE

The purpose of the questionnaire was to understand what kind of information GFE members want to find on a Best Practices Sharing Platform and in what form this information should be presented.

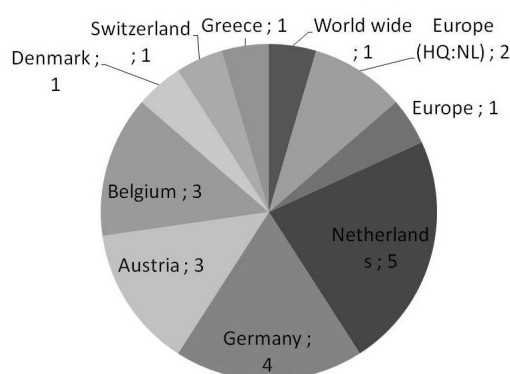


Fig. 1. Responses by country
Rys. 1. Odpowiedzi według krajów

The twenty two respondents originate from different countries of the European Union with a relative large group coming from the Benelux countries (Figure 1). The spread is quite similar to the present composition of the members of GFE. Since we have not asked for the organization of the respondent, we can say nothing about distinction in answers of carriers and shippers. Moreover, we implicitly assumed that they as GFE members want to share information with others because that is one of the objectives of the GFE organization [website GFE]. Based on discussions with the Working Group of Sharing Platform GFE we have drawn up a list of themes which could be

interesting for GFE members. Respondents could evaluate the themes by using a Likert scale (Table 1).

Table 1. Choices and ratings
 Tabela 1. Wybory i ich rating

| Choice | Rating |
|------------------------|--------|
| completely unnecessary | 0 |
| not really interesting | 1 |
| can be interesting | 2 |
| important | 3 |
| very important | 4 |

The result of evaluation sorted by average score is given in table 2.

Table 2. Average scores by theme
 Tabela 2. Średnia ocena według zagadnienia

| Theme | Number of respondents | Average score | Standard deviation |
|--------------------------------------|-----------------------|---------------|--------------------|
| 1. Innovations | 20 | 3,55 | 0,51 |
| 2. Supply Chain Optimization | 21 | 3,48 | 0,68 |
| 3. Eco driving | 22 | 3,14 | 0,83 |
| 4. Transport collaboration | 20 | 3,05 | 0,83 |
| 5. Vehicles | 21 | 3,00 | 0,84 |
| 6. Verified Technologies | 21 | 3,00 | 0,77 |
| 7. Alternative fuels | 22 | 2,91 | 0,92 |
| 8. Information technology | 21 | 2,90 | 0,77 |
| 9. Legal information | 21 | 2,81 | 1,03 |
| 10. Telematics | 20 | 2,80 | 1,01 |
| 11. Anti-idling | 20 | 2,75 | 0,79 |
| 12. Environmental management systems | 21 | 2,71 | 0,96 |
| 13. Consolidation | 18 | 2,56 | 0,78 |
| 14. Manufacturer information | 20 | 2,40 | 0,82 |
| 15. Material planning | 17 | 1,88 | 0,86 |

It was striking that none of the themes was evaluated as 'completely unnecessary'. However, not all 22 respondents gave a rating to each theme. We could give a zero to those themes that were not evaluated, but we have chosen not to do that and to consider just the rated choices. If we would have given these unrated themes a zero, the results would have been slightly different. Innovations and Supply Chain Optimization would have switched places. But the order of a theme would not have changed significantly. Therefore we have chosen to take into account only themes that were rated. It is striking that standard deviations of the themes Innovations and Supply Chain Optimization are low and the

standard deviations of the other themes are higher. It means that respondents not always agree with each other on the importance of a theme. Apparently, the Working Group of GFE Sharing Platform should offer members a list of more general themes such as Technologies, Transport and Organizational aspects.

The purpose of the GFE Sharing Platform is to share best practices. But a member could also learn a lot from the mistakes of others: worst practices. Again, the respondent could express his preference by using the Likert scale (Table 1). There is a clear result with regard to the best practices: they are seen as a very positive and important tool. In contrast, bad

experiences evoke more mixed results. No majority for worst practices as a good instrument: 57% see in no benefit or doubt of

their use and 43% recognize the benefits of learning from them. One respondent suggested: *Instead of worst practices we should call it learning from trials/pilots.*

