

Proposition Multimodal Hinterland Connections

February, 2016



**Buck
Consultants
International**



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Proposition



Proposition Multimodal Hinterland Logistics

to logistics chain operators

“Dutch Multimodal Hinterland Logistics solutions enable your service organization to improve asset availability and reliability, and reduce operational costs through intelligent and optimized planning, direction and execution of multimodal transport flows “



Proposition Multimodal Hinterland Logistics to shippers

“Dutch Multimodal Hinterland Logistics solutions enable your organization to improve customer satisfaction by increased reliability, and reduce operational costs through intelligent and optimized planning, direction and execution of multimodal transport flows .”



Introduction to multimodal hinterland logistics



What is multimodal transport?

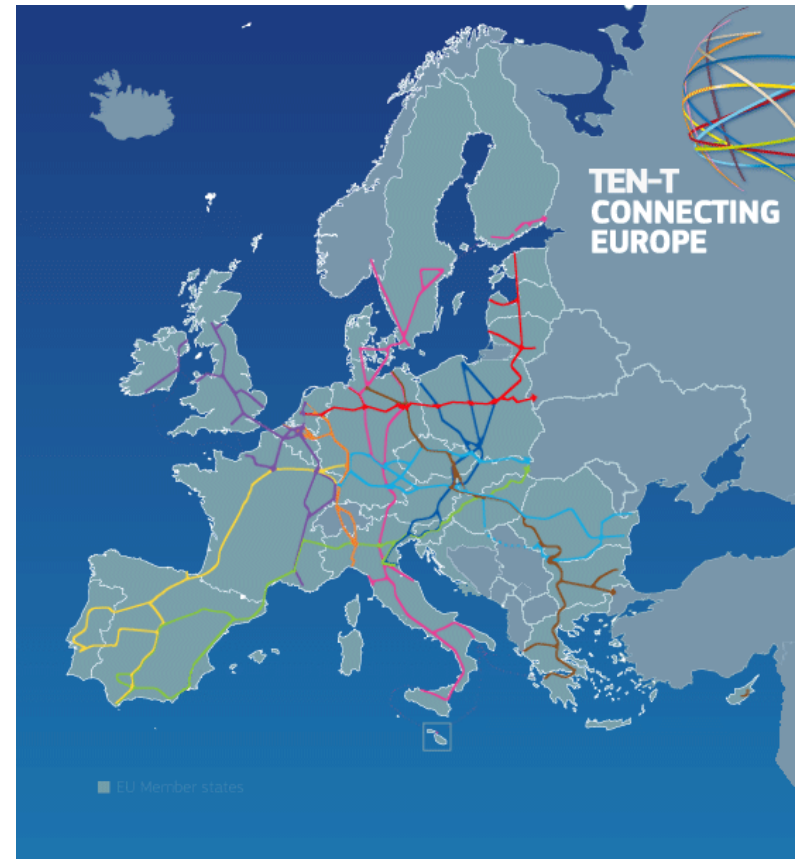


- Combination of at least two means of transport
- Integrated transport chain for bulk and container transport
- Main characteristics
 - Standardized and reusable loading units in case of intermodal container transport
 - Transshipment terminals for cargo handling between short-distance and long-distance traffic

TEN-T Connecting Europe

Infrastructure investments in multimodal corridors and connections

- European development of nine "Core network corridors" with public and private resources. Focus on EU support from the Connecting Europe Facility for , infrastructure investments that:
 - remove bottlenecks
 - build missing cross-border connections
 - promote modal integration and interoperability
- Three TEN-T corridors connect the Netherlands to Europe
 - North Sea-Mediterranean
 - North Sea-Baltic Corridor
 - Rhine-Alpine Corridor



