

Top Sector Logistics

# SYMPHONY NO. 2

RESULTS OF THE  
TOP SECTOR LOGISTICS



## Top Sector Logistics – key figures

### Direct logistics activities

- Added value: 55.0 billion euros
- Employment: 813,000 FTEs
- Production value: 125.8 billion euros

#### 1 Transport and transshipment

- Added value: 29.3 billion euros
- Employment: 433,000 FTEs
- Production value: 67.8 billion euros

#### 2 Storage and warehousing

- Added value: 14.4 billion euros
- Employment: 212,000 FTEs
- Production value: 33.3 billion euros

#### 4 Supply chain management

- Added value: 11.3 billion euros
- Employment: 168,000 FTEs
- Production value: 24.7 billion euros

### Indirect logistics effects

- Added value: 11.8 billion euros
- Employment: 121,000 FTEs
- Production value: 17.0 billion euros

#### 3 VAL and VAS

- Added value: 2.2 billion euros
- Employment: 34,000 FTEs
- Production value: 3.6 billion euros

#### 5 Support activities

- Added value: 9.6 billion euros
- Employment: 86,000 FTEs
- Production value: 13.3 billion euros

Symphony no. 2





Aad Veenman  
Chairman of the Top Sector Logistics

## Preface

You are reading the third results book published by the Top Sector Logistics. Since the last edition all kinds of special partnerships have once again been forged within the Top Sector Logistics and a number of excellent results have been achieved. We have been working hard within a triple helix structure, comprising businesses, knowledge institutions and the government, to develop innovations that further boost the Netherlands' profile as the 'Gateway to Europe'. This year the Netherlands even managed to secure first place in the 'Image Ranking Brand Study' conducted by German transport and logistics magazine *Verkehrsrundschau*, which focuses on aspects including the image of key European logistics locations. In this results book you will find information on projects of the program secretariat Connekt, TKI Dinalog, TNO and NWO, as well as details of notable results achieved in 2015.

The key focus areas of the Top Sector Logistics are learning, ongoing innovation and the achievement of results. After all, the countless developments we are witnessing in today's digital world mean that society is changing at a rapid pace. Innovation benefits companies – not only large companies, but SMEs too, which is why a number of projects within the top sector are being carried out specifically with SMEs in mind, such as the SMILE projects. Within these projects knowledge that is already available is also being made accessible for SMEs. Time and again we are seeing that even small changes can have a significant positive impact.

Developments in society have consequences for everyone working in the field of logistics. That is why we are working to ensure that a sufficient number of talented people are attracted to the logistics sector and why we are also supporting these people in continuing their development. In December I was appointed as the central portfolio holder for the Human Capital Agenda for all Top Sectors and will be working hard in this area over the coming year.

The Netherlands is an open economy: international trade has long been our lifeblood and we are therefore a key player in the global economy. Our strength in the area of logistics is not only evident in the transport and logistics sectors, but in many other sectors too. One excellent example is the ContainerMonitor, a partnership between GroentenFruit Huis, the NLIP, Portbase and Informore. This partnership is a model of cross-sector cooperation in which both the Top Sector Horticulture & Propagation Materials and the Top Sector Logistics are involved and is enabling the business community to save up to ten million euros a year.

Quality of life and accessibility are key themes for the Netherlands. To promote them, we are joining forces with existing initiatives wherever possible. In 2015 this resulted in the decision to include City Logistics in our action lines by linking up with the Green Deal for Zero Emission City Logistics. The ambition is to reduce emissions resulting from the supply of goods to our city centers to zero by 2025. To support this goal, Living Labs are being set up and you can find out more about the Maastricht Living Lab in this results book.

The Netherlands has a top-quality logistics industry! Our ports are amongst the best in the world, we have an excellent customs authority, our hinterland logistics are efficiently organized, we lead the way in the area of synchromodality and our city logistics services can ensure goods are delivered to the door almost to the minute. The challenge we face is to continue to innovate to ensure we retain this position in the future. The Top Team and I are determined to take another major leap forward with the entire logistics sector over the coming year!

*Aad Veenman*  
Chairman of the Top Sector Logistics



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## Top Sector Logistics

**Logistics covers all the knowledge needed to plan, organize, execute and manage goods and information flows – from raw material through to end product. With added value of 53 billion euros a year and a total of 646,000 people employed in the sector, logistics is hugely important to the Dutch economy (BCI/TNO, 2012). It also supports our other (top) sectors.**

The Dutch Government (first Rutte cabinet) launched its top sector policy in 2010. With this policy the aim is to make the top sectors in which the Netherlands excels on a global scale even stronger. Logistics, which already enjoys a strong position and has excellent growth prospects, is one of these sectors. This year the Netherlands even managed to secure first place in the 'Image Ranking Brand Study' conducted by German transport and logistics magazine *VerkehrsRundschau*, which focuses on aspects including the image of key European logistics locations. The top sector policy implies that the government will work together with businesses and knowledge institutions to make targeted investments in the sector.

### Innovation

Customers across the globe are extremely demanding when it comes to transport quality and logistics services. Transport has to be as quick and sustainable as possible, for example. The Top Sector Logistics is seizing on this development with the aim of achieving an international leading position by 2020. If we are to realize this ambition, we need to innovate. To promote such innovation, the program

secretariat Connekt and TKI Logistiek (TKI Dinalog, NWO and TNO) are working together to establish public-private partnerships within the logistics sector. They are also ensuring that the knowledge and experience gained and the results achieved within these partnerships are marketed and transferred.

### Parties

All kinds of different parties are working together within the Top Sector Logistics, such as shippers, logistics services providers, port authorities, transport companies, shipowners, knowledge institutions and the government. The activities undertaken by these groups are making an important contribution to the Netherlands' strong international position. Although it represents only 0.25% of the global population and accounts for just 1% of global production, the Netherlands enjoys a 3.7% share in global trade.

### Ambition

The Top Sector Logistics' aim is to make the greatest possible contribution in terms of strengthening the Netherlands' international competitive position. With this in mind, the Top Team has drawn up an Action Program ('Partituur naar de Top' [Roadmap to the Top]) in which it sets out the Top Sector's ambition: in 2020 the Netherlands will occupy a leading position internationally (1) in the handling of goods flows, (2) as a chain manager of (inter)national logistics activities and (3) as a country offering shippers and logistics companies an attractive climate for innovation and business location.

This ambition will be realized by means of eleven different actions. These eleven actions and associated projects are described in this results book.



## Facts & Figures



**Rotterdam is the largest port in Europe**, followed by Antwerp in second place. Globally, Rotterdam is ranked in **8<sup>th</sup> place**, after six ports in China and one in Singapore. (source: Port of Rotterdam)



With **1,633,000 tons of freight**, **Schiphol Airport** is ranked in **4<sup>th</sup> place** in terms of freight transport. (source: Schiphol facts and figures)



In **2014** a total of **39,367,000 tons** were transported by train. (figures of Statistics Netherlands)



The logistics sector **employs 646,000 people**.



In **2014** a total of **52,726,000 tons** were transported by pipeline. (figures of Statistics Netherlands)



The Netherlands has **6,261 km of navigable waterways**. (figures of Statistics Netherlands)

# NEUTRAL LOGISTICS INFORMATION PLATFORM

## What is the NLIP?

Under the banner of the NLIP a group of committed stakeholders are working together to increase the efficiency of the Dutch logistics sector by sharing data.

This initiative has the following aims:

- To prevent the double entry of data
- To support the optimization of logistics chains
- To maximize the availability of data
- To help the Netherlands lead the way in Europe

The key ports, government bodies, Port Community Systems, umbrella organizations and other parties from the fields of logistics/ICT who are involved are working towards barrier-free data sharing by focusing on three different pillars:

- Development of new technology: instead of the conventional approach of 'taking' data to central platforms, we are developing technologies that make it easier to 'fetch' information from the source. Existing dilemmas relating to data security, authentication and authorization are being resolved as part of this process;
- Development of new forms of cooperation within the chain: barrier-free data sharing calls for new forms of cooperation, the creation or strengthening of mutual trust, legal agreements, co-creation and agreements on sharing the (efficiency) benefits realized in the chain (gain sharing);
- Implementation of concrete pilot projects: new, reusable concepts and technologies are being developed and tested in practice to allow them to be reused right across the logistics sector.

### Results

- Value Engineers has developed an app that links supply and demand in the area of transport with current truck locations. This makes it possible to combine loads, increase loading factors and, as a result, make transport more efficient;
- Cargonaut and Portbase have been commissioned to adapt their Port Community Systems and link them to the government's Air/Maritime Single Window. This will ensure that reporting formalities for incoming and outgoing vessels and aircraft can be dealt with via a single point of contact;
- TLN Consultancy has been commissioned to help city distribution centers and the transport companies cooperating with them to implement the previously developed city logistics message standard;
- Together with a number of other parties, ZET Solutions has been commissioned to carry out a practical test that involves linking the logistics message standard developed by TLN to the digital standards in the construction sector.

## Show and Sign Interface

**In the logistics sector, the consignment note forms the basis for order placement and billing. Development work is taking place with a view to replacing paper consignment notes with electronic consignment notes, from which electronic invoices will also be derived. In May 2015 the Top Sector Logistics therefore asked the market to develop a standard interface between the message standards for the electronic consignment note, on the one hand, and on-board computers and smartphones, on the other. This interface will also be tested and implemented. The aim is to ensure that all on-board computers and smartphones, irrespective of type, are able to work with the electronic consignment note.**

### Winner

This contract was awarded to Transfollow BV. The pilot involves suppliers of on-board computers and their customers (transport companies) defining a pilot environment in which goods flows are supported by the electronic consignment note. This pilot will result in a 'Show and Sign component' (interface) that functions in line with expectations – in terms of performance, ease of use, error-free operation, etc. – and can be easily understood and applied by users.

### NLIP library

Once the pilot and tests have been completed, the standard interface that has been developed will be published in the NLIP library ([www.nlip.org/bibliotheek](http://www.nlip.org/bibliotheek)), allowing it to be used

freely by all parties. During the first few years in particular implementation problems may be identified during use. Companies that apply the standard will also have specific questions about the interface. Transfollow will therefore also take care of the management of the interface.

## Linking systems brings breakthrough within agrilogistics

**On December 1st, 2015 Loek Hermans, Chairman of the Top Sector Horticulture & Propagation Materials, launched the new ContainerMonitor in Rotterdam. This platform links the data of dozens of different parties involved in the transport, storage and transshipment of containers. It allows industry to save around a hundred euros per container, which adds up to ten million euros every year – a genuine breakthrough for businesses.**

This project was initiated by GroentenFruit Huis (formerly Frugi Venta), the NLIP, Portbase and Informore. Their partnership is a model of cross-sector cooperation in which the Top Sector Horticulture & Propagation Materials and Top Sector Logistics are also involved. For this project, which also forms part of the Ministry of Economic Affairs' breakthrough project 'Information Platforms in Top Sectors', the systems of GroentenFruit Huis, an interest group representing the fruit and vegetable industry, and the Port Community System of Portbase are being linked by means of Informore's L2 platform. The B2B sharing of information in this way represents a real breakthrough. Loek Hermans, Chairman of the Top Sector Horticulture & Propagation Materials, took this opportunity to appeal to the government. "With this initiative the sector is showing that it is ready and keen to move

forward. We would also like to invite the government to take advantage of the possibilities resulting from linking these systems together."

### Greater efficiency

"Today, fruit and vegetable exporters often have one employee working full time to collect different bits of information about a shipment of fruit or vegetables, which are then combined to create a clearly presented whole", explains Peter Verbaas, Deputy Director of GroentenFruit Huis. "However, there is now no need to make countless phone calls, as all the information is available on one screen. This not only allows companies to make immediate savings, but also leads to greater transparency, better traceability and greater efficiency during the rest of the import process."

### What does the platform do?

The information that the parties involved, including shipowners, terminals, the customs authority and, in the future, inspection services, share on this platform enables companies to consult, for a small charge, dozens of separate pieces of information, which are presented clearly on a single screen. "It takes a certain amount of courage on the part of those involved to share information with third parties who they do not always know personally", says Michiel Haarman, NLIP program manager. "We are pleased that so many parties are being bold and looking beyond their own corporate interests. This is enabling us to make major efficiency gains as a sector and is helping the Dutch agrilogistics sector to retain its edge." Portbase is keen to make the Netherlands' ports the smartest in Europe. "That's not something we can do on our own", explains Iwan van der Wolf, Managing Director of Portbase. "We are therefore constantly on the lookout for progressive and innovative projects like this."