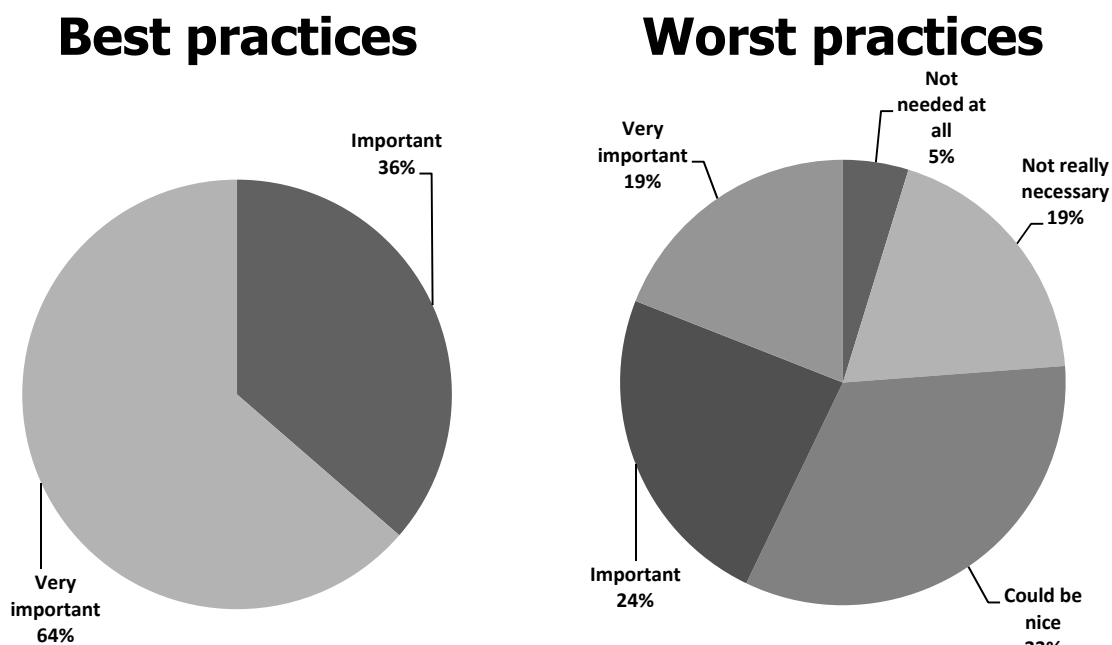


Fig. 2. Best practices versus Worst practices
 Rys. 2. Dobre praktyki vs złe praktyki

Table 3. Forms of information by preference
 Tabela 3. Formy informacji według preferencji

| Theme | Number of respondents | Average score | Standard deviation |
|-------------------|-----------------------|---------------|--------------------|
| 1. Case studies | 22 | 3,36 | 0,66 |
| 2. Workshops | 22 | 2,82 | 1,01 |
| 3. Articles | 22 | 2,68 | 0,95 |
| 4. Conferences | 22 | 2,45 | 0,86 |
| 5. Company visits | 21 | 2,19 | 0,75 |

Next that we wanted to know in which form GFE members want the information to be presented. We gave respondents a choice between case studies, articles, workshops, company visits and conferences. Here the respondent had the opportunity to use a Likert scale (Table 1). The results are presented in Table 3 in order of preference.

Case studies proved to be most preferable, followed by workshops, articles, conferences and finally company visits as the least attractive. This fact surprised us. We had

expected company visits would end up higher and articles would score lower. Perhaps the comment of a respondent explains this choice:

Due to huge distance between partners, workshops, company visits and conferences are difficult to attend.

Finally, we asked what GFE members think of sharing their knowledge and experiences with others members. It clearly appeared that they are willing to share their own knowledge and experiences with other members. Only one respondent expressed his doubt and no one

said absolutely no. From two respondents we have received no opinion. The doubter mentioned as a reason:

We may not have best practices yet.

Another respondent expressed his concerns in the following sentence:

Yes and no! Tricky! Some knowledge and experience result in a competitive advantage and should not to be shared!

The same picture appeared from the interviews: fear to lose a competitive advantage by sharing knowledge with competitors. GFE will have to do its best to get that aspect clear: how one can share information without harming the company's competitive interests.

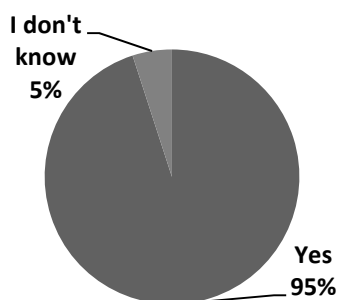


Fig. 3. Willingness to share experiences with others
Rys. 3. Chęć dzielenia się doświadczeniem z innymi

CONCLUSIONS AND RECOMMENDATION

Even though our research was conducted under a small number of respondents, it shows that transport companies want to learn from each other's experiences, but they are also careful in terms of sharing information with competitors. The themes of best practices which are considered to be useful for a GFE database of best practises are very broad. This means that companies have no a clear idea of the direction in which they should go. According to our research, sensitivity towards competition plays always a considerable role when sharing experiences. In a general sense, the need for a creation of a knowledge sharing platform appears to be widespread amongst our respondents. In order to make this GFE platform interesting for sharing information, good examples of cooperation projects regarding sustainability in the form of case

studies are best. GFE members want to get new ideas that they might develop in future for themselves. It is a pity that there is a little interest for worst cases because an organization could learn so much from the mistakes of others.

