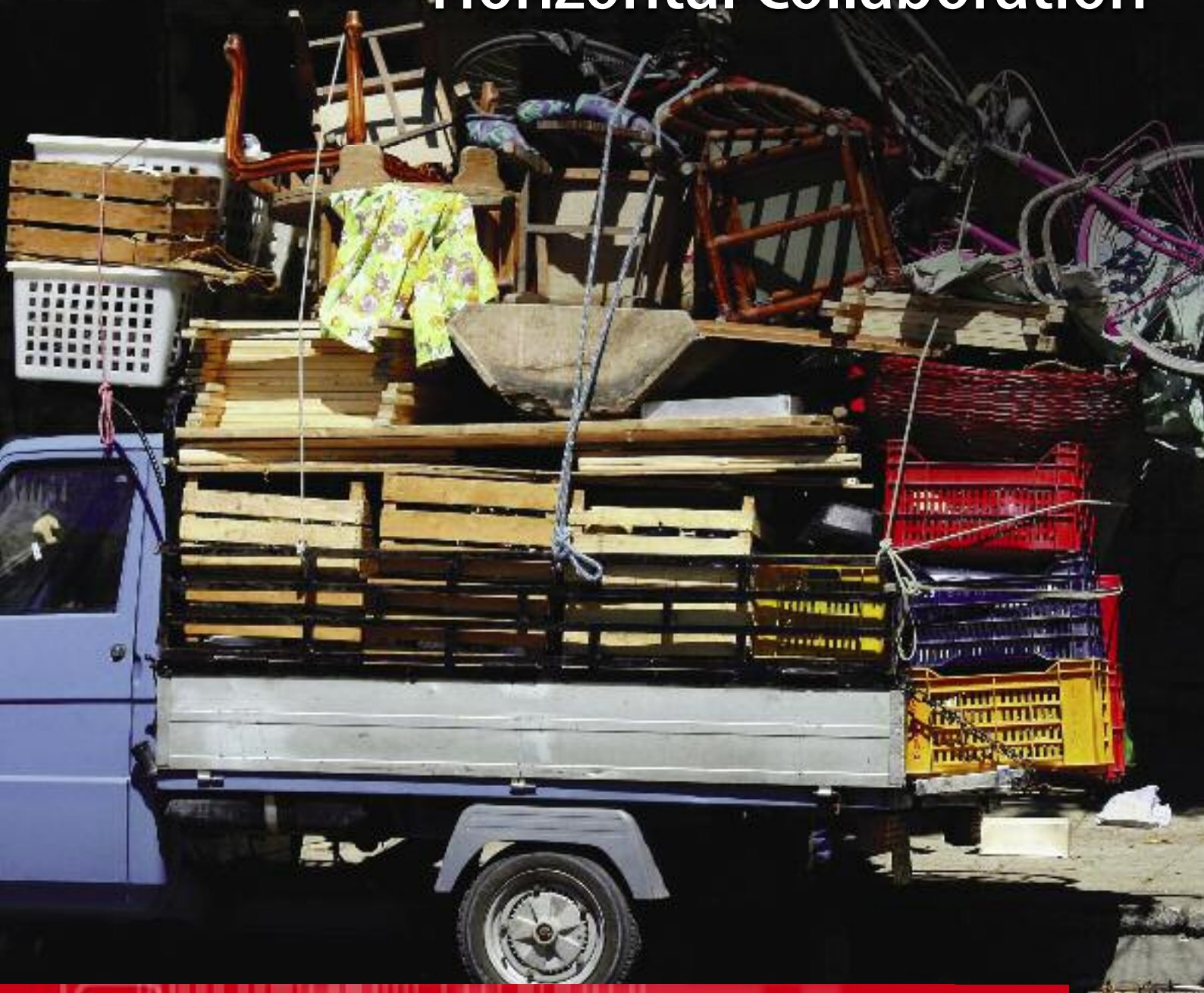
Retail Inbound Horizontal Collaboration



GS1 Belgilux

ECR

SEVENTH FRAMEWORK PROGRAMME

CO2

SPAR

TRI VIZOR

Colophon

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Preface

The purpose of this document is to share best practices on bundling of loads in the FMCG industry in Belgium, Luxembourg and The Netherlands. It is based on a real-life business case of Spar Retail, several of their suppliers and their Logistic Service Providers. Sharing best practices will allow the members of the FMCG industry to learn from each other what the challenges and benefits are from horizontal freight consolidation.

This project was executed together with Spar Retail and was supported by the GS1 Belgilux ECR Committee. The pilot was conducted with financial support from ECR Belgilux and was part of the European CO^3 consortium. TRI-VIZOR, a Belgian spin-off company of the University of Antwerp, acted as neutral trustee and project manager.