Watch the film about the ContainerMonitor here:





# SYNCHRO MODAL TRANSPORT

## What is Sychromodal Transport?

Synchromodal Transport is a form of multimodal transport where the shipper uses the available transport modes in parallel or leaves it up to a service provider to decide on the transport modes used. This service provider chooses, within agreed limits, which transport mode will be used for which route. The goods reach their destination at the agreed time and it no longer matters which method – rail, road, inland shipping, short sea shipping, pipelines, etc. – is used to get them there. This ensures that goods flows are bundled in the most efficient way and better use is made of available capacity, resulting in more sustainable and, in many cases, cheaper transport.

By focusing on Synchromodal Transport, the Top Sector Logistics is achieving a reduction in road transport that runs into millions of kilometers. This benefits everyone: shippers, logistics services providers and society as a whole.

### Aim

The aims of the Synchromodal Transport action are as follows for 2020:

- An additional 850,000 TEU transported synchromodally (compared with 2012);
- A reduction in road transport of 35 million kilometers;
- A reduction in CO<sub>2</sub> emissions of 18,700 tons.

### Results

The results achieved within the Synchromodal Transport action include the following:

- 94 parties (most of whom are shippers) have now shared data with a view to identifying synchromodal 'lanes';
- The Neuss Synchromodal project has been launched. This pilot involves transporting goods synchromodally to Neuss and beyond;
- 30 companies have joined NewWays, a platform in Brabant within which major shippers are working together to set up new, sustainable business models in the area of transport and distribution;
- A number of games have been developed that allow players to experience the benefits of synchromodal transport.

## Neuss Sychromodal project launched

**In November 2015 the Neuss Sychromodal project was launched. Within this project various parties are working together to provide sychromodal services. "In my view sychromodal transport is about bringing together the best of all worlds," says Marcel Heuvelman from barge operator HTS. Here he talks about the Neuss Sychromodal project together with Jos Helmer from rail operator Optimodal Nederland B.V. and Ard de Vries from ARVI Consultancy.**

### **New cranes enable sychromodal service**

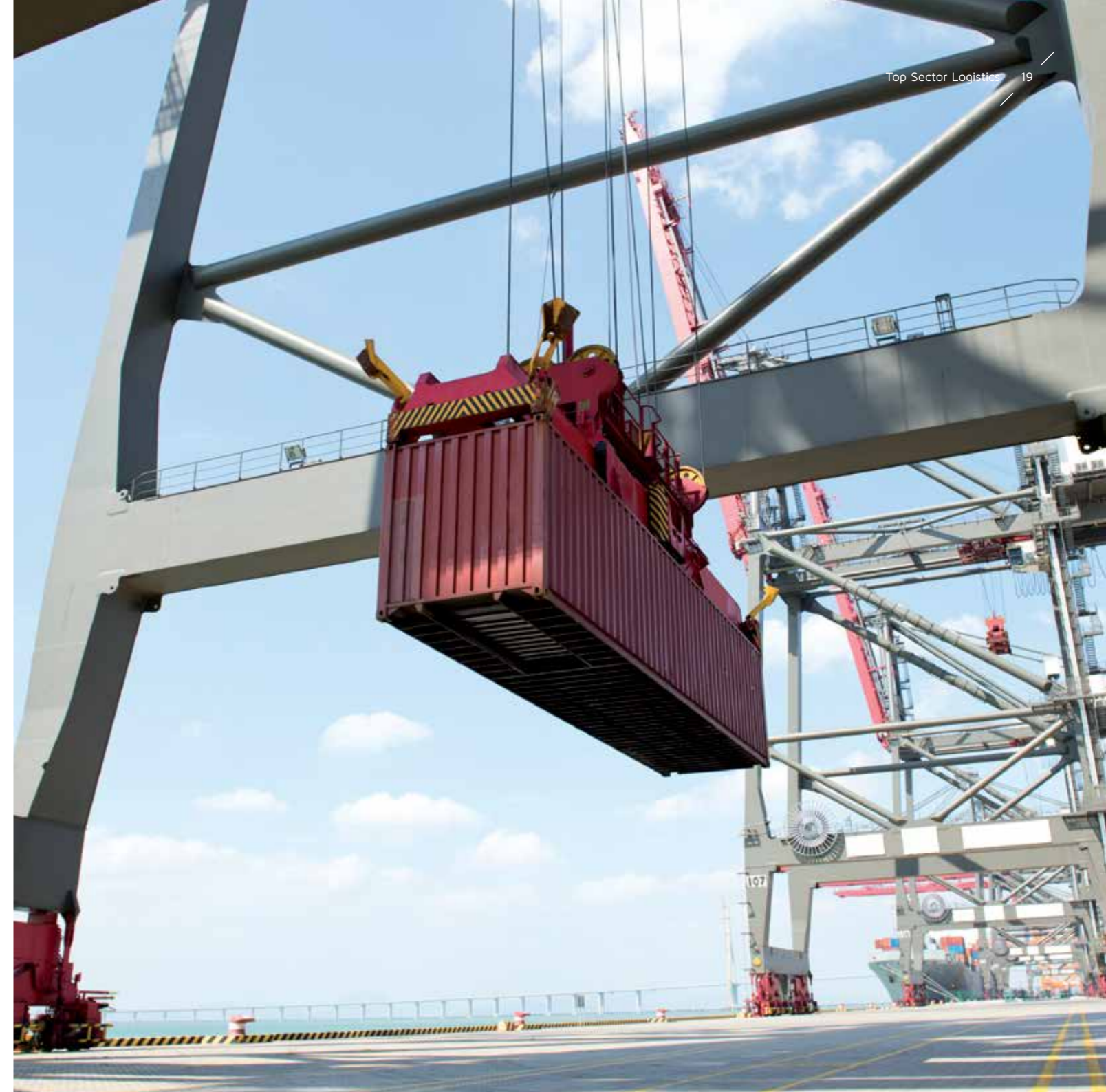
Jos Helmer: "Last year two new inland shipping cranes were delivered to Neuss. These will be used by Neuss Trimodal GmbH for the transshipment of goods transported by rail and inland shipping. It was decided that this terminal would be equipped to handle several different modes and that its transshipment capacity would be increased substantially by investing in new cranes. The physical capabilities of these new cranes also mean that a sychromodal service can now be offered to customers. That means a container can be transported between Rotterdam and Neuss in the most efficient way. And that's just the start: Neuss is a hub for transport towards destinations including Austria and Italy." Marcel Heuvelman adds: "As barge and rail operators we have already been working together a great deal and this has boosted confidence in our partnership. With this project we are taking this cooperation a step further."

### **Added value**

As part of this project shippers are handing over all their transport to the consortium HTS and Optimodal Nederland B.V. This transport is then arranged as efficiently as possible. A key aspect here is the speed with which the shipment is transported. Ard de Vries: "Speed is extremely important to shippers for certain shipments. You can offer them this speed using rail transport. On the other hand, transport by water is cheaper and more flexible. Not all sea port terminals and container depots can be served efficiently by rail. If we take the whole package off shippers' hands, we can transport 40-50% of their goods by water. In this way we can offer cost savings, speed and sustainability." Marcel Heuvelman adds: "In my view sychromodal transport is about bringing together the best of all worlds. We are therefore offering our customers real added value and hopefully appealing to a new market."

### **Linking transport systems**

To optimize the partnership between the companies, their transport systems are being linked as part of the project. Marcel Heuvelmans: "Thanks to the contribution from the Top Sector Logistics, we can free up capacity to do this." Jos Helmer: "Linking transport systems is no easy task, as a lot of research is needed. Logistics companies by no means always have the capacity to do this – as businesses we are much too down to earth. This project and the support we are receiving have moved the points on the horizon closer. The project is forcing us to think in concrete terms about what we want to achieve." Ard de Vries: "We are also working on selling the sychromodal concept: it is important that we communicate the benefits of sychromodal transport clearly, internally and



externally. Lastly, we are aiming to increase train and barge capacity. At the start of the project we therefore decided to add one additional sailing and one additional train service. This may be increased further over the course of the project. Making use of additional barge and train capacity allows us to offer extra sailings and train services to customers. That means they benefit from an increased transport frequency and also the flexibility of the synchromodal service."

## Brabant shippers cooperating within 'NewWays' platform

**'NewWays' is a new neutral logistics platform in Brabant within which major shippers are working together to set up new, sustainable business models in the area of transport and distribution. The Brabant logistics platform initiative, headed by Frans van den Boomen, is being supported by the Top Sector Logistics, Lean and Green Synchromodal and ABN Amro.**

### New ways to transport goods

A total of 30 companies have now joined the platform, which was launched on [date]. The NewWays platform was officially presented in October 2015 during Dutch Design Week in Eindhoven. It was initiated by the regional development agencies Rewin, BOM and Midpoint Brabant and the NHTV. According to the initiators, leading brand manufacturers such as Samsung, Abbott Logistics, Ricoh, Lamb Weston, Fuji film Europe and Sabic are working together within the platform to create reliable, sustainable and fast logistical links to key European markets. The aim of the Brabant logistics platform is to work together in an innovative way and use what the initiators are

Take a look at the white paper that was handed out during the Smart Ports & Logistics Open Data Relay here:



calling 'new ways' to transport goods to make goods distribution more future proof.

### Reducing the shortage of drivers

The decision to set up this platform was prompted by the fact that road transport is coming under ever greater pressure as a result of increasing congestion, the need to cut CO<sub>2</sub> emissions and the shortage of drivers due to the aging working population.

### New business models

At the same time, according to Rewin, BOM, Midpoint Brabant and the NHTV, the distribution volume of most shippers, whether large or small, is insufficient individually and they lack the right knowledge to be able to make the switch to more future-proof alternatives, such as rail and inland shipping. The changing logistics sector therefore requires new business models.

### Promoting multimodal transport

Within the NewWays platform shippers are able to bundle volumes with other participants. The aim here is to ensure that multimodal transport is actually feasible, for example. The platform launched in October 2015 is an extension of Multimodal Smart Match, initiated at the end of 2013, in which Sabic and Samsung were also involved. These two companies now have a joint distribution channel for the transport of goods by rail to Hungary and Slovakia.

### Creating regional clusters

Within the platform, regional clusters are being created. These comprise shippers who want to work together with other parties to improve and modernize their distribution. With the assistance

of neutral parties, the three regional development agencies and the NHTV, potential partners are being brought together and business cases developed. According to Rewin, thirty major shippers have now joined NewWays.

## SynchroMania

**Synchromodal transport means greater flexibility within the logistics sector. At the same time, however, it makes the work of the operational planner and sales manager more complex. To gain an insight into these changes, TNO, ECT, EGS and Danser have developed a serious game, with support from a TKI allowance from the Top Sector Logistics. This game makes it possible to experience the changes associated with synchromodality. It goes by the name of SynchroMania and gives employees involved in the logistics planning process (operational planners, sales employees, etc.) the opportunity to find out how synchromodal planning works and what choices have to be made. The game reveals the operational and financial benefits that can be achieved if the number of restrictions attached to an order is reduced and the cooperation that is needed between planners, sales staff and customers to realize this.**

### How does it work?

When you play SynchroMania you step into the shoes of a planner responsible for optimizing the planning of orders placed by three demanding customers. You need to satisfy these customers, while also minimizing transport costs and the impact on the environment. By no means an easy task! Within a limited period of time the player has to allocate the orders to a route and transport mode, while satisfying the customer's specific requirements. Over three rounds the degree of freedom is gradually increased, giving the planner greater room for maneuver. Action cards can be

purchased to increase the degree of flexibility on the demand or supply side.

At the end of each round the performance of the players is evaluated: transport costs incurred, emissions and customer satisfaction. The scores achieved are compared and the chosen tactics can be discussed. Players can then adapt their tactics in the following round on the basis of the insights gained.