EU focus on hinterland transport

developing innovative multimodal solutions

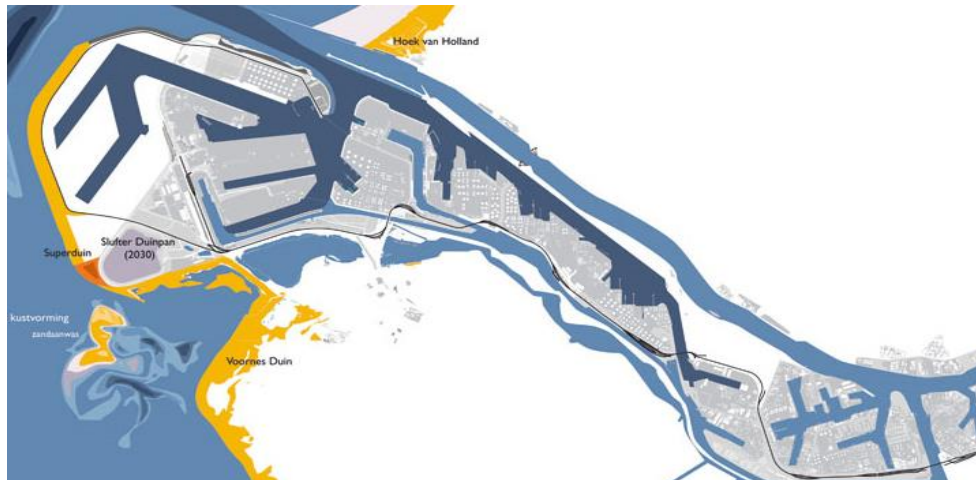
- EU White paper “Roadmap to a Single European Transport Area” 2011
- Focus: Optimizing the performance of multimodal logistic chains, including using more resource-efficient modes like rail and barge transport more frequently.
- Targets in EU White Paper:
 - 60% reduction of emissions in 2050
 - 2030: 30% of transports > 300 km by barge or rail transport
 - 2050: 50% of transports > 300 km by barge or rail transports



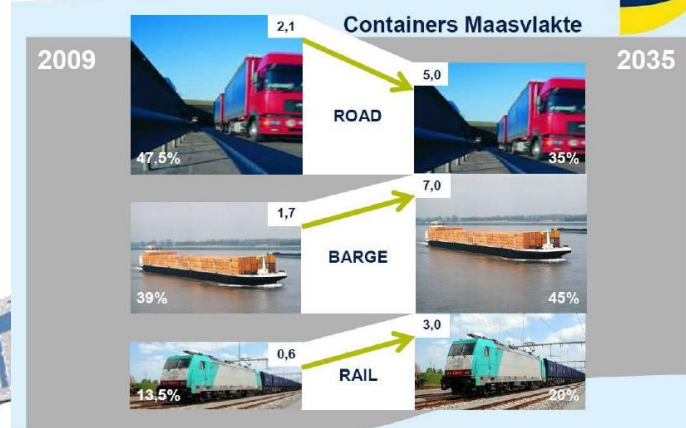
Challenges

in multimodal and intermodal hinterland connections

- Port of Rotterdam: nr. 1 in Europe → Increased cargo flows calls for optimized multi/intermodal solutions.
- 2015: Maasvlakte II, adding 600 ha containers transshipment facilities