This project shows that freight consolidation requires the active collaboration of all involved parties: Logistics Service Providers, retailers and suppliers. The retailer needs to take a leading role to achieve actual results. To maintain the savings it is important to regularly monitor and update the results since transport networks are subject to constant change. In this case Spar Retail has adopted the pilot learnings as regular practice, and thus maintains the results achieved.

We hope this best practice guide can inspire you and that you can learn from the experience of Spar Retail.

Good luck!

Jan Somers
CEO, *GS1 Belgium & Luxembourg*

1. Acknowledgements

The authors of this document wish to thank the management and employees of Spar Retail and the Colruyt Group for their highly constructive participation and willingness to make available their time and share their viewpoints. They are equally grateful to the European CO³ Consortium Members and Scientific Board for their valuable support, insight and feedback.

2. Executive Summary

This report describes the detection, creation and management of logistics horizontal collaboration and inbound transport synergy opportunities in the supply network of Belgian retail company Spar Retail (part of the Colruyt Group). It is intended for a wide audience: logistics, purchasing and sales managers at retailers, wholesalers, manufacturers and logistics service providers, as well as professionals who are responsible for transport or fleet management within a retail environment. SME-size retail suppliers are a special target group for this test case.

The purpose of this project is to show that suppliers in a retail network can share transport capacity that would otherwise run empty, by engaging in cross-company collaboration. This will improve the total performance of the retail network and its stakeholders in 3 ways:

- Efficiency: lower transport price per pallet or per drop, lower reception costs, lower inventories
- Effectiveness: higher service level or delivery frequency, faster stock replenishment
- Sustainability: lower carbon emissions per pallet or per drop, less wasted vehicle capacity and traffic

Another goal of the project is to demonstrate that transport collaboration can be "triggered" from the outside by a neutral trustee and that it can work both for large and small companies, resulting in retail distribution networks with 'fewer and friendlier kilometres'. At the same time it is demonstrated that retailers can take a proactive approach to encourage collaboration in their supplier network. It is also shown that such collaboration can take place in accordance with competition law, with support from a neutral external facilitator (called a "trustee").

This case study was conducted by GS1/ECR Belgilux in collaboration with TRI-VIZOR, a Belgian spin-off company of the University of Antwerp. TRI-VIZOR acted as neutral trustee and project manager on behalf of Spar Retail and GS1/ECR. It started the preparation of this test case in the summer of 2012, working with both Spar Retail, its suppliers and Logistics Service Providers to realize the project, and made a status evaluation of the test case in January 2014.

Conforming to the standard CO³ methodology for creating horizontal collaboration, TRI-VIZOR applied a 3-phased approach to set up this test case:

- Phase 1: identification of compatible suppliers and overlapping transport flows
- Phase 2: preparation of a collaborative concept and business case
- Phase 3: operational implementation, management and support

Acting as 'offline trustee', TRI-VIZOR first mapped and analyzed the Spar Retail inbound network, identified a number of compatible suppliers and product flows, grouped these into geographical clusters and evaluated their potential to realize transport synergies. TRI-VIZOR and GS1/ECR Belgiux assisted Spar Retail to define a number of test communities, evaluate their potential and measure their actual results. Both success factors and practical showstoppers were documented. The project learnings and best practices are described in this document, as well as top-10 recommendations for other companies who wish to start similar projects in the future.

List of Abbreviations

3PL: 3rd Party Logistics Service Provider

CMR: Convention Relative au Contrat de Transport International de Marchandises par Route; a binding set of international rules for road transport. The CMR document (delivery note) which needs to accompany every transport, is also used as proof-of-delivery when the goods are handed over by the Logistics Service Provider to the customer.

CO_2: carbon dioxide, a greenhouse gas and logistics sustainability (carbon footprint) measure

CO^3: Collaborative Concepts for Co-modality (www.co3-project.eu)

DC: Distribution Center

EU: European Union

FTL: Full Truck Load

HACCP: Hazard Analysis and Critical Control Points, a standard methodology for food safety

JIT: Just-in-Time

KPI: Key Performance Indicator

LSP: Logistics Service Provider

LTL: Less-than-Full Truck Load

POD: Proof of Delivery

Speed dock suppliers: suppliers of Spar Retail who mostly deliver in LTL quantities, for whom a dedicated and separate unloading dock ("snelkaai") has been foreseen

3. Introduction

A retail distribution network is a complex and dynamic logistics environment with many interdependent stakeholders, product flows, processes and systems. Retail product flows are often fragmented as well as time critical, and most commercial actors in retail network have a natural tendency to manage and optimize their supply chain parameters from their own perspective and on an individual basis. Together with an overall lack of network visibility and transparency, this will inevitably cause a lot of inefficiencies in the network. As a result, many retail suppliers typically have to deal with a lot of logistics challenges and contradictions:

- Lots of expensive transport kilometers
- Underutilization of delivery vehicle capacity
- Empty return trips
- Suboptimal drop sizes
- Suboptimal or conflicting delivery windows
- Congestion risk
- Unpredictable drop dates and delivery schedules
- Demand variability with peaks and lows
- Suboptimal inventory rotation
- Suboptimal on-shelf availability

Since the population density in Belgium is high and the number of large retail chains is limited, most suppliers have to deliver to a small number of retail distribution centers which are located in the center of the country. On the one hand, it can therefore be assumed that there exists a lot of overlap and synergy potential between individual suppliers' product flows. On the other hand, there is often a lack of visibility of this overlap and suppliers are not used to communicate or collaborate with each other to jointly look for flow optimization opportunities. In addition, the most powerful party in the network, i.e. the retailer at the center of the network is not used to modify its inbound delivery schedules or to provide incentives to its suppliers, in order to help them create logistics synergies.

In this test case, Spar Retail, a mid-size Belgian retailer, addressed the above challenges by applying innovative concepts of horizontal collaboration in its inbound supplier network.

4. Stakeholders

Creating horizontal collaboration in a retail inbound network is a complex undertaking with many different involved parties. The stakeholders in this test case are the following:

Spar Retail Belgium

The story of SPAR in the early years is the story of Adriaan Van Well, a visionary Dutch wholesaler. He was inspired by a simple yet powerful philosophy that independent wholesalers and retailers can achieve more by working together than by working alone. In the 1930's there was evidence that multiple chains were expanding in Europe. As a response, SPAR was launched in 1932 as DESPAR, an acronym of a slogan: "Door Eendrachtig Samenwerken Profiteren Allen Regelmatig". This translates in English as: "All Benefit from Joint Co-operation". SPAR continued to develop in the Netherlands during the 1930s and took its first international step in 1947 when SPAR was introduced into Belgium. In the late 1940s the name was abbreviated from DESPAR to SPAR. The brand is now operated in Belgium by Spar Retail, which is today part of the Colruyt Group, Belgium's largest retailer. Spar Retail is responsible for 249 stores, all of which are run by independent retailers. All stores are delivered from Spar Retail's central distribution hub, which is located in the Flemish town of Heist-op-den-Berg, ca. 20 km east of Mechelen. The distribution center comprises separate buildings and sections for dry packaged food, fresh and chilled products and wines and beverages. For historical reasons, the accessibility and mobility of the site are not ideal and its expansion possibilities are limited. Therefore, the Colruyt Group intends to move the DC to a new and larger site in Mechelen, close to the E19 highway, in 2014.

As a proactive answer to the increasing congestion challenges and to reduce somewhat the burden of heavy supplier traffic on the surrounding urban area, Spar Retail and the Colruyt Group decided that the DC in Heist-op-den-Berg would make an interesting testing ground for supplier horizontal collaboration and logistics capacity sharing. The retailer intends to keep the learnings and best practices from this test case and apply them at once to their inbound supply flows at the new DC in Mechelen.

The suppliers of Spar Retail

The Spar Retail DC in Heist-op-den-Berg is continuously replenished by hundreds of large and small suppliers, located in Belgium as well as abroad. This causes a heavy daily sequence of truck movements and receptions at the warehouse. To limit the scope and effort and to maximize the bundling opportunities, a smaller subset of suppliers was filtered out for this test case, i.e. small and medium size Belgian suppliers who deliver in "Less than Full Truckload" (LTL) quantities and with relatively broad time intervals. To make the reception operations more efficient, these suppliers are required by Spar Retail to deliver to a dedicated, fixed unloading gate called the "speed dock". Based on the fragmented delivery dates and LTL drop sizes, it was expected that quick-wins could be found by synchronizing and optimizing the inbound flows of compatible suppliers at this "speed dock".

The Logistics Service Providers of the Suppliers of Spar Retail

The Spar Retail suppliers use a mix of own drivers and vehicles, as well as externally sourced transport capacity. Especially larger suppliers are used to working with 3rd Party Logistics Service Providers (3PLs). These 3PLs provide Spar's suppliers with transport capacity as well as with warehousing and value-added logistics services. As such, they will be important stakeholders or at least involved parties in the reengineering of Spar Retail's inbound supply chain. In this case study, although the primary optimization contacts took place directly between Spar and its suppliers, the transport and logistics providers were also considered as equivalent and necessary partners in the total network optimization. This means that a "win-win-win" situation was pursued for Spar Retail, its suppliers and the involved logistics provider.