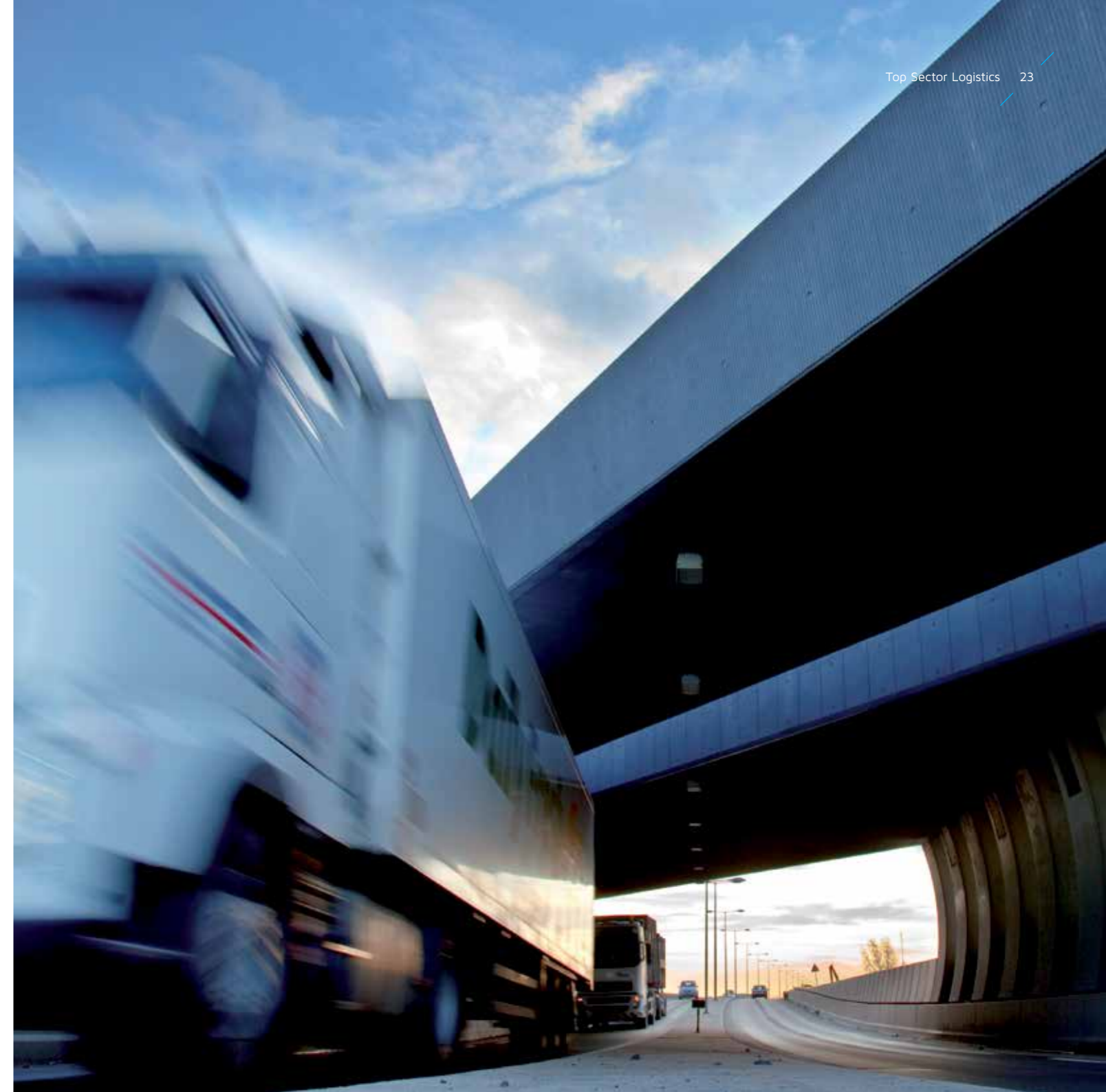
### Results

SynchroMania is intended to give planners and sales employees an insight into the new approach that is needed to make synchromodality a success. Gaming sessions with employees from ECT, EGS and Danser have revealed that the game allows such an insight to be obtained in an informative and enjoyable way. Participants say it has helped them acquire a better understanding of synchromodality. The game has now also been played at a number of logistics events and by students at universities and universities of applied sciences.

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**SynchroMania gives planners and sales employees an insight into the new approach that is needed to make synchromodality a success.**

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# TRADE COMPLIANCE & BORDER MANAGEMENT

Read the white paper 'Trade compliance: the basis for a trusted supply chain' here:



## What is Trade Compliance & Border Management?

The purpose of Trade Compliance and Border Management (TC&BM) is to reinforce the Netherlands' position as a European Gateway by putting the appropriate framework in place, including the optimum facilitation of international supply chains. This action focuses on incorporating effective monitoring into the logistics chain by means of cooperation between inspection services and industry. As a result, monitoring is simpler, cheaper and more effective.

The Top Sector is keen to develop this trade-facilitating measure even further. It is doing so by developing innovative monitoring concepts and simplifying and streamlining procedures. Recent studies into the regulatory burden within import chains reveal that the avoidable costs amount to roughly 250 million euros a year and that the costs per container can be as much as 1,200 euros. The impact of the trade agreement between Europe and the US (TTIP) will potentially allow the Netherlands to save over 4 billion euros in compliance costs, mainly in the following sectors: Agri & Food, High-Tech Systems & Materials (product safety and customs) and Chemicals (REACH safety and customs). Trade facilitation is therefore an area where the Netherlands can achieve benefits running into billions of euros.

### Aims

- To reduce the inspection burden by optimizing use of information already available within the chain, to prevent the duplication of information requests and physical inspections;
- To implement system monitoring where, instead of transactions, the monitoring system and internal control measures of companies themselves form the basis for the monitoring regime (horizontal monitoring);
- To shift customs and inspection activities to locations that are less disruptive to the logistics process of companies than traditional inspections at the border itself;
- To improve coordination between various inspection services within the framework of actual 'coordinated border management'.

### Results

The results achieved within the Trade Compliance and Border Management action include the following:

- Trade Compliance and Border Management white paper published at the 2015 Top Sector Logistics Conference;
- The UNECE study published in 2015 revealed that the Netherlands has implemented the highest percentage of trade-facilitating measures anywhere in the world; the Netherlands is the only country that scored over 90% in all categories!

# CITY LOGISTICS

## What is City Logistics?

In the second quarter of 2015 the Logistics Top Team decided to include City Logistics as a specific action of the Top Sector Logistics. The term 'city logistics' refers to the entire process of transporting goods within a city, including supplying stores and catering outlets, delivering parcels and post, supplying construction materials and taking away packaging materials or construction waste and collecting refuse.

### Green Deal ZES

To date the cooperation between all the parties involved in the area of city logistics has mainly taken place within the framework of the Green Deal for Zero Emission City Logistics (Green Deal ZES). The parties to this Green Deal are aiming to supply goods to city centers with zero emissions by 2025. These parties include the Dutch Government, various municipal authorities, industry organizations, knowledge institutions, shippers, transport/distribution companies, fuel suppliers and vehicle manufacturers. They are working together within 'Living Labs' to develop solutions. The projects being worked on relate to vehicle technology, the utilization and loading of trucks and the initiation of innovative logistics projects.

### Living Labs

Due to the diverse nature of the parties and projects concerned, numerous developments have

to take place in parallel in regional pilots (Living Labs) and an evolutionary approach is required that comprises two phases. The launch of the first phase coincided with the entry into force of the Green Deal and will run until January 1st, 2020. During this first phase the Green Deal will focus, via Living Labs, on demonstrating or making a plausible case to support the argument that Zero Emission City Logistics is feasible for a specific logistics flow from a technical, economic and enforcement perspective. In the second phase, which will run until January 1st, 2025, the Green Deal will concentrate on scaling up the concepts that have been shown to work.

### Aim

The City Logistics action has the following aim for 2020:

- To reduce CO<sub>2</sub> emissions by 5,000 tons.

### Results

The results achieved within the City Logistics action include the following:

- A total of 72 parties have now signed the Green Deal ZES;
- Development of city logistics centers (e.g. in Zutphen and Delft);
- Web application allowing municipal authorities to calculate the impact of a city logistics center on quality of life in the city;
- Improvement in quality of life in city centers due to the use of clean vehicles and fewer logistics movements (e.g. thanks to the use of electric trucks in Maastricht);
- Development of services that fit in with what consumers and businesses will want in the cities of tomorrow, such as home delivery of purchases made in physical stores.

## Pioneers in the field of sustainable city logistics

**At the end of 2014, 54 parties signed the Green Deal ZES. On October 20th, 2015, the opening day of the BedrijfsautoRAI trade fair, 18 new parties committed themselves to working towards emission-free cities by 2025. The ultimate objective of the Green Deal ZES is to reduce harmful emissions (CO<sub>2</sub>, NO<sub>x</sub> and particulates) and noise pollution resulting from city logistics to zero. By means of Living Labs experiments are being conducted on a regional level to investigate new solutions involving a combination of logistics, regulations, vehicles and behavior.**

### Guiding the future of city logistics

Signing the Green Deal ZES can result in a number of significant benefits for participants. Parties to the Green Deal ZES can contribute ideas and play an active part in shaping the future of city logistics, for example. Through the Living Labs the Green Deal ZES provides a platform where new solutions can be developed that involve a combination of logistics, regulations and vehicles. Innovations can be put through their paces in practice and successful projects can then be scaled up. Via the Green Deal participants can also come into contact with more than 70 other parties and will have

plenty of opportunities to share knowledge and exchange experiences. In this way the participants in the Green Deal ZES can help guide the process of mapping out a route towards emission-free city logistics. Via the Green Deal network it will also be possible to throw the spotlight on logistics solutions, both nationally and internationally. Other countries are showing considerable interest in the Green Deal ZES and the developments taking place within the Living Labs.

The new signatories, together with the existing Green Deal ZES partners, can be regarded as pioneers in the field of city logistics. Many of them are already involved in the Living Labs with a view to achieving the intended objectives by 2025. The companies 2W logistiek, Sligro and Nomad Power, for example, are conducting experiments in various cities linked to charging and parking spaces for electrically refrigerated vehicles.

### Clean supply of goods

The municipality of Tilburg is focusing on clean city logistics through measures such as encouraging goods deliveries to supermarket chains in the early morning using clean, quiet vehicles, such as those of Simon Loos. Bubble Post is offering zero-emission deliveries of chilled and dry goods, with a focus on the last mile. Emoss is manufacturing electric drive systems for city distribution and passenger transport, for both the national and international market. E-Trucks is building electric and hydrogen-powered vehicles for use in city logistics, while DHL is focusing on clean deliveries using the "cubicycle", making use of electric delivery vans where necessary.

### Electric vehicles

Transport companies Stad Alkmaar Logistiek and Peeters Vervoercentrale have been leading the way in the area of clean transport for many years and reaffirmed their commitment by becoming parties to the Green Deal. A striking example of the policy being pursued by the municipality of Amsterdam is its pioneering decision to have all removals carried out using electric vehicles. Removal companies Apollo, Deudekom and Aad de Wit, all of whom use electric vehicles, have joined forces and are handling all removals for the municipality. Wierda Bedrijfswagens is developing an electric trailer superstructure to make clean, quiet transport a reality, while the municipalities of Haarlem and The Hague are also taking steps to promote smart, clean transport.

## Under the spotlight: Maastricht Living Lab

**What solutions could help us make our city centers emission free by 2025? Various Living Labs in the area of city logistics are looking into this question. In Maastricht many of the initiatives are being implemented in the district of Wyck. This is a district in the center of the city, but it is not a pedestrian area. Wyck is home to a number of shops and hotels. Rob Lamers: "The municipal council has issued the instruction to reduce traffic in this district, by introducing new loading and unloading arrangements and reorganizing parking, for example. A number of projects that have an impact on each other are therefore being carried out here. Reorganizing loading and unloading has an impact on your parking policy, for example. It is partly for this reason that the district has taken on something of an experimental character."**

### Cleaner and quieter deliveries for the catering sector

One of these projects focuses on deliveries for the catering sector. Rob Lamers explains: "To supply goods to catering outlets, Sligro's trucks make frequent trips around the city. As part of this project we have investigated whether it is possible to supply a number of customers from a single location. At this location we will provide electricity, which will mean the refrigeration systems will be able to run on electricity rather than diesel. This will make them cleaner and quieter. The catering outlets are situated no more than 250 meters from the charging point."

This project ran from July to October 2015 and was evaluated afterwards by parties including drivers, the logistics services provider, Sligro and the catering sector. Other wholesalers are also expressing an interest and the evaluation is therefore also focusing on how the project could be scaled up. It will then be possible for other municipal authorities to make use of this knowledge.

#### Parcels to the city

Another initiative being taken in Maastricht is focusing on the delivery of small consignments to companies in the city. Thierry Verduijn: "A number of retailers and businesses in the city are having their goods delivered to the city distribution center operated by Binnenstadservice, which is situated on the outskirts of the city, and then having the consignments transported into the city in bundled loads. A number of carriers are also using this facility to avoid traveling into the city center. Unfortunately, it is not yet possible to measure whether this has actually reduced traffic in the city. Maastricht aims to give city distribution centers greater freedom and increase the options open to them, provided they can clearly demonstrate that loads are actually being bundled. This means that carriers and the city distribution center need to share information on routes and consignments in the city. We are therefore currently launching a project that uses standards of the Neutral Logistics Information Platform. This is one of the actions of the Top Sector Logistics and is examining how organizations can share data as effectively as possible. We plan to set up a portal where municipal authorities can gain an insight into how many loads are already being bundled. Students from Fontys University of Applied Sciences will be setting up a demonstration for this purpose. The aim is to initiate a discussion on how

bundling can be achieved in the city. What conditions do we need to put in place? This knowledge can then be used by other municipal authorities too."