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UCZENIE SIĘ PRZEZ DOŚWIADCZENIE W ZRÓWNOWAŻONEJ PRAKTYCE TRANSPORTOWEJ: GREEN FREIGHT EUROPE ORAZ WDROŻENIE NAJLEPSZYCH ROZWIĄZAŃ

STRESZCZENIE. Wstęp: Dla wiele dostawców usług logistycznych oraz przewoźników pojęcie transportu zrównoważonego jest pojęciem całkiem nowym, nawet biorąc pod uwagę, że większość fakt, że większość firm transportowych jest już włączonych w rozwój zrównoważony. Każdy z nich ma też inne doświadczenia w tym zakresie. Obserwując wysiłki i osiągnięcia, wydaje się korzystnie dzielenie się swoimi doświadczeniami, które mogą się przyczynić do wprowadzenia nowych innowacyjnych metod prowadzących do zrównoważonego rozwoju firm. Certyfikowana organizacja Green Freight Europe (GFE) chce stworzyć bazę danych obejmujących różnego rodzaju doświadczenia w celu wspierania swoich członków do bardziej zrównoważonego rozwoju.

Metoda: przeprowadzono wywiady z dostawcami usług logistycznych oraz przewoźnikami jak również przeprowadzono krótką ankietę wśród członków GFE.

Wyniki: Rozwój zrównoważony kojarzy się praktycznie wszystkim ankietowanym przedsiębiorstwom z redukcją kosztów, ale również z narzędziem mogącym przyciągnąć nowych klientów. Obecnie otrzymane informacje o podtrzymywaniu praktyk rozwoju zrównoważonego pochodzą głównie od producentów samochodów a nie od dostawców usług logistycznych.

Wnioski: Stwierdzono, że istnieje chęć dzielenia się dobrymi praktykami, ale również obawa, że przekazujący informację straci swoją przewagę konkurencyjną poprzez przekazanie innych informacji o unowocześnieńiach.

Słowa kluczowe: rozwój zrównoważony, zielona logistyka, Green Freight Europe

LERNEN DURCH ERFAHRUNG IN DER ZUKUNFTSFÄHIGEN TRANSPORTPRAXIS: GREEN FREIGHT EUROPE UND DIE EINFÜHRUNG DER BESTEN LÖSUNGEN

ZUSAMMENFASSUNG. Einleitung: Der Begriff des zukunftsfähigen Transportes stellt für viele Logistdienstleister und Frachtführer eine ganz neue Bezeichnung dar, wenn auch die meisten Transportunternehmen in ihrer Betriebspraxis bereits einer nachhaltigen Entwicklung nachgehen. Jede Transportfirma besitzt aber unterschiedliche Erfahrungen in diesem Bereich. Wenn man die betreffenden Bemühungen und Errungenschaften wahrnimmt, scheint der Erfahrungsaustausch durchaus brauchbar zu sein, zumal dies zur Einführung der neuen, zur nachhaltigen Firmenentwicklung führenden Innovationsmethoden beitragen kann. Die zertifizierte Organisation Green Freight Europe (GFE) hat momentan vor, eine verschiedenartige Erfahrungen umfassende Datenbasis zwecks Unterstützung ihrer Mitglieder bei deren nachhaltigen Entwicklung zu erstellen.

Methoden: Es wurden Umfragen bei den Logistkdienstleistern, Frachtführern und bei den GFE-Mitgliedern durchgeführt.

Ergebnisse: Die nachhaltige Entwicklung wird praktisch bei allen interviewten Unternehmen mit Kostenreduzierung assoziiert. Sie wird bei ihnen auch als ein brauchbares, neue Kunden anziehendes Werkzeug angesehen. Die gegenwärtig gewonnenen Informationen über die Aufrechterhaltung der Praktiken für die nachhaltige Entwicklung kommen hauptsächlich von Autoherstellern und nicht von den Logistkdienstleistern.

Fazit: Es wurde festgestellt, dass man willig ist, gute Praktiken gegenseitig auszutauschen, wobei auch die Angst besteht, dass der Informationsmitteilende seine Wettbewerbsfähigkeit durch Preisgeben von innovativen Informationen verliert.

Codewörter: nachhaltige Entwicklung, Green-Logistik, Green Freight Europe

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