TRI-VIZOR

TRI-VIZOR is a spin-off company of the University of Antwerp, specialized in logistics horizontal collaboration. It played the role of neutral trustee, facilitator and project manager for this test case on behalf of Spar Retail and GS1/ECR Belgiux. As such, TRI-VIZOR brought suppliers around the table, analyzed their delivery data and evaluated potential logistics synergy. TRI-VIZOR also facilitated the collaboration process and helped the companies and their staff to overcome various operational and mental barriers towards collaboration.

Over the past few years, neutral trustees have emerged as essential new players to create and manage horizontal collaboration communities in the logistics market. In line with the recommendations of the EU-supported "Collaborative Concepts for Co-modality" (CO³ www.co3-project.eu) program, trustees can have two main functional responsibilities, which are described as "offline" and "online" functions.

The first possible function of the trustee is the "offline function" which provides neutral external support to the collaborating companies. This role encompasses, but is not limited to, activities such as matchmaking, the search for compatible volumes and critical mass, providing stability and transparency, transport sourcing support, fair gain sharing, competition law compliance, community entry/exit policies, conflict resolution and ensuring data confidentiality for the community. The second possible function of the trustee is the "online function" which encompasses real-time operational planning and optimization of the collaboration process.

In this particular test case, TRI-VIZOR played only an offline role, while operational aspects were handled between Spar Retail, the suppliers and their respective Logistics Service Providers.

GS1/ECR Belgilux

GS1 Belgium & Luxembourg is a member of the worldwide GS1 organization. GS1 develops uniform standards for the identification, capturing and sharing of industrial data in more than 100 countries. Globally, 2 million companies in 30 different industry sectors are member of GS1. In Belgium and Luxembourg alone, GS1 has 5.200 members, among whom Spar Retail and many of its suppliers. GS1 is a neutral, not-for-profit organization with a strong focus on value chain collaboration. As such, GS1 Belgilux supports collaborative logistics projects that result in more efficient, effective and sustainble supply chains and networks.

In 2007, GS1 Belgilux merged with ECR Belgilux, the Belgium-Luxembourg branch of ECR Europe. ECR stands for Efficient Consumer Response and is a neutral collaboration platform for retailers and suppliers. The goal of ECR is to sustainably serve the consumer better, faster and at less cost. Collaboration along the value chain provides added value to retailers and suppliers. But freight consolidation between competitors and clients can be a complicated matter. That is why ECR facilitates this process.

GS1/ECR Belgilux believes that competition should take place on the shelf, not in truck trailers. As such, together with TRI-VIZOR, it played a pivotal role in facilitating this project and bringing the different stakeholders together.

5. Project Methodology

As neutral trustee, TRI-VIZOR was asked to initiate and facilitate the collaboration process in the inbound supply network of Spar Retail. To make this possible, it used a standard 3-step methodology which is applicable to most instances of logistics horizontal collaboration. This methodology guides the stakeholders in a structured manner "from start to finish", from the very first contacts to the operational phase of the horizontal collaboration:

1 IDENTIFICATION → **2 PREPARATION** → **3 OPERATION**

It should be mentioned that although for each horizontal collaboration project the 3 basic phases are identical, every project requires a tailor-made approach depending on its complexity, its stakeholders, its group dynamics and its operational level of ambition. The identification phase and preparation phase may overlap because it is not uncommon for additional partners to join the community at any moment during the 2nd project phase. On the other hand, it can also happen that community members drop out of the project for a variety of reasons, forcing the search for compatible shippers (identification phase) to start over again.

Identification

As a starting point for identifying logistics and transport synergy opportunities, an overview was needed of all inbound transport flows to the SPAR warehouse in Heist-op-den-Berg. As many hundreds national and international suppliers are involved, this can become quite a heavy and complex exercise (the processed inbound volume amounts to ca. 20.000 pallets/month). Spar Retail extracted this information from various inbound reception files and databases. In order to account for seasonality effects, the data for 1 calendar year had to be collected. As explained above, the project scope was focused on Belgian "speed dock" suppliers who typically deliver in LTL quantities. However, in the identification phase also FTL and international suppliers were investigated in order not to miss any bundling quick wins. Both Belgian and international suppliers were selected who had delivered at least once during the past 12 months. For each of these suppliers, an indication was given of their average number of deliveries and their average number of delivered pallets per month.