#### Wanted: municipalities for knowledge sharing

Rob Lamers: "We have now organized a number of meetings relating to the Living Labs in partnership with ELC. All kinds of interesting ideas are emerging and even competitors are coming together around the table. Many of these ideas are still in their infancy, but a start has been made! We think it would be extremely useful to share the knowledge we have acquired with other municipalities and to hear about their own experiences. After all, it would make no sense to try out an idea if another municipality has already shown that it doesn't work. And the opposite is true too, of course: if something works somewhere else, we'll be happy to give it a try in Maastricht too!"

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**"Many of these ideas are still in their infancy, but a start has been made! We think it would be extremely useful to share the knowledge we have acquired with other municipalities and to hear about their own experiences."**

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## City logistics via a web tool

**Supplying goods to city centers is an increasingly important issue in the area of logistics.**

**Municipalities want to limit traffic in city centers and keep inconvenience and pollution to a minimum.**

**City distribution concepts are therefore being developed apace. The current distribution model is no longer up to the task, especially in view of the increasing demand for smart, sustainable logistics.**

**One new distribution model involves creating a city logistics center on the outskirts of a city, where goods will be bundled. A specially developed web tool is allowing municipalities to work out whether such a center would be a viable option for their city.**

#### City logistics center

Transport companies deliver goods intended for the city center to the city logistics center. Once they have been bundled, they are delivered using clean, electric vehicles. Kees-Willem Rademakers: "The most important condition to consider when it comes to building a city logistics center is the potential volume of goods. You need to look into which goods would be suitable for bundling and whether flows of parcels from third parties could be added." Goods could also be collected from the city center and taken to the city logistics center for transport to other destinations. Furthermore, the city logistics center could manage stocks for local physical stores or online shops.

#### Web tool

With the help of a model, municipalities can work out quickly and easily how a city logistics center could relieve the burden on their city center. This model has been integrated into a web application containing relevant data on aspects including access restrictions, maximum speeds, time windows, the geographic location of the distribution center and types of goods and vehicles. A number of KPIs are defined based on the desired situation. Kees-Willem Rademakers: "The model takes care of the rest and makes recommendations relating to aspects including the use of large or small clean vehicles, such as an electric delivery van or bicycle."

#### Example: Delft City Logistics

In partnership with the municipality of Delft, PostNL has launched the Delft City Logistics initiative. The transport of goods in the old city center was a cause of considerable inconvenience. Goods are now bundled on the outskirts of Delft and PostNL delivers them to the city center every two hours via the existing logistics network using small electric vehicles. Kees-Willem Rademakers: "In future consumers will also be able to have products that they buy in stores in the afternoon delivered from the city logistics center in the evening." Communication between the retailer, carrier and consumer will take place electronically via the website or mobile app. "As well as offering convenience for the consumer, this will also significantly increase quality of life in the city center."



## Behavior of various parties involved in city logistics goods transport modeled

**Modeling how various stakeholders in the field of city logistics could cooperate more effectively within the logistics chain to create cleaner and more accessible city centers has moved a step closer thanks to a study by Nilesh Anand of NWO. He has developed a framework for this and has investigated how this type of 'actor-based' modeling could be put into practice.**

### Commercial vehicles in cities

The number of commercial vehicles in our cities is increasing. It is estimated that goods deliveries in cities account for 10-20% of the total number of vehicle movements in a city, and as much as 20-30% in terms of kilometers traveled. Commercial vehicles cause safety, environmental and congestion problems due to their number, size and the frequency with which they travel through cities, and also as a result of parking, loading and unloading. How can these negative effects of the growth in the transport of goods in our cities be reduced without making compromises that impact on goods transport itself and local residents?

### Lack of cooperation and efficiency

There are many different types of stakeholders in the field of city logistics. All the different activities within the logistics chain are connected. Nilesh Anand: "Although individual parties may regard their logistics process as efficient, if you take a helicopter view you actually see that retail space and truck capacity is not being used optimally within the city. Companies often transport goods within a city in isolation, unaware of the fact that cooperating could help to mitigate social and environmental problems and also improve the profitability of an individual company. However, the idea of working together does not always develop automatically, especially between companies that offer the same or similar products or services. This lack of synergy can be attributed in part to an inadequate exchange of information between logistics providers in the city when it comes to designing, planning and implementing logistics processes."

### Complex interactions between parties mapped out

Nilesh Anand's study was based on the idea that with a city logistics modeling platform you can literally map out all the complex interactions between stakeholders, who all have their own differing perspectives. Nilesh Anand: "We are actually talking about a strategic information system for designing logistics concepts and policy, based on input from several parties. To design logistics concepts smartly, you need an approach that takes into account the goals and perceptions of all stakeholders involved in the urban transport of goods." The platform developed by Anand does this in a natural and flexible way using an actor-based modeling technique.

### Information system increases cooperation

"My study focused, on the one hand, on determining the methodological relationships between characteristics of city logistics and the actor-based modeling technique. On the other, I designed various steps with the aim of successfully implementing this modeling. The result is a comprehensive framework for using actor-based technology in the field of city logistics," Anand explains. To test the model, a game was played with test participants. "What we saw was that the convictions of the various parties converged and a greater basis for cooperation was indeed created."

"Companies often transport goods within a city in isolation, unaware of the fact that cooperating could help to mitigate social and environmental problems and also improve the profitability of an individual company."

# CROSS CHAIN CONTROL CENTERS

## What are Cross Chain Control Centers?

Cross Chain Control Centers are control centers where the latest technology, sophisticated software concepts and supply chain professionals are brought together. The purpose of a Cross Chain Control Center (4C) is to allow the joint control and coordination of one or more complex chains. Here we are not only talking about physical flows, but also about information and financial flows. After all, chains become more efficient if they are controlled jointly. By exchanging information between logistics chains, in a 4C we can organize transport on a cross-chain basis. The greater volumes involved increase the options when it comes to using rail and inland shipping as an alternative to road transport, for example. We can also increase the loading factors of vehicles and vessels. This not only leads to cost savings, but also to improved accessibility in cities and the more sustainable handling of goods flows.

The creation of 4Cs results in:

- A better overview, improved coordination and the bundling of activities;
- Lower supply chain costs due to the combination of loads;
- A reduced impact on the environment;
- The creation of more jobs;
- New knowledge that can also be applied in other supply chains.

### Aims

The 4C action has the following aims:

- To create 15 Cross Chain Control Centers by 2020;
- To reduce CO<sub>2</sub> emissions by 50,000 tons by 2020;
- To reduce the distance covered for road transport by 50 million kilometers by 2020;
- To enable chain-controlling activities carried out by 4Cs to contribute 1.8 billion euros to the Netherlands' gross domestic product by 2020.

### Results

The results achieved within the 4C action include the following:

- In 2015 three pilot projects were launched that will involve setting up and implementing a 4C.
- Within the 4c4Chem project all the parties involved achieved potential cost savings of 10% and a reduction in CO<sub>2</sub> emissions of 19%.

## 4c4Chem demonstrates key benefits of cross-chain cooperation

**Within the 4c4Chem project businesses and knowledge institutions are working together to develop innovative supply chain processes. These are focused on significantly increasing efficiency within the chemical industry supply chain, creating a favorable competitive position for the chemical industry cluster and developing a business case for a start-up.**

The 4c4Chem project is an initiative of the Netherlands' three largest chemical companies (SABIC, Shell and Dow), a major transport company in the chemical industry (Den Hartogh), an innovative platform developer (Cargogator), the VNCI (Association of the Dutch Chemical Industry) and Eindhoven Technical University, with support from TKI Dinalog.

### Joint decision-making

The project is focusing on cooperation within chains and between different chains. Transport, stocks and other resources are being shared to allow joint decisions to be taken. The resulting benefits for the participating companies are greater than would be the case if they were acting alone.

### Aims

The project has three aims: planning, combining and bundling. These concepts will make it possible to improve transport forecasting and planning, to combine stocks and other resources virtually and to bundle container transport flows. The project was launched in September 2012 and was completed at the end of 2015.

### Positive impact

Part of the project involved developing a new business case for the virtual pooling of raw materials with all the parties involved: this highlighted potential cost savings of 10% and a reduction in CO<sub>2</sub> emissions of 19%. In addition, a software tool was developed for sensitivity analyses or the extrapolation of scenarios for additional raw materials. Another result of the project saw Kelly Klawer, a recent graduate of Eindhoven Technical University, win the Dow Chemical Master Thesis Award for her thesis entitled 'New business model for horizontal supply chain collaboration in the commodity industry'.

## 4C4D

**As part of the 4C4D project supported by TKI Dinalog scientific research was carried out into city-center distribution by Delft Technical University, Eindhoven Technical University and the University of Tilburg. However, the project also covered the application of this research by leading companies such as Ahold, TransMission, Jan de Rijke, Lekkerland, Binnenstadservice and Green City Distribution. Technology organizations TNO and ORTEC ensured that the knowledge gained was put to the best possible use.**

### Background

The project was prompted by the need to increase the possible options for transport within cities while reducing emissions, congestion and noise pollution. Bundling goods flows by sharing cargo space and combining planning and routes offers the greatest potential. However, despite the efforts undertaken over a number of years to make the most of the possibilities in this area, achieving these goals remains a recurring problem. For this reason the first step involved drawing up a position paper in which the lessons from the past are clearly set out.

### Solutions

Various perspectives have been taken to try to find potential solutions. A retailer can ensure that goods are bundled by ordering more smartly, for example. Smart optimization software being developed within the project is making it easier for transport companies working within partnerships to make the right choices when it comes to exchanging and bundling loads.

The business models that have been developed are resulting in a number of concrete follow-up steps and business cases that are already being put into practice. In some situations involving a neutral controller as part of a horizontal partnership appears to be a more promising solution. The traditional business case in which goods are supplied to city-center stores can be strengthened by adding deliveries to catering outlets, for example.

### Cooperation

The key point with all the solutions and business cases is that parties cannot do it alone. A large number of stakeholders are involved, all of whom are playing an active role. Cooperation is crucial and for this you also need a regulatory framework. At present this is extremely fragmented, which is hampering the development of business cases.

# SERVICE LOGISTICS

## What is Service Logistics?

In the field of logistics, the maintenance phase of a product, e.g. the supply of spare parts, plays an important role. Service Logistics is all about controlling the logistics involved from the moment the after-sales service for a product begins through to the end of its lifecycle. It covers all logistics activities required to ensure that equipment, machines and systems function optimally throughout their lifecycle, up to and including recycling. Service Logistics focuses primarily on linking information flows to goods flows, but during the later stage of the lifecycle of goods. As Service Logistics is characterized by the just-in-case principle and involves smaller transport volumes and low stock turnover, it requires specialist knowledge and the application of specific logistics solutions in the areas of control and ICT.

### Aim

The Service Logistics action has the following aims for 2020:

- To create 8 Service Logistics control towers;
- To reduce the total cost of ownership of projects by 15% through service logistics.

### Results

The results achieved within the Service Logistics action include the following:

- Development of a statistical model to validate and pre-process data (including measurements of pressure, vibrations, external temperature, wind speed and power output);
- Development of monitoring and diagnosis models for the maintenance of wind turbines to limit unexpected downtime.

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Service Logistics is all about controlling the logistics involved from the moment the after-sales service for a product begins through to the end of its lifecycle.

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## Minor in service logistics launched at Rotterdam University of Applied Sciences

**The fact that the themes on which the Top Sector Logistics is focusing have become embedded in (higher) education is apparent from developments including the new HBO (higher professional education) minor launched at Rotterdam Mainport University, the engineering institute of Rotterdam University of Applied Sciences. This is the first time that a university of applied sciences has offered an HBO minor on the subject of service logistics. Thirteen students started the Service Logistics minor, which is taught in English, in September 2015.**

### Modules

The minor consists of three modules that involve a mix of technology and economics. Subjects such as service strategy, service chains, systems engineering, spare parts management and 'the human factor' form the core elements of the course. There are then two practical components in which students work together in project groups: maintenance/asset management and total cost of ownership. A research project on service excellence forms the third practical component. This involves working on two tasks originating from the business community and takes up an entire semester. This last project is also supported

by the Service Logistics Forum (SLF), which has made its network available for this purpose, including at the SLF Summit held on November 5th, 2015.