Modal split target



The Netherlands

Rotterdam
port area

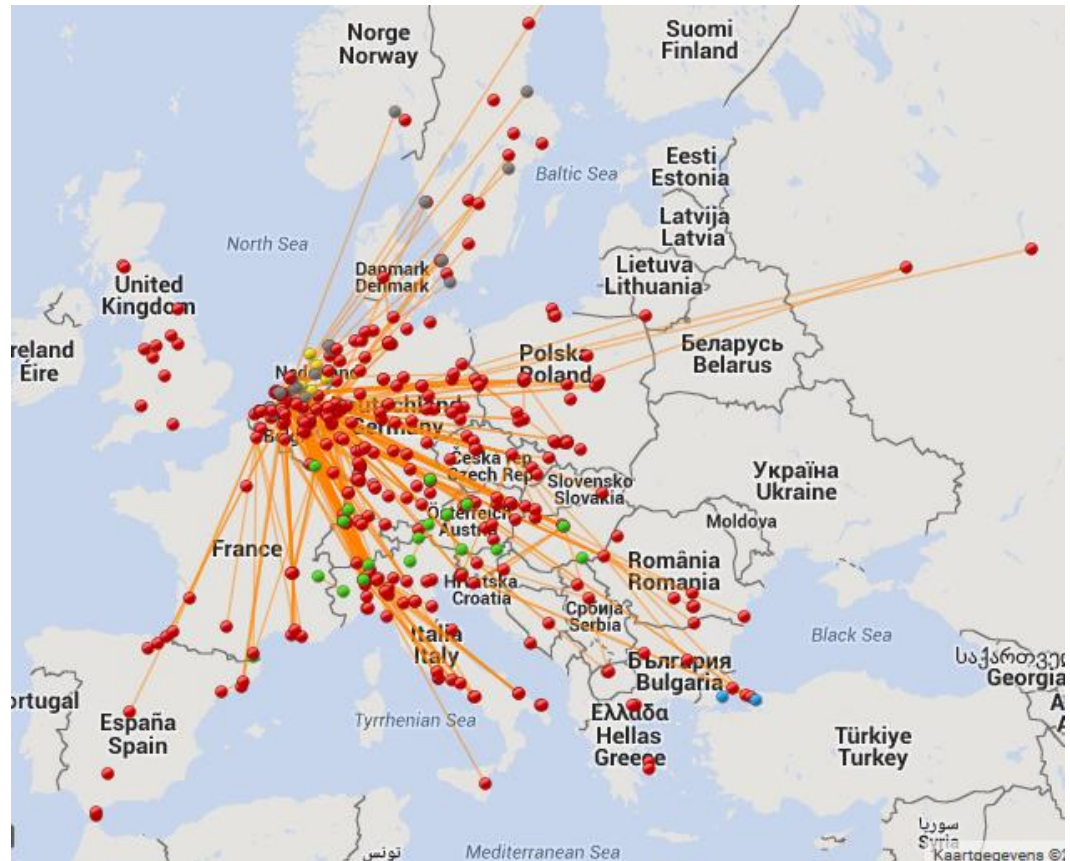
Europe

The Netherlands

Multimodal rail cargo network

Intermodal rail hinterland connections

- The Netherlands: more than 300 rail cargo services to other EU destinations
- The Netherlands rail cargo sector is liberalized : more than 20 rail transport operators make rail cargo transport competitive.
- Dedicated Betuwe railway line from Rotterdam to Germany



Multimodal inland barge network

Inland waterway hinterland connections

- The Netherlands: largest inland waterway barge fleet in Europa
- The Rhine is main international waterway, but whole of Netherlands is crisscrossed by rivers and canals.
- More than 100 million tons annually crossing the Dutch-German border by inland waterway



Dutch focus on inland waterways transport multimodal solutions



Connected to main European waterways: Rhine, Meuse, Moselle, Danube, and canal system NW Europe



Business:

- > 50% of European barge fleet registered in the Netherlands
- Strong cluster maritime industry
- Financial infrastructure for inland shipping with specialized banks



- Internationally oriented shipping industry
- Innovation cluster in IT, ship design, shipbuilding and intermodal networks
- High quality education specialized in inland shipping