On the basis of this information, a longlist of active suppliers was selected who made at least 50 deliveries per year in Heist-op-den-Berg (=1 or more deliveries per week) with a certain minimal drop volume. This longlist contained in total 316 suppliers:

- 78 Belgian speed dock (LTL) suppliers
- 76 Belgian FTL suppliers
- 162 international suppliers

For these suppliers, the following information was collected by the internal ICT department of SPAR:

- Supplier name and address
- List of year-to-date deliveries and volumes (pallets per day)
- Temperature conditioning

This information was then used to plot a geographical location map of the most important Belgian suppliers of Spar Retail ("pie sizes" are in function of number of deliveries per year). This representation makes it easy to identify clusters of suppliers who are located geographically close to each other and who should have, as such, potential transport synergies for delivering to Heist-op-den-Berg:

A similar exercise was carried out for the international suppliers of Spar Retail:

Preparation

It was observed that in most cases, Spar Retail only knew the administrative (=Accounts Payable) address of its suppliers. The physical origin of the supplier flows was not known. It was also not immediately known whether the suppliers operated their own transport, or whether they made use of an LSP. After some double checking with other retailers, it appeared that this lack of physical flow information is quite common in the retail world. As such, this detailed operational information must typically be collected on an individual basis from the suppliers themselves – a very labour intensive process.

Based on the density and proximity of suppliers per geographical region, the following regional clusters were identified as potentially interesting for flow bundling:

- South-West Flanders (4 suppliers)
- Hainaut (3 suppliers)
- Liège (6 suppliers)
- Waasland/E17 highway (3 suppliers)
- Scheldeland (3 suppliers)
- Antwerp (8 suppliers)
- Gent (3 suppliers)
- Willebroek (10 suppliers)
- Netherlands (6 suppliers)
- France (wine suppliers in Bordeaux region)
- Germany (5 suppliers)

Based on the above data analysis, a high level overview was now available of potential transport bundling opportunities between regional clusters of suppliers. However, as the data analysis was purely an internal exploration exercise between Spar Retail, GS1/ECR and TRIVIZOR, none of the suppliers had been made aware yet that they were the potential subject of a horizontal collaboration initiative.

Therefore, the following step was to make the suppliers aware of this exercise and at the same time motivate them to participate. Instead of approaching the suppliers on an individual basis, it was decided to organize a series of regional "information roadshows" where local suppliers were invited by GS1/ECR on behalf of Spar Retail. Roadshows were held in the following regions:

- Antwerp
- Hasselt
- Gent
- Brussels

In these 2-hour workshops, the suppliers were given an introduction about logistics horizontal collaboration and CO3, and were invited to participate in pilot projects. They also had a chance to ask practical questions or to express concerns, e.g. about transport liability or gain sharing. It was always clearly stated that the intention of Spar Retail was to focus on improvement of empty running and efficiency in its inbound network, but that any cost savings would be left to the suppliers and logistics service providers who made them possible. Participation was on a voluntary basis, i.e. no pressure whatsoever was exercised on suppliers or transport providers to participate in the pilot program.

Unfortunately, not all suppliers responded to the roadshow invitation. As a lesson learned, it might have been better for the response rate to send out the workshop invitations by Spar Retail directly, instead of by an external party. This would at the same time also emphasize the strategic importance of the workshops in terms of Spar Retail's supplier relations.

Based on the roadshows and individual follow-up, a shortlist of potential supplier clusters in Belgium was identified. The next step was to collect additional information from these suppliers in order to explain the concept more in detail and to establish their "transport baseline" towards Spar Retail:

- Geographical location of outbound warehouse
- Name and location of Logistics Service Provider, if any
- Product characteristics and transport requirements
- Transport cost and service level
- Openness to work on increased sustainability
- Relationship with other suppliers in the same region
- Nature of relationship with Spar Retail
- Nature of relationship with Logistics Service Provider
- Logistics maturity and ability to invest management time and effort in a pilot project
- Contact details of logistics responsible
- …

From the shortlist of interested suppliers and potential collaboration clusters, a number of "quick wins" were identified and elaborated. As soon as sufficient potential synergy was detected between the delivery flows of 2 or more suppliers, an important question was how to realize this synergy in practice. The most obvious way was the selection of a shared Logistics Service Provider and a common transport price.

It turned out that this was not an easy matter. Many small and medium-sized suppliers operate their own vehicles and emply their own driver(s). This makes it legally and practically difficult to bundle products of multiple suppliers in the same truck. In addition, in many cases the suppliers had no accurate view on their logistics and transport cost.

Small and mid-size suppliers who have outsourced their transport often enjoy long standing relations with their "house" transport provider, who is often also located nearby. Switching LSPs is in many cases perceived as a risk and an administrative or emotional burden. It was in this context also observed that many small and mid-size suppliers do not have a well-defined transport and logistics department or manager. As a consequence, the degree of managerial freedom to implement innovative logistics concepts such as horizontal collaboration is limited. Furthermore, the interest in transport sustainability is low when it is not coupled with attractive cost savings.