### Cooperation between Dinalog and SLF

Rotterdam Mainport University (RMU) has spent two years preparing for the course. Current knowledge requirements, the competences needed and the latest trends and developments have been coordinated with external parties. To this end the university has talked to stakeholders such as the SLF, Deltalinqs, Dinalog, the Rotterdam Port Authority and representatives of industry (process industry, transshipment, tank storage, maintenance, fleet management and services). The minor modules have been developed with financial support from TKI Logistiek. Partner universities have helped to raise awareness of this minor amongst HBO students via the National Logistics Platform and the Logistics Knowledge Distribution Centers. Over the past couple of years interested lecturers have been able to sign up for the Service Logistics Master Class provided by Dinalog and the Universities of Tilburg and Eindhoven.

### Research into service logistics

RMU's Logistics Engineering course can be regarded as the cradle of service logistics at HBO level. The subject is embedded across the whole curriculum. First-year students can therefore choose to follow an optional service logistics module, third-year students have been offered an English-language service logistics module since 2014 and the minor has now been added to this package. The RDM Knowledge Center of Rotterdam University of Applied Sciences is also conducting research into service logistics and HBO students are graduating in Rotterdam in subjects related to service logistics. Source: [www.logistiek.nl](http://www.logistiek.nl)

## CAMPI R&D project

**In the process industry complex installations are operating 24/7, which makes it difficult to determine the ideal moment to carry out maintenance. Many companies perform preventive maintenance, whether this is needed or not. However, the sector needs more condition-based maintenance to avoid maintenance being carried out too early or too late. Within the Top Sector's CAMPI project, Oliveira is researching the possibilities of employing Condition-Based Maintenance (CBM) for wind turbines, alongside corrective and periodic maintenance measures. Oliveira specializes in lubrication and condition-based maintenance of installations and supports customers in more than 10 countries in the industrial, maritime and water sectors. Thanks to its proactive approach, Oliveira is able to keep machines in optimum working order.**

### Problems with data collection

A characteristic of condition-based maintenance are the many different purposes for which data are used. To predict faults, information on known failure mechanisms has to be combined with information on the existing condition of machines. Twan Kohlen from Oliveira: "In the process industry hardly any maintenance-related data are recorded, even though such data are crucial for identifying problems. Data on the performance of machines are often available, but are rarely used for maintenance purposes." The lack of data hampers the development of models that can be used to predict when maintenance

is required. "Companies should exchange more information with each other so the data that becomes available can be used more effectively in the maintenance process."

### Smart calculation models

In partnership with Oliveira various smart calculation models have been developed for monitoring, fault detection and diagnosis in the area of wind turbines. The idea behind these models is to create variable threshold values (or alarm values) in which a number of indicators are combined, for example on the basis of statistical process control. Twan Kohlen: "The temperature of the turbine is combined, for example, with the wind speed and a number of other environmental factors. Abnormalities that we were previously unaware of therefore become visible." The models process data from sensors on various components, output from various components and data from similar machines. "That means the maintenance process is no longer dependent on the chance observation of defects. What's more, the concepts and implementation procedures for the models can be extended to other areas of the process industry."

**"There is a need for more condition-based maintenance right across the sector"**

## Greater awareness of the importance of Service Logistics

In recent years awareness of the importance of Service Logistics has spread across a number of different sectors. In addition to the high-tech sector (ProSeLo), research projects are also being carried out involving the process industry (CAMPI), (wind-) energy sector (Sustainable service logistics for offshore wind farms), defense industry (Shared Business Intelligence Cell LMI) and public transport sector (with a particular focus on the railways). A brief explanation of two projects, ProSeLoNext and MaSelMa, is provided below.

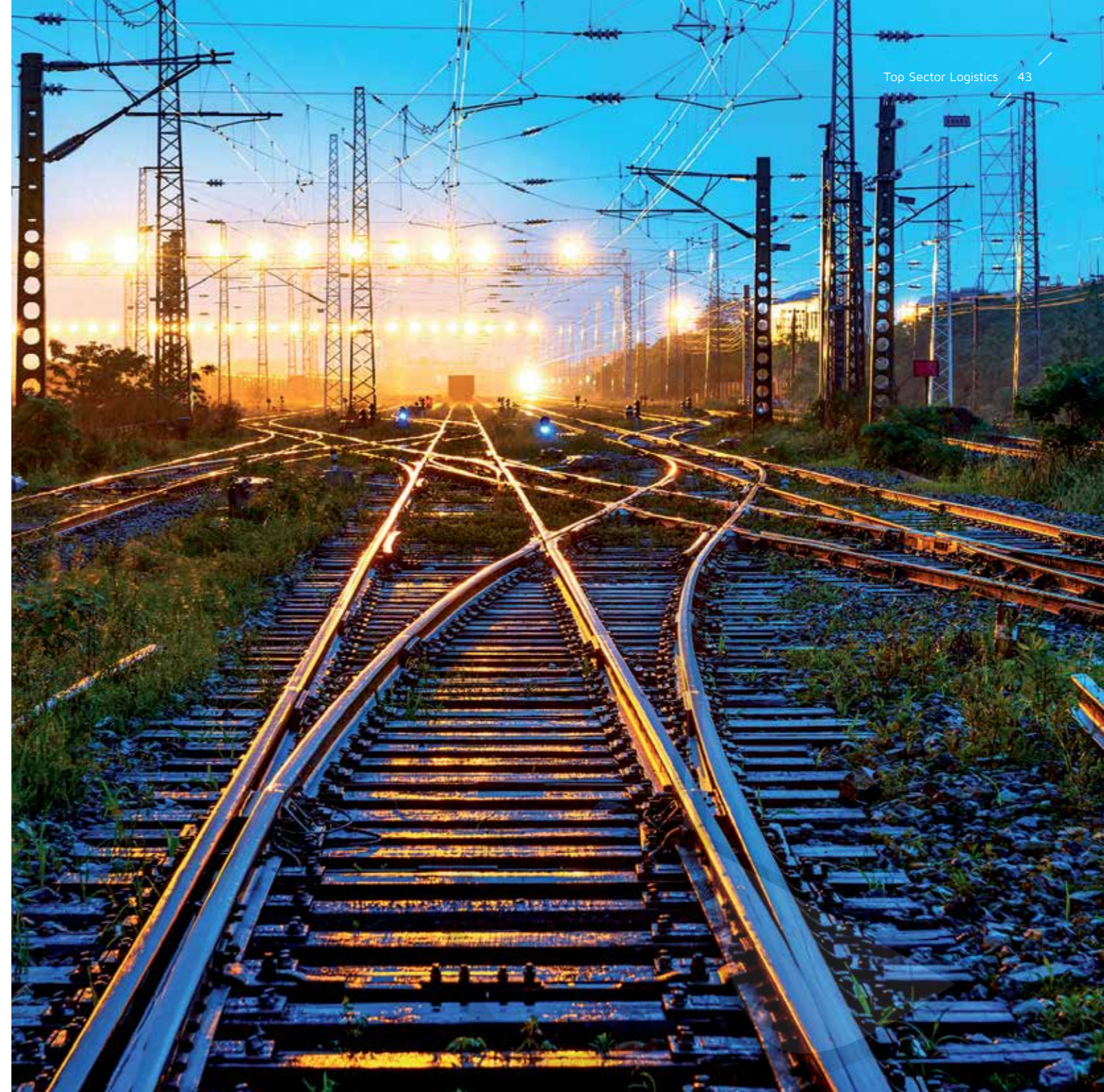
### ProSeLoNext

The ProSeLo (Proactive Service Logistics) research project was successfully completed in 2015 and is being continued in 2016 in the form of ProSeLoNext, within which the next steps are being taken. The consortium, comprising Eindhoven Technical University, the University of Tilburg, Erasmus University Rotterdam, the University of Twente, ASML, Fokker Services, IBM, Marel Stork, Océ, Thales Nederland, Vanderlande, Gordian Logistic Experts and the Service Logistics Forum, is largely unchanged. Within this project the research is focusing on (1) predictive maintenance and service logistics: the models developed within the ProSeLo project are being applied in two pilots, (2) service business models: research into how the interests of both OEMs and service providers can be brought

into line, (3) service control towers: coordinated management requires service control towers, which focus on operational decision-making within a dynamic market.

### MaSelMa

In 2015, within the MaSelMa (Maintenance and Service Logistics for Maritime Assets) project, Bram Westerweel won both the WCM Maintenance Award and the SLF Thesis Award with his master's thesis 'A Total Cost of Ownership analysis based on a physical degradation model for corrosion of steel vessels'. In the maritime sector service logistics support and system maintenance account for a substantial portion of operating costs, due to the high degree of complexity, high capital value and the highly variable and generally arduous working conditions. Within the MaSelMa project innovative concepts are being developed to improve the predictability of maintenance and service logistics. This predictability is helping to increase the efficiency of maritime products from a service logistics perspective.





# FOREIGN PROMOTION

## What is Foreign Promotion?

If we want to make the Netherlands Europe's leading logistics hub, we need to make our country even more attractive to foreign companies. The Top Sector Logistics has therefore launched an internationalization initiative. The Netherlands' ambition is to retain its leading international position within the logistics industry – not only in the handling of goods flows, but also as a chain manager of (inter)national logistics activities and as a country offering shippers and logistics companies an attractive climate for innovation and business location. To achieve this, the government, knowledge institutions and, above all, the business community are working together to develop targeted logistics propositions for specific sectors and thematic areas. Connection, Research & Strategy, Market & Customer Approach and Communication & PR are the areas on which attention is being focused to ensure effective foreign promotion.

### Aims

The Foreign Promotion action has the following aims:

- To increase the logistics activities carried out in the Netherlands by foreign companies, including new international business originating from the Netherlands, by 'managing' international goods flows that do not necessarily pass through the Netherlands;
- To increase goods flows via the Netherlands;
- To export logistical knowledge and expertise abroad to contribute to the development of logistics in emerging markets and developing countries.

### Results

The results achieved within the Foreign Promotion action include the following:

- Propositions relating to Logistics and Life Sciences & Health, Fashion Logistics and E-commerce;
- Baseline measurement of export value of knowledge and expertise;
- Knowledge mapped out in the areas of 'chain management' and 'supply chain finance';
- The first steps have been taken towards the development of the Holland Logistics Library (expected to be completed in April 2016);
- Improved coordination and cooperation between parties in relation to incoming and outgoing missions;
- Appointment of secretary/coordinator for Foreign Promotion Board.

## Cooperation between South Africa and the Netherlands in the area of asset and spare parts management

**The aim of foreign promotion is to create more added value for Dutch businesses by marketing innovative knowledge and expertise outside our borders. Through the Top Sector Logistics' Service Logistics action a great deal of experience has been acquired in relation to innovative concepts, especially in the high-tech industry. A control tower has also been developed for spare parts management. This is generating additional added value in the Netherlands, as we can act as an 'enabler' of international trade in spare parts and service logistics services.**

Within the Foreign Promotion action an international service logistics proposition has been developed that incorporates information on service logistics, the backgrounds, supply chain challenges and the expertise available in the Netherlands. This proposition also includes starting points for

capitalizing on concrete opportunities in the areas of spare parts control towers, maintenance logistics and reversed logistics solutions, together with sample cases.

It has been used as a basis for initiatives including a survey of the South African market, which identified sufficient potential for developing the market for spare parts control towers. In November two business-meets-science seminars were held in Cape Town and Johannesburg. Steps were also taken to create a link with the Netherlands' trade mission.

This was one of the factors that resulted in the signing of an MoU between Gordian Logistics Experts and South African company Pragma, in the presence of Prime Minister Rutte. This partnership should create business, jobs and innovative solutions in South Africa, the Netherlands and beyond. It combines knowledge of innovative service logistics and sustainable asset management. Nowadays, technological systems and machines, such as electricity grids and mining and factory machinery, are essential to meet the basic needs of people and businesses. Optimized asset management and a spare parts system are an important component here. Besides setting up business activities, the partnership also covers the joint development of software, methodologies and training courses, as well as the organization of further business-meets-science seminars on spare parts management in Africa, for example.