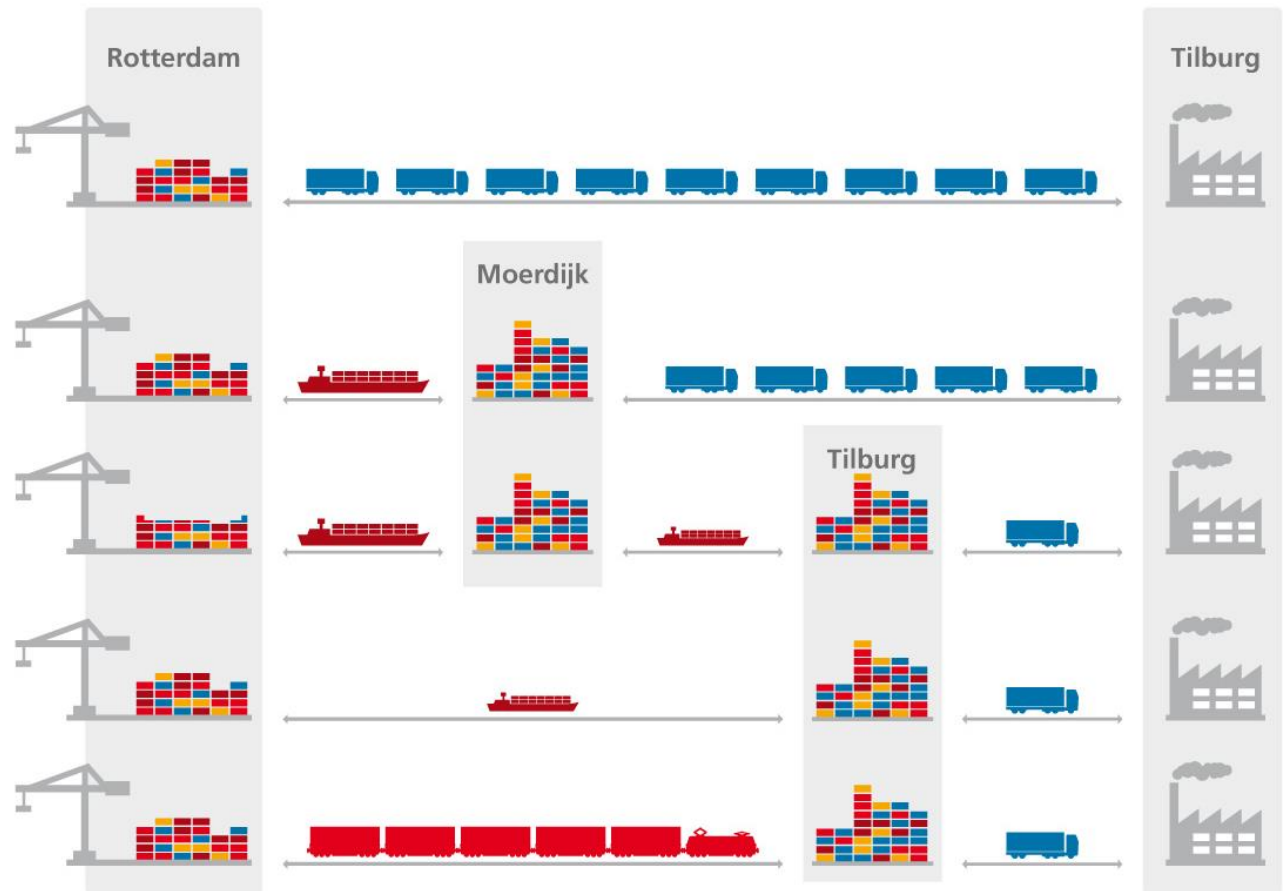
Source Binnenvaart.eu / STC-group

Multimodal hinterland connections

Intermodal corridors; an example from Rotterdam to the hinterland

Choices for transport from port of Rotterdam to end customer:

- Using road, rail or inland waterway transport
- Using port of Moerdijk as transshipment hub
- Intermodal solutions



Multimodal hinterland connections

Innovation: synchromodal transport solutions

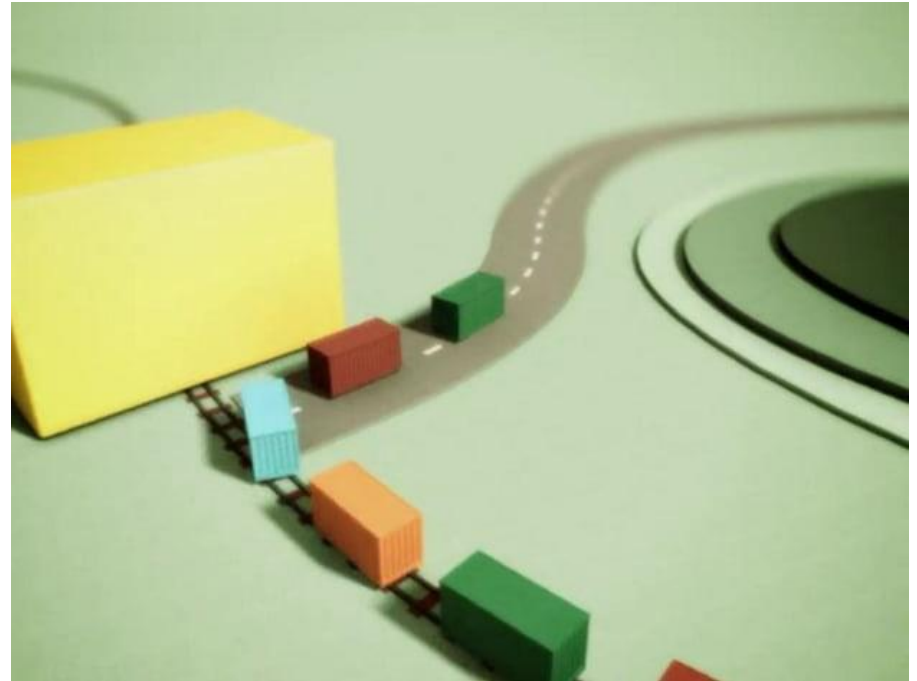
How to improve use of intermodal transport, and increase customer service?
The answer is in Innovation: Synchromodal transport. Logistics service provider has ability to switch without effort between different modalities = optimal, effective and sustainable utilization

Innovation in:

- Bundling
- Decision horizon
- Flexibility
- System approach

Objective: Improved transport system:

- Increased reliability
- Increased predictability
- Cost efficiency
- Quality
- Sustainability
- Speed



Multimodal network collaboration

Essential: sharing transport information in network from ports to operators to hinterland hubs



Why provide flexible multimodal hinterland solutions?



Benefits

of using multimodal hinterland solutions