Another observation is that many suppliers who operate their own vehicles, work according to to a very rigid system of daily millkruns, often delivering certain regions of the country on fixed weekdays. This system has often been internally developed and carefully balanced over the years, to make it possible for the supplier to deliver LTL drop sizes to a dispersed customer base without losing too much efficiency. By taking out certain loads and delivery addresses in order to bundle them with other suppliers through a shared Logistics Service Provider, the internal transport network can get "out of balance", causing more disadvantages then benefits. This can be a very important blocking factor for horizontal collaboration between suppliers who do not yet work with outsourced transport.

To complicate matters, due to the fact that smaller suppliers are often family-owned and locally embedded, it turned out that it was not easy to get them around the table. Quite surprisingly, willingness or refusal to talk with potential partners was often influenced by personal animosity or amity between company owners and management teams in a certain region. Obvious competition concerns added to this complexity.

One of the possible conclusions was that in order to generate logistics synergies between smaller suppliers in a specific region, a very simple, attractive and transparent "plug-and-play" offering must be made by a logistics service provider, ideally with support and encouragement from the retail company.

The biggest opportunity for spontaneous horizontal collaboration quick wins was found with mid-size or larger suppliers who have a certain degree of "logistics maturity" and professionalism. Especially in case the potential partners had already outsourced their transport, a financial business case could quite rapidly be developed.

Whether or not a successful collaboration can be set up, will then depend on a number of criteria:

- Selection of a shared Logistics Service Provider
- Negotiation of a shared transport rate and operational procedures
- Synchronization of LTL transport movements towards he retailer (driven by Spar Retail)
- Overall willingness to experiment with the new concept

Typically, the suppliers will enter into a 1-to-1 discussion with each other and with potential transport providers to reach a collaborative agreement. The neutral trustee together with the retailer can support this discussion in the background, e.g. to clarify the concept or to calculate cost and CO_2 savings.

As a general guideline, it was learned that pilot projects for shared logistics between retail suppliers should be kept as simple and transparent as possible.

Operation:
Some Case Studies

As from the start, given the limited scale of this test project, the targeted benefits were modest. This is mainly due to the fact that the SME-size suppliers could not easily be convinced to invest a lot of time in the project. Elaborate 1-on-1 discussions to come to a collaborative agreement on transport (i.e. which 3PL to use and how to divide the costs and benefits) were seldom an option. Spar Retail therefore took a more pragmatic approach and selected 6 groups of suppliers that were believed to currently work with the same 3PL located in the same region. This information was gathered by the Spar Retail transport planned based on data from the CMR. After checking with the planning and buying department, 6 supplier clusters remained in scope.

These groups of suppliers were contacted one by one by GS1 ECR to see if they would agree to have the 3PL bundle their loads. A common delivery day was set, and this information was communicated to the 3PL. For 3 supplier clusters, a common delivery schedule could be agreed, which has been implemented as from Q2 of 2014. The 3 other supplier groups chose not to participate, mainly for a number of practical reasons: suppliers did not always work with the same 3PL, they only had very few deliveries via the targeted 3PL, the physical location of the goods was different from the address in Spar Retail's database, etc. Before the pilots could start however, 2 more groups fell out of scope. This was due to changes in 3PL collaboration and the ordering patern of Spar Retail. One pilot was effectively launched, see below.

It was noted that many suppliers found this an odd question, they expected that either the 3PL or the retailer would bundle their flows automatically (which was not the case). We believe it is an important learning that suppliers should be made aware that synergy projects such as this one, can only be done in collaboration with retailers and 3PLs. Nobody will have all the necessary data and information, let alone the decision power, to execute or enforce such a project individually. The use of a neutral trustee can help to align all the different players in this respect, and to divide the synergy gains on a fair basis.

Shortly after the first pilot had been launched, Spar Retail repeated the exercise. A new group of suppliers was identified and a second pilot was launched.

Pilot 1

Bakker Logistiek Tilburg transports products of 4 different suppliers. These suppliers used to have 3 different delivery days at Spar Retail. As from January 2014 the delivery days were changed and Bakker Logistiek was asked to bundle the orders. As such, we could reduce the number of trucks per week from 3 to 1. This means we reduced the transport kilometers with 66% without changing the order quantities.

Pilot 2

Eratrans transports the products of 2 suppliers, one existing supplier and a new supplier. When Spar Retail noticed that this new supplier worked with Eratrans, they arranged for both suppliers to have the same delivery day. As such, additional transport kilometers could be avoided. This means a reduction of 50% in transport kilometers.

6 Logistics and Product Compatibility

An important consideration to make in any collaborative logistics community is whether the partners can make use of the same transport capacity or delivery vehicles in the network. Without a minimal degree of compatibility between products and transport equipment, logistics collaboration will be very difficult.