## Study trip to Munich

**At the request of the Foreign Promotion Board, in May 2015 Connekt and TLN organized a study trip to Munich for the Top Sector Logistics. The public-private delegation was headed by Siebe Riedstra, secretary-general of the Ministry of Infrastructure and the Environment. This trip was organized around the Transport Logistic trade fair.**

The trip began on Monday, May 4th, with a visit to the headquarters of BMW, where the delegation was received by Glenn Schmidt, Head of Political and External Relations, Communication and Sustainability. He and his team gave a number of presentations on BMW's strategy, focusing in particular on sustainability, purchasing strategy and sustainable transport and logistics. The second part of the visit involved a tour of the BMW factory. Following this the delegation traveled to MAN Truck & Bus for a tour and round table discussion, the theme of which was 'future developments and innovations in transport'. Ben Kraaijenhagen, VP, Head of Group Division Product Strategy and Requirements of MAN Truck & Bus, gave a presentation that prompted excellent discussions on issues such as platooning and automated driving. The day was brought to a close with a network dinner at the residence of the Consul General, Peter Vermeij. During the dinner the delegation had the opportunity to get to know a number of parties from the German public and private sector.

Tuesday, May 5th, began with a round table discussion on the theme 'Innovation in integrated hinterland networks'. This was organized by Dinalog and EffizienzCluster LogistikRuhr. Following a warm welcome from Siebe Riedstra, secretary-general of the Ministry for Infrastructure and the Environment, Albert Veenstra kicked off the discussion. The scientific director of TKI Dinalog focused on the Netherlands' approach to innovation in logistics. He provided examples of successful public-private partnerships in the area of innovation and enthused his audience with statements about more efficient cross-border logistics. "Connectivity is crucial", he said.

Rob Bagchus, Chief Public Affairs & Public Relations Officer of ECT, gave a presentation on the successful implementation of European Gateway Services. These involve taking a synchromodal approach to facilitate transport of the increasing container volumes at ECT's terminal in Rotterdam to the European hinterland. Rob Bagchus: "We need to view the entire hinterland in a different way." Vincent Kobesen, CEO of PTV Group, also explained that the worlds of personal mobility and goods transport are converging as a result of the shift towards real-time information. We use the same infrastructure, after all. His colleague Matthias Hormuth, Solutions Director, gave a presentation on practical logistical ICT solutions that can help make intermodal, integrated hinterland networks a reality.

Wando Boevé, a member of the Logistics Top Team, summarized the discussion neatly: "The first step we can take together is to look at logistics in a different way. We need to start with a shift in our mindset. This involves taking a triple helix perspective



– where businesses, knowledge institutions and the government work together – to look beyond traditional solutions, and then implementing innovative solutions together, in public-private partnerships. We would be pleased to take this first step with our German partners. After all, for the Netherlands the hinterland starts with Germany.”

A second study trip for the Top Sector Logistics will be organized in May 2016. This time the trip will be to the ITF Summit in Leipzig.

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“We would be pleased to take this first step with our German partners. After all, for the Netherlands the hinterland starts with Germany.”

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## Dutch/Flemish economic mission to Atlanta

**A successful Dutch/Flemish economic mission to Atlanta took place from October 5th to 7th, 2015. This was headed by Dutch Prime Minister Mark Rutte and Minister-President of Flanders Geert Bourgeois and 85 Dutch and Flemish companies took part. The visit focused on the economy and the theme of the mission was cybersecurity, financial technology and logistics (smart logistics).**

### Raising the profile of the Netherlands and Flanders

The aim of the visit was to raise the profile within the US of the Netherlands and Flanders as an economic region (Gateway to Europe) and to put this region more firmly on the map as a partner for bilateral trade and an investment location. As the visit centered around the economy, Prime Minister Rutte and Minister-President Bourgeois also met a number of holders of political office during the program. Various seminars were organized for the delegation from the Dutch/Flemish business community. The companies were informed about how to do business in Atlanta. Local Dutch and Flemish entrepreneurs shared their experiences and offered tips on doing business in Atlanta. In addition to panel discussions and break-out sessions, a number of company visits were

planned and the companies had the chance to network with each other and establish links with American parties.

### Top Sector approach

On October 7th a lunch was held for key investors in the Netherlands and Flanders, which was organized by the NFIA and Flanders Investment & Trade. During this lunch the two premiers addressed the guests. The keynote speech was given by Arthur van Dijk, head of the logistics delegation. With reference to the Top Sector approach, he underlined the excellence of the Dutch/Flemish delta and called on investors to think about how the economy can be made more sustainable. Prime Minister Rutte and Arthur van Dijk also gave a number of media interviews in which they talked specifically about the strength of the Dutch/Flemish Logistics Delta.

### MoUs and Lols signed

During the visit to Atlanta 7 MoUs/Lols were signed between Dutch/Flemish and US parties. These are estimated to be worth in the region of 3 million euros. A number of companies have since held follow-up talks with their US counterparts with a view to further developing and consolidating their relationships. The economic mission and the strength of the Dutch/Flemish Delta were covered in reports in various media. Talks will be organized to work out the details of the mission's follow-up activities in relation to the companies concerned and the region in a broader context.

# SIMPLIFICATION OF LAWS AND REGULATIONS

## What is Simplification of Laws and Regulations?

The Top Sector Logistics is keen to simplify and coordinate the complex laws and regulations that apply in the logistics industry. Current laws and regulations are an obstacle to planned innovations in logistics and detrimental to the investment climate in the Netherlands.

### Customized Approach to the Regulatory Burden in Logistics: Action Plan

Within the Customized Approach to the Regulatory Burden in Logistics (Maatwerk Aanpak Regeldruk Logistiek) departments and inspection services, the shippers' organization EVO, TLN and other industry organizations are working together to improve regulations and ensure that laws and regulations are implemented more smartly. Fifty issues have been identified on the basis of Actal's advisory report, the EVO Top Ten 2013 and regulatory problems highlighted by Air Cargo Netherlands (ACN) and the Royal Association of Dutch Shipowners (KVNR). It has been concluded that 22 of these 50 issues can be tackled within two years by means of targeted initiatives. These make up the Action Plan for the Customized Approach to the Regulatory Burden in Logistics. The initiatives are being taken in addition to the routine approach

to other issues that has already been set in motion. The other 28 issues are already being addressed in existing consultations between the government and industry or can only be resolved over the medium to long term.

The Action Plan for the Customized Approach to the Regulatory Burden in Logistics was completed in January 2015 and presented to the Dutch Parliament by the Minister of Infrastructure and the Environment, also on behalf of the Ministry of Economic Affairs.

### Aims

The Simplification of Laws and Regulations action has the following aims:

- To ensure laws and regulations are appropriate to the current situation;
- To prevent laws and regulations that restrict the development of innovative logistic service concepts (including Synchromodal Transport and the NLIP);
- To set up a contact point for reporting issues in laws and regulations that impair sustainable growth and innovation, including ensuring that the restrictive laws and regulations are addressed with the responsible government body or bodies, such as the Regulatory Burden Steering Group and supervisory bodies, but also regional or local authorities;
- To achieve an appreciable reduction in the regulatory burden by resolving 50 issues over the 2015-2020 period.

### Results

The results achieved within the Simplification of Laws and Regulations action include the following:

- Since last year the customs authority has been

using tablets, which makes it possible to check goods more quickly. During an inspection the customs officers also send photos of goods, resulting in a smoother verification process. As a result, goods are released more quickly. According to interest groups, this is generating significant time savings for companies;

- Fewer unnecessary fines resulting from expiry of the Eurovignette: the efforts of industry organizations and the information campaigns they have organized have had a positive impact;
- The rates for tachograph cards (driver cards, company cards and workshop cards) issued by Kiwa Register were reduced by one euro with effect from January 1st, 2015. Within the Customized Approach the possibility of setting the rates at a level that covers costs is being examined. This is an initial step towards that aim;
- Extension of delivery time windows: in the municipality of Amsterdam a trial involving the extension of generic delivery time windows resulted in a decision to make this permanent. As a result, businesses face fewer local restrictions when it comes to supplying goods to retailers. The trial may also be rolled out in other municipalities;
- To support companies in complying with regulations in the area of hazardous substances, Beurtvaartadres has developed an app, in close cooperation with EVO and TLN, that makes information on hazardous substances available in a user-friendly way. Within the Customized Approach efforts are also being made to provide an insight into procedures and conditions linked to legislation on hazardous substances;
- Discussions on the issue of harmonizing volume measurement tolerances for bulk goods have

removed uncertainty and made clear that the approach works to the satisfaction of the business community. This issue has therefore been dealt with. Another issue identified by businesses was the introduction of the fiscal penalty order. They believed this would have an adverse impact on the AEO certificate. However, this proved not to be the case. Consequently, this issue has also been resolved;

- Insufficient information on laws relating to crews was another issue highlighted by the business community. The creation of a consultation structure by the Environment and Transport Inspectorate and cooperation with the Ministry of Infrastructure and the Environment should promote this flow of information;
- The granting of tax and social insurance numbers to seafarers from Estonia and Latvia was also raised as an issue. This matter was looked into and it became clear that there was a misunderstanding here. Following the entry into force of the Basic Registration of Persons Act in 2014 it is also possible to issue a citizen service number (formerly tax and social insurance number) to seafarers from countries such as Estonia and Latvia.

## Regulatory burden further reduced

**Over the past six months the regulatory burden has been reduced even further. The easing of the burden that has now been achieved equates to a sum of 1.35 billion euros, an improvement of almost 500 million euros compared with the situation six months ago, according to a letter sent to the Dutch Parliament by Ministers Henk Kamp (Economic Affairs), Ronald Plasterk (Interior and Kingdom Relations) and Stef Blok (Housing and the Civil Service) in June 2015.**

One example of new plans that will bring about a reduction in the regulatory burden is the digital consignment note. Freight carriers no longer need to complete various paper consignment notes, as all these versions are being replaced by a single digital consignment note. This will result in a saving of 100 million euros for freight carriers.

Another example is the parking app, which citizens and businesses can use to find a parking space more quickly and more easily. Opening up the national parking register (NPR) means that businesses can use a national database of parking data free of charge to develop parking apps. Making these data available will deliver a total reduction in the regulatory burden amounting to 98 million euros.

The cabinet is on track to achieve the 2.5 billion euro reduction in the regulatory burden that it is targeting in this term. Regulations equating to

total savings of 2.37 billion euros have now been identified, an increase of 17 million euros compared with the report one year ago. The regulatory burden is being eased by scrapping unnecessary rules and increasing flexibility in the area of legal obligations. This will save citizens and businesses time and money. In this way easing the regulatory burden will contribute to economic growth.

# Smarter logistics thanks to Customized Approach to the Regulatory Burden in Logistics

**In 2011, in the Roadmap to the Top, the Top Sector Logistics stated that the regulatory burden had to be brought under control. Ministers Melanie Schultz van Haegen and Henk Kamp also commissioned an Actal study into the regulatory burden within the Top Sector Logistics.**

One of the points to emerge from this report is that the logistics sector is faced with an unnecessarily onerous regulatory burden. In its advisory report 'Regels in bedrijf: sectorscan logistiek' ['Regulation in industry: logistics sector scan'] Actal revealed that the regulatory burden has three main causes. Within legislation there is a rigid focus on the mode of transport, which restricts the freedom of businesses to switch to a more efficient mode. Furthermore, regulations have become extremely complex. As a result, businesses often no longer understand the rules and can no longer comply with them. Actal's report also states that the quality of supervision is frequently inadequate due to a fragmented approach. Brigit Gijsbers, Chair of the Customized Approach to the Regulatory Burden in Logistics steering group

and Director of Maritime Affairs at the Ministry of Infrastructure and the Environment: "There were therefore a number of reasons to examine how we could improve the way laws and regulations are organized. I sat down with Arthur van Dijk, the initiator of the Simplification of Laws and Regulations action within the Logistics Top Team, to examine whether a joint approach could be taken in this area. We opted for an approach that involves the business community and public authorities working together. Working in partnership with industry in this way helps us get to the heart of the problem. You also gain an insight into the form that a good solution that contributes to smarter logistics might take. Working together with so many parties is not always easy, but it helps you come up with the right solution."

## Risk-based inspections

The Simplification of Laws and Regulations action focuses on organizing inspections in a smarter way to reduce the inconvenience experienced by parties in the logistics chain. The ambition is to move towards risk-based inspections, where inspections are only carried out if an elevated risk is considered to apply. "Ultimately this means that businesses and carriers that have their affairs in order are inconvenienced less by inspections," explains Brigit Gijsbers. "We are also focusing on changes to legislation. This can sometimes take time, as a good deal of legislation originates from Europe or is even based on global treaties. However, the international nature of logistics in the Netherlands means that legislation also has to be organized on an international level."

## Customized Approach to the Regulatory Burden in Logistics

Brigit Gijsbers: "To date we have concentrated on identifying all the issues linked to the regulatory

burden. Fifty issues have been identified on the basis of Actal's advisory report, the EVO Top Ten 2013 and regulatory problems highlighted by Air Cargo Netherlands (ACN) and the Royal Association of Dutch Shipowners (KVRN)." Based on these issues, three lists have been drawn up within the framework of the Customized Approach to the Regulatory Burden in Logistics. The A list contains points that can be resolved within two years. The B list indicates, amongst other things, where the issues lie for the customs authority and business community, as well as in the area of automation projects such as the Neutral Logistics Information Platform (NLIP) and single window trade and transport. The third list, the C list, is made up of longer-term projects, such as amending international treaties and international legislation. "Of the 50 issues identified, 22 are on the A list – issues that can be resolved within two years. An action plan has been drawn up in relation to these and over the next two years concrete results will be achieved. For each issue a clear indication is given of who is responsible, who is involved and when the process should be completed. Clusters have been formed and a cluster manager has been appointed with this aim in mind. This manager may be a member of the business community or someone within the government department. A steering group has also been set up to make sure that projects are completed on time," says Brigit Gijsbers.

## Digital consignment notes

One project that has already been completed in the Netherlands is the digitization of consignment notes. Brigit Gijsbers: "We have now also put the digitization of consignment notes on the agenda at Benelux and EU level and at the United Nations in Geneva. However, a number of other steps have also been taken. For example, there is now greater coordination between

supervisors in Rotterdam. The Environment and Transport Inspectorate is concluding agreements with parties (taxi firms, large transport companies, etc.) who have demonstrated that they have their affairs in order. In some cases it is not just the legislation that needs to be amended, but also the way it is implemented and enforced, as well as the monitoring carried out on the basis of this legislation, to reduce the inconvenience caused to logistics processes and companies."

## Contact point for the Hazardous Substances Act

A contact point was recently set up to which questions relating to the Hazardous Substances Act can be addressed. This Act contains highly complex legislation and specific rules apply depending on the substance you are working with. An app has also been developed where people can find information on legislation in the area of hazardous substances. The purpose of these services is to make it easier for people to access the legislation and simplify the process of checking which requirements apply.

## Action Plan for the Customized Approach to the Regulatory Burden in Logistics discussed in the Dutch Parliament

The Action Plan for the Customized Approach to the Regulatory Burden in Logistics was presented to the Dutch Parliament by the Ministry of Infrastructure and the Environment and the Ministry of Economic Affairs in January 2015. Parliament welcomed the action plan and subsequently asked a number of questions, which are currently being answered by the departments concerned. A letter outlining the progress made will be sent to Parliament in the spring of 2016. This will indicate the state of affairs and explain how the actions on the B and C lists are being dealt with.

# HUMAN CAPITAL AGENDA

## What is the Human Capital Agenda?

The Human Capital Agenda focuses on the human 'capital' within the logistics sector. A sufficient supply of logistics professionals is an important condition that has to be met if the Top Sector Logistics is to realize its ambitions. The Human Capital Agenda (HCA) was drawn up for this reason and is based on three pillars:

- Promoting an influx of students onto logistics training courses;
- Optimizing the interaction between education and industry;
- Keeping workers within the logistics sector through social innovation.

As part of the Human Capital Agenda action six Knowledge Distribution Centers (KDCs) have been set up. A university of applied sciences plays a pivotal role at the heart of each KDC. This university acts as a contact for companies in the region and shares the knowledge acquired in the region with the other KDCs. The KDCs are directed at national level by Amsterdam University of Applied Sciences.

Download the white paper 'Wie het weet mag het zeggen' here:



The main benefit of the KDC structure is that knowledge can be shared easily, between universities of applied sciences, but also with the business community. This is because each KDC is surrounded by a network of parties, such as

hospitals with logistics activities, logistics services providers and the customs authority. The result is a large logistics network that can put questions to the KDCs, but can also provide input for the education sector in the region.

Within the KDCs the Top Sector Logistics' action agenda has been integrated effectively into education by incorporating the themes into the courses on offer at universities of applied sciences. Each university of applied sciences has selected a maximum of three profile themes that tie in with the Top Sector and the institution's own area of focus (as it has a lecturer available to teach the subject, for example).

### Aims

The Human Capital Agenda action has the following aims for 2020:

- To tackle the quantitative and qualitative challenges facing the sector;
- To promote a strong knowledge infrastructure with greater knowledge sharing;
- To achieve a 50% increase in the number of professionals with sound knowledge of innovation-related themes who enter the logistics sector upon completing their studies.

### Results

The results achieved within the Human Capital Agenda action include the following:

- A working group of the Logistics Human Capital Table has examined the theme of social innovation and drawn up a plan to promote social innovation in the field of logistics. On the basis of this plan the ManpowerGroup has published the white paper 'Wie het weet mag het zeggen' ['If you know it, say it'], in consultation with the Top Sector Logistics;

- At the end of November 2015 the first master class for senior secondary professional education ('MBO') teachers was launched. The aim of this project is to organize master classes to offer logistics teachers from regional training centers participating in the MBO knowledge agreement up-to-date knowledge and an insight into logistics and logistical developments and in this way to make them aware of the Top Sector Logistics' innovative themes;
- The 'vLm [Logistics Management Association] classification system and register' project has been launched. The purpose of this project is to develop an effective label for classifying logistics professionals based on their knowledge, experience and skills. This will benefit logistics professionals by helping them to set themselves apart and will simplify the recruitment and selection process for companies;
- The human capital coordinators of all 9 top sectors are working together closely with the aim of combining strengths in the area of human capital. This has resulted in the development of a joint Human Capital Roadmap 2016-2020;
- Excellence in education: the 9<sup>th</sup> edition of Top Coaches for Top Talent has been launched;
- From February 1st, 2016 the Logistics Knowledge Distribution Center will have a completely new portal. Take a look at [www.KennisDCLogistiek.nl](http://www.KennisDCLogistiek.nl) and see the knowledge grow!

## Companies in Gelderland now also benefiting from INNVAL

**In the logistics sector competition is fierce. For a business to be and remain profitable it is vital that it creates relevant added value. Ongoing innovation is therefore the watchword. This is an area in which many SMEs are letting opportunities pass them by. Logistics services providers and transport companies in the province of Gelderland can now benefit from the support of the Gelderland Logistics Knowledge Distribution Center as part of the Innovation Value Added Logistics (INNVAL) project.**

"With the INNVAL project the Gelderland Logistics Knowledge DC is aiming to increase the added value within the chain, strengthen companies' organizational capacity and encourage companies to work together in clusters," explains Folkert Tuininga, INNVAL project manager at the Knowledge DC. "The intention is to enable companies from the lower levels of TNO's 'Logistics Sector House' to move to the top levels and carry out more complex services offering greater added value."

Folkert Tuininga believes that companies that have been developing innovative services since INNVAL was launched in 2008 are increasingly able to take on management functions too. To further encourage and support them in this area, INNVAL is focusing on 'chain management'.

The aim of the INNVAL project is to help logistics services providers in Gelderland, whether or not they are organized in the form of clusters, to carry out value-adding activities within intercontinental flows of goods from seaports and/or airports to the European hinterland via Gelderland. This project is being supported by the province of Gelderland.

### Concrete activities within the framework of INNVAL

As part of the project the Gelderland Logistics Knowledge DC is undertaking three concrete activities with companies:

- Identifying the 'Motives of the Entrepreneur' and the 'Product-Market Combination';
- Determining the company's positioning with the help of the 'INNVAL Positioning Tool';
- Drawing up an 'Innovation Action Plan'.

Companies are also being supported with the implementation of this 'Innovation Action Plan'. This support in particular is crucial to bring about an actual increase in a company's organizational capacity. However, it is also important to increase added value.

Folkert Tuininga says that the Gelderland Logistics Knowledge DC can also organize INNVAL knowledge groups for interested companies. Activities and issues that could be covered in these sessions include:

- Company visits, presentations and lectures;
- Study days;
- Creative marketplace: the link between the logistics sector and the creative industry.

## 'Entrepreneurship in logistics' workshop

**On Tuesday, December 15th, Mieke Damen and Yolande de Heus from the Human Capital Agenda action held a workshop on entrepreneurship in logistics at the 't Atrium secondary school in Amersfoort. This workshop gave students a better idea of what is involved in setting up a logistics company.**

Following a short introduction from teachers at the school, the workshop started by explaining the top sector policy and the ambitions of the Top Sector Logistics to two classes, one at higher general secondary education and one at pre-university education level. A film was shown to give the students an insight into the logistics operations at a Mars factory. Vince van Coolwijk, a lecturer from Amsterdam University of Applied Sciences, then talked about logistics training courses, together with two fourth-year students of Logistics Engineering. The positive experiences that the fourth-year students gained from work placements and projects were also discussed, as were the points that they think make the course interesting.

After this, Jan den Dekker from Greenway Logistics and Lotte Harmsen and Paul Krijger from Simacan transported the students into the world of these two successful and enterprising start-ups. Simacan's live demonstration showing the location of the

1,000 or so trucks and what time they will arrive to supply the 4,000 Albert Heijn stores was particularly interesting for students who have a part-time job with the supermarket chain. This gave the students a greater insight into the different aspects involved in setting up a successful company and the challenges you face as an entrepreneur.

The students were then divided into groups of four and set about brainstorming ideas and developing a new product or service. They were assisted by the workshop contributors, who went round from group to group and acted as advisors. At the end of the workshop each group presented its product in a five-minute pitch. Simacan's activities proved to be a source of inspiration and the technology developed was taken as a basis for new kinds of apps. The ideas that emerged included a Mac Service, an electric ship and a coffee machine for students.

This workshop fits in with the priority area 'Promoting the Sector's Image and the Influx of New Talent', which is being worked on by the Logistics Human Capital Table. As it proved to be such a resounding success, it is likely that another workshop will be organized in 2016.



# SUPPLY CHAIN FINANCE

## What is Supply Chain Finance?

Logistics is not only about controlling goods flows. It also involves financial flows. When companies purchase goods from all over the world, they not only need to ensure that they physically arrive, but also that the financial side of the transaction is handled effectively. Under the Supply Chain Finance (SCF) theme the Top Sector Logistics is aiming to optimize the financial processes between companies. Supply Chain Finance relates to the optimization of financial flows between companies and also to the integration of financial processes between customers, suppliers and logistics and financial services providers.

As a product passes along the logistics chain, value is added to it bit by bit. Financial compensation for this added value is provided at each stage of the process, namely when the next link in the chain pays for the product. In some cases suppliers have to wait months to receive payment. In the Netherlands around twenty billion euros of working capital is tied up in total due to unpaid invoices. This is where Supply Chain Finance can help, for example by increasing cooperation within the chain.

The credit crisis and natural disasters, amongst other things, have increased awareness of how vulnerable the flow of goods is. More and more companies now realize that this flow of goods cannot be taken for granted and that the risk of this flow stopping is often linked to financial factors. If a

company's cash flow is too low, there is a risk that it will no longer be able to manufacture or buy goods. Financial obstacles therefore restrict the physical supply of goods. Through SCF efforts are being made to find solutions to increase stability within the chain.

### Aims

The Supply Chain Finance action has the following aims:

- To ensure that 50% of the 1,000 biggest customers are actively involved in SCF;
- To ensure that 50% of all SMEs in the Netherlands have access to SCF;
- To help the Netherlands acquire an international reputation as the knowledge center in the area of SCF;
- To create new SCF companies and start-ups and add a billion euros to our gross domestic product.

### Results

The results achieved within the Supply Chain Finance action include the following:

- Various SCF solutions have been developed to make smaller-scale financing for SMEs possible;
- The final of the Global Student Challenge 2014 was held at Windesheim University of Applied Sciences in Zwolle in April 2015. The winners of the Challenge were the Bottleneckbreakers from the Indian Institute of Management Bangalore. A new Challenge was launched in 2015;
- A highly successful SCF forum was held in Amsterdam with 200 international participants and a range of foreign speakers.



## Innovative Supply Chain Finance to support SMEs

**NBK Group, together with one of its customers, Branda, a global wine and spirits wholesaler, has decided to take part in a pilot project to test whether its services could be expanded by offering supply chain finance to its customers. The SMILE project is an initiative of Dinalog and Fluas and has been set up to provide hassle free support to SMEs in the area of logistical innovation.**

NBK Group offers a broad range of logistics services to its customers, including forwarding, warehousing, air and sea freight, road transport and value-added logistics. Understanding the customer's actual needs and fostering innovation is paramount here. This focus, combined with a healthy balance sheet, has resulted in the development of a highly innovative supply chain finance concept.

### Small-scale inventory financing

In itself inventory financing is quite common. It is estimated that around 5% of all global trade is financed this way. The aim of the pilot project was to see whether it was possible to integrate inventory finance with the normal operational processes.

The outcomes of this project would provide valuable input for further extending the financial services offerings to NBK's customers.

"The trade in excise goods is becoming increasingly volatile", explains Julius Ledas, Branda's owner.

"Sharp exchange rate fluctuations and bear and bull markets that are following each other in ever quicker succession are resulting in smaller shipments with a greater variety of products. That means you not only need liquidity to invest in the range of products you hold, but also to be able to capitalize on opportunities that arise in these kinds of markets. We see inventory financing as one of the tools that can help generate further growth. That's why we are participating in the pilot."

Aljosja Beije, co-founder of BeSCOPE Solutions:

"Supply Chain Finance is a balancing act between the financial, information and physical flows within the supply chain. For a long time too little attention was paid to financial flows. The 2008-2009 crisis changed that significantly, however, prompting the development of Supply Chain Finance as a separate discipline. One development is following another at a rapid pace, to the point that there are already different versions of Supply Chain Finance. Supply Chain Finance 1.0, for example, still has a strong focus on reverse factoring, the smart use of differences in the interest rate on borrowed funds within the supply chain. Supply Chain Finance 2.0, on the other hand, focuses on integrating the financial, physical and information flows within the supply chain to fundamentally transform the supply chain and how it is managed."

"Our top-5 customers have been with us for many years and we want that to remain the case", says Bob de Winter Jr. of NBK Group. "Supply Chain Finance can help us to make our partnership with our customers even more sustainable." This is very much a necessity at a time when the trend is towards concluding shorter and shorter contracts and annual tenders. In the view of Bob de Winter Jr. these are not positive developments: "A focus on the short term leads to mistrust and opportunism in the chain and ultimately only creates losers. It is therefore all about cooperation, not only between the service provider and customer, but also with banks."

### Results of pilot

The pilot has now gone live and as part of this project a small portion of Branda's stocks are being financed by NBK Group. Particular attention has been paid to the administrative structure, to ensure that all transactions are carefully documented. Aljosja Beije: "Wine and spirits are actually perfect products for inventory financing". They have no best before date and remain marketable. These aspects, combined with Branda's reputation, meant that the measures required to control risks could be integrated relatively easily into the existing processes and systems within NBK Group. The operational impact was therefore minimal, especially as the input of the necessary information, such as the value of the goods and the physical inspection of the goods, forms part of the existing service.

On the other hand, there was a significant impact on administrative processes. "Inventory financing requires us to look at our financial exposure in a different way", explains Stefan Plaisier, CFO of NBK Group. "It is not just days outstanding that are important, but also, for example, the value of the inventory at hand, any changes in their price and our work in progress, in the form of customer orders in various stages of completeness. Combining this information and being able to share it in real time demands a great deal from our processes and systems."

Now the pilot has gone live the most important result is that Branda now has more working capital at its disposal for trading. This is a result that should not be underestimated, according to Dick van Sprundel, International Tax Partner at Mazars Accountants en Belastingadviseurs. Mazars is involved in the SMILE project as a project partner, because of its wealth of fiscal knowledge in the field of Supply Chain Finance. "This is a unique case for the Netherlands and one of the first of its kind in the world. In practice it would be difficult, if not impossible, for Branda to set up this form of inventory financing with a bank at a reasonable cost. Thanks to NBK Group's approach, combined with its retention right, an ingenious and innovative solution has been implemented. In my opinion it is also to be welcomed that a relatively simple administrative structure has been chosen, given that all kinds of fiscal and legal aspects can come into play."

"Inventory financing is by no means a magic formula for all our customers or for every logistics services provider," according to Bob de Winter Jr. "Everything has to come together: the customer's reputation, the type of product, processes, systems and the financial management of the customer and logistics services provider. The SMILE subsidy that supported the management of the project allowed us to make the extra push needed to fine-tune everything. In any case, this pilot has given us confidence to take the next step and develop this concept further."



## Supply Chain Finance Community

**The Supply Chain Finance Community (SCFC) was established in 2012 with support from the Top Sector Logistics and Dinalog. Its aim is to position the Netherlands globally as the leading knowledge network in the area of Supply Chain Finance and to play a coordinating role, nationally and internationally, between companies, the government and knowledge institutions. With the help of the subsidy received last year the SCFC has been able to further strengthen its international leading position. A highly successful SCF forum was held in Amsterdam with 200 international participants and a range of foreign speakers. Van Uden Logistics delivered the keynote speech and explained how it deals with the possibilities available in the area of SCF. This day also marked the start of the betaalme.nu program, an initiative that is being supported by parties including the SCFC. Betaalme.nu brings SMEs and large companies together with the aim of achieving faster payments and making supply chain finance possible.**

### International SCF study

In 2015 an international SCF study was set up together with the knowledge institutions involved in the SCFC. This study is focusing entirely on the logistics services provider and aims to improve the competitive position of logistics services providers and reduce risks and (financial) costs in the chain of which they form part by providing an insight into

the potential for these logistics services providers to offer financial services to partners in the chain. The companies participating in the study are: Van Uden Logistics (NL), Swiss Post (CH), Simon Hegele (GE), Aztek (UK) and Number One Logistics (IT). The participating knowledge institutions are the University of Warwick, Fraunhofer Institute, Politecnico and Windesheim. Windesheim is the project manager and knowledge will be distributed via the SCFC. The students involved from the various countries will spend six months in the Netherlands.

### Global Student Challenge

The SCFC has also launched the Global Student Challenge, an international SCF game that is played between universities in the form of a global competition. In 2016, 2,500 students from 700 universities in 96 different countries are taking part. The 20 best teams will travel to Zwolle for a week for the final and play the game at Windesheim. Every year more students and universities are getting involved in the Challenge. This is an excellent way to make other countries aware of the Netherlands' knowledge and expertise in the area of SCF.

### Supply Chain Finance forums

The support provided by the Top Sector Logistics is helping to ensure that the Netherlands is firmly on the map internationally when it comes to SCF. This year another SCF Forum will be held in the Netherlands and the possibility of organizing an SCF Forum in Singapore is also being looked into. The latest news about the community can be found on the revamped website [www.scfcommunity.org](http://www.scfcommunity.org). In 2015 the website [www.scfacademy.org](http://www.scfacademy.org) was also set up, where the latest scientific articles, papers and publications are made available.

## Strengthening the working capital position of SMEs through 'tracking and tracing' of outstanding invoices

If companies had a better insight into the status of outstanding invoices issued to customers, they would be able to make better use of their working capital. Such an insight would allow companies (especially SMEs) to coordinate their outgoings and income more effectively and make it easier to have outstanding invoices financed by a bank or factoring company.

Based on this hypothesis, Innopay, factoring company 'voldaan' and one of its customers developed a demonstration of this idea between November 2015 and January 2016. In this demonstration the status of an outstanding invoice is presented digitally in the system of 'voldaan', which therefore gains a better insight into developments concerning the collateral (in this case the invoice) and the associated risks.

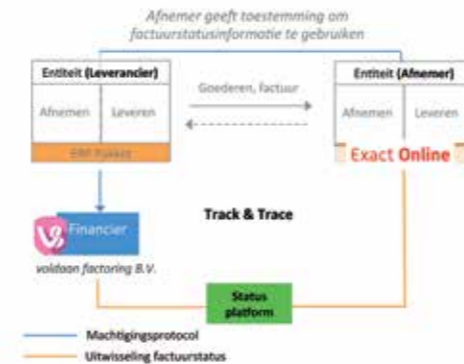


Figure 1 – The invoice status is shared digitally after obtaining the customer's consent

### How does it work?

The customer orders a product or service from a supplier. Once the product or service has been delivered, the supplier sends an invoice to the customer. Then, at the request of its supplier, the customer digitally gives its consent to the supplier's financier (in the demonstration this is 'voldaan') to allow this party to view the status of the financed invoice. As the financier is therefore able to 'track and trace' the payment, it knows when it can reinvest this sum and is exposed to a lower risk.

### Benefits

Gaining an insight automatically into the status of an invoice has a number of benefits, including:

1. The financier can operate much more cheaply, partly because risks are easier to manage;
2. As the costs are lower, it is possible to finance invoices with lower amounts (< EUR 1,000), which is not financially feasible at present;

3. The financier no longer has to make a phone call to check the financed invoice;
4. The recipient of the financed invoice (the customer) no longer has to create communications with its supplier's financier manually.

The most important result is that suppliers gain a better insight into their cash flow and, if they decide to raise finance, this can be done easily and cost-effectively.

### Insights

The demonstration has also provided a greater insight into the following:

1. Provisional specifications for the protocol that customers use to authorize the financier (of their suppliers) to access their accounting software to view the invoice status;
2. Provisional specifications for a digital invoice status and its integration into financiers' business processes and systems;
3. The positioning of such a solution within existing SCF programs, whereby the invoice status is shared with suppliers and their financiers. This contrasts with the current practice where the invoice status is mainly known to the customer and is generally shared with the customer's financier. This allows this financier to present a separate financing offer to the supplier (reversed factoring) in cooperation with the customer;
4. Interest from German and Italian parties, although it should be noted that the Netherlands is regarded as the leader in this area.

In the first half of 2016 this demonstration will be extended to include more financiers, suppliers,

customers and ERP solutions and will also be given a broader geographic scope to cover countries including Germany and Italy. Lastly, ways in which the digital invoice status can be integrated in practice into existing SCF or e-invoicing solutions will also be examined.

# MIRT GOODS CORRIDORS

## What are MIRT Goods Corridors?

To ensure that transport flows can be handled effectively, it is important that a high-quality and efficient core network is in place. This core network is a shared vision of the business community, port authorities and (regional) public authorities and refers to a core network of hinterland connections (road, rail, short sea and inland shipping) and multimodal transshipment points. It is made up of two levels: a network that is important for international accessibility and one that is important for national accessibility.

The core network needed to ensure international accessibility has already been laid down by the Ministry of Infrastructure and the Environment in consultation with the Logistics Top Team and has been included in the National Policy Strategy for Infrastructure and Spatial Planning. Within this network it has been decided that two multimodal goods corridors will be created: the A15 – Betuweroute – Waal corridor from Rotterdam (“Eastern corridor”) and the Rotterdam – Brabant – Limburg – Germany corridor (“Southern corridor”).

Research is being carried out into these corridors as part of the Multi-Year Program for Infrastructure and Transport (MIRT).

The corridor studies aim to identify the opportunities and obstacles associated with optimizing the multimodal goods corridors, with a view to enhancing the accessibility and competitiveness of the Netherlands, to determine how these opportunities can be seized and the obstacles removed, and to examine the forms of cooperation needed between the parties concerned. Within this context it is important to encourage:

- The optimized and flexible use of the existing infrastructure network and transport modes (road, rail, water and pipelines);
- The realization of improvements in the efficiency of the logistics sector and the hinterland network;
- The utilization of opportunities for economic development.

### TNO white paper on truck platooning

Together with stakeholders steps are being taken to work out a development approach for these corridors. This will consist of a shared vision and action plan. ITS measures such as truck platooning (self-driving trucks traveling in convoy) offer the potential to make road transport within these corridors safer, cleaner, more efficient and more cost-effective.

TNO regards truck platooning as the future of freight transport: trucks that travel together as a group a short distance from each other (less than 1 second apart) based on automated driving technology. Transport companies will benefit from lower fuel consumption and improved (driver) productivity, while society will benefit from fewer accidents, safer transport, less congested roads and reduced CO<sub>2</sub> emissions.

The TNO white paper explains what platooning is, what benefits it offers for which parties in the chain and what the roadmap is for the use of platooning on Dutch and European roads. For a number of years now developments have been taking place in relation to the underlying Cooperative Adaptive Cruise Control (CACC) technology, although the large-scale deployment of platooning is a system-wide innovation challenge. That means a joint approach is needed involving all stakeholders within society.

At present the political and economic climate is positive as far as the widespread use of platooning is concerned, as the first legislative amendments have now been proposed to allow tests involving self-driving trucks to be carried out on Dutch roads. For this system-wide innovation TNO recommends setting up a Shared Research Program based on open innovation principles. Within such a program parties will work together on the commercial implementation of the platooning concept for two trucks in 2020, resulting in a solution that is safe, reliable and efficient.

Read the  
TNO white paper  
on truck platooning  
here:





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