Some aspects to take into account in this respect are the following:

- truck types: city vans, trailers, double deck trailers, tautliners, boxes, side or rear loading
- temperature regime: ambient, chilled, frozen
- max. weight and volume of the products
- pallet sizes and packaging/returns management
- availability of a tail lift
- pallet strength and stackability
- vehicle cleanliness
- food safety regulations (e.g. HACCP)
- licenses and insurances
- necessary documents (e.g. POD, temp. tales)
- security
- procedures in case of transport damage
- transport booking and invoicing
- …

7. Legal Aspects

A fundamental question to be asked at the start of any horizontal collaboration project is whether it is legally permitted. Both European and national legislations prohibit the formation of cartels. However, the object of the legislator is not to hold back efficiency or sustainability improvements. As such, EU anti-trust legislation is quite tolerant of logistics horizontal collaboration when efficiency or sustainability gains can be demonstrated. This is especially the case when a fair share of these gains eventually benefits society and consumers.

The evaluation whether a horizontal community operates within the boundaries of the law, depends on many criteria:

- The aim and size of the collaboration
- The number of market participants involved
- Whether the collaboration involves (potential) competitors
- Whether a written multi-party contract exists
- The characteristics of customers and suppliers of the community
- Whether prohibited activities take place (e.g. price fixing)
- …

As the EU no longer provides individual rulings, these criteria should be evaluated by a professional attorney or competition law specialist on a case-by-case basis. For larger collaborations, the use of a solid and standardized legal framework is strongly recommended in order to provide legal certainty and clarity. The use of such a framework will also facilitate the smooth working of a collaborative community, as it provides a written record of arrangements. However, it should be noted that not only the written contract but also the implementation in practice may be investigated in order to assess the legal compliance of a collaboration.

The European Commission is currently supporting the development of legal best practices in horizontal collaboration (www.co3-project.eu). A number of guidelines are being promoted to avoid anti-trust risk, for example:

- Avoid sharing competition sensitive information directly between the parties
- Use a neutral trustee or intermediary as information "black box"
- Use a pre-approved multi-party agreement or template according to jurisdiction
- Make the collaboration transparent and open for new entrants
- Clearly define what is in and out of scope (e.g. trade lanes)
- Calculate and demonstrate the efficiency gains
- …

An important observation so far is that many companies today still have cold feet to engage in written contracts to support horizontal collaboration. In some cases, a short and simple "Letter of Intent" is signed to express commitment between the parties without having to write elaborate and expensive legal agreements.

Shared use of own transportation

It was observed in this project that many small and mid-size suppliers still prefer to operate with their own vehicles and truck drivers for delivering their products to Spar Retail and other customers. Special attention must be given in this case to the legal and insurance aspects of sharing this vehicle capacity:

- In principle, only registered transport companies are allowed to carry goods of other companies
- Suppliers who structurally share their own transport capacity with other suppliers, should register as Logistics Service Providers and make sure they have proper insurance in place (e.g. CMR)
- This may have an impact on the social statute (CAO) of employees driving the supplier's own vehicles

Therefore, in case sufficient flow overlap and logistics synergy is detected between a number of suppliers in the same region to start a collaborative cluster, it is recommended that these parties work with a joint Logistics Service Provider in order to implement the shared transportation and/or warehousing.

8. Gain Sharing

A fair allocation of costs, benefits and risks among the different players in the community will be crucial to the stability and success of any horizontal collaboration project. A number of gain sharing mechanisms can be applied, ranging from simple (e.g. "fifty-fifty" or volume-based) to advanced (e.g. "Shapley Value", named after the winner of the 2012 Nobel Prize in Economic Sciences).

A prerequisite for a good gain sharing mechanism is that it should be fair for all parties involved. "Fairness" can be defined either subjectively or objectively. A gain sharing mechanism that is not subjectively perceived as fair by the coalition partners, will not be sustainable even if it is mathematically correct.

In the Spar Retail case, the gains to be divided are centered around logistics and transportation cost savings, as well as carbon footprint reduction. The players in the collaborative community are invited by Spar Retail to modify their logistics processes or behavior in order to achieve synergy gains for the community as a whole. In the context of fair gain sharing, each player will compare his "baseline", i.e. his cost level before the collaboration, with his cost level after the collaboration. If the difference is too small or if the cost savings is perceived as unproportionate to the invested effort, the player will not be motivated to remain part of the community.

The test cases in this Spar Retail project were too small to justify elaborate synergy measurement or gain sharing procedures. The focus was mainly on operational quick-wins. It was agreed beforehand that all parties could keep the gains realized in their part of the supply chain. In other words, the players are involved and committed in the operations of the community. By changing their behavior, they can affect both their own cost and efficiency levels and those of other players in the community.

In addition, for anti-trust reasons, the players in a coalition are discouraged to exchange competition sensitive information (such as transport costs) directly with each other. As such, it is recommended that gain sharing be managed by a neutral party or external referee. This external party is often referred to as the "neutral trustee".

9. Key Performance Indicators

Ideally, the benefits and synergy gains of logistics horizontal collaboration should be easy to measure and quantify. Therefore, it is important to agree upfront with the community on a set of relevant Key Performance Indicators (KPIs).

The Key Performance Indicators or measurement points to be optimized in this Spar Retail case were:

- Higher utilization rate of delivery vehicles (cube and weight fill)
- Lower number of kilometres driven in the transport network (especially empty ones)
- Lower number of receptions at the gate of the Spar Retail warehouse (lower cost of labour)
- Lower inventory levels (higher inventory rotation)
- Higher customer service level (faster deliveries + smaller drops)
- Positive impact for society (reduced traffic)

Given that the test cases in this project were relatively small, a pragmatic approach was taken and no elaborate measurement schemes were set up to keep track of the KPIs. However, the general feeling was that the test cases sucessfully helped realize the general goal of "fewer and friendlier" kilometres in the Spar Retail inbound logistics network.

In addition, some of the test cases showed that it is possible to reach an enhanced degree of simplicity in the inbound retail network in combination with a positive impact on the logistics efficiency (cost), effectiveness (service level) and sustainabilty (carbon footprint).

10. Conclusions

This project made it clear that inbound logistics networks of retailers have a large untapped potential for collaborative capacity sharing. A clear and proper methodology in conjunction with a data-driven approach, is needed to create visibilty of the inbound flows and identify and elaborate the most interesting synergy oportunities. For reasons of trust as well as anti-trust, it is recommended that this process is driven forward by a neutral trustee.

Many retail suppliers are small and medium sized companies with a limited degree of logistics maturity or managerial freedom. Therefore, collaboration projects should be kept as simple as possible and should aim to produce clear cost benefits.

Business opportunities exist for Logistics Service Providers to develop and offer innovative but simple 'plug-and-play' solutions to SME-size suppliers, in order to offer them logistics clustering and transport synergies with other shippers who are located geographically nearby. However, retailers should actively support this offering in order to maximize the potential.

The first analysis that was conducted for this project did not directly lead to executable pilots. However, it was very useful for Spar Retail as it showed them the potential of bundling of loads. They then took a more pragmatic approach – starting from the CMR to identify possible bundling opportunities. This approach has now been integrated in their way of working. Every 6 months, Spar Retail scans the CMR data for potential bundling opportunities. Both pilots that were launched are still running and will continue to run. So far, there has been no discussion with the supplier on the effect that this project had on cost savings.

11. Top 10 Learnings and Recommendations

1. **Communication is key**: most suppliers and LSPs are happy to discuss and test inbound transport collaboration. All stakeholders must be clearly informed about the goals and background of the project, as well as the potential benefits for them.

2. **Involve multiple departments:** although projects of this nature will often be driven by logistics and supply chain managers, do not forget to include purchasing (on retailer side) and sales (on supplier side) departments into the discussion. In large retail organizations, also the legal department may want to get involved.

3. **Nominate project managers and give them freedom to operate:** clear project responsibles should be nominated on the side of the retailer, the suppliers and the shared LSPs.

4. **Work data-driven:** use historical data and master data to analyse the retailer's inbound transport flows, to identify quick wins and to calculate the business case.

5. **Anti-trust compliance:** in case of doubt or in order to avoid any risk, have the legal aspects checked by a legal specialist.

6. **Use a solid methodology:** inbound retail collaboration projects often involve many players and can rapidly become very complex. The "3-step" methodology (Identify, Prepare, Operate), promoted by the EU-project "Collaborative Concepts for Comodality" has proven to be a very powerful guideline in this respect.

7. **Work with a neutral trustee:** inbound collaboration will require the collection and sharing of large amounts of data and information, some of which will be competition-sensitive (volumes, transport prices, commercial terms,…). Therefore it is strongly recommended to work with a neutral intermediary.

8. **Keep it simple and start small:** in order to avoid an expensive and lengthy project, start small and work bottom-up. Try to identify potential quick wins or low hanging fruit, and work with a "coalition of the willing". After a few small but successful pilot tests, it will be far easier to scale up.

9. **Work with Logistics Service Providers as equivalent partners:** no logistics horizontal collaboration project can be successful without the active belief and support of a strong and capable logistics service provider. Ideally, logistics collaboration should also result in business benefits for the LSP, such as fewer empty kilometers or loading meters, or higher stability of volumes and less capacity risk.

10. **Celebrate success:** use successful test projects as stepping stones towards enhanced horizontal collaboration. Communicate results (of failures) clearly, also to the outside world, in order to build a collaborative logistics culture with all partner organizations.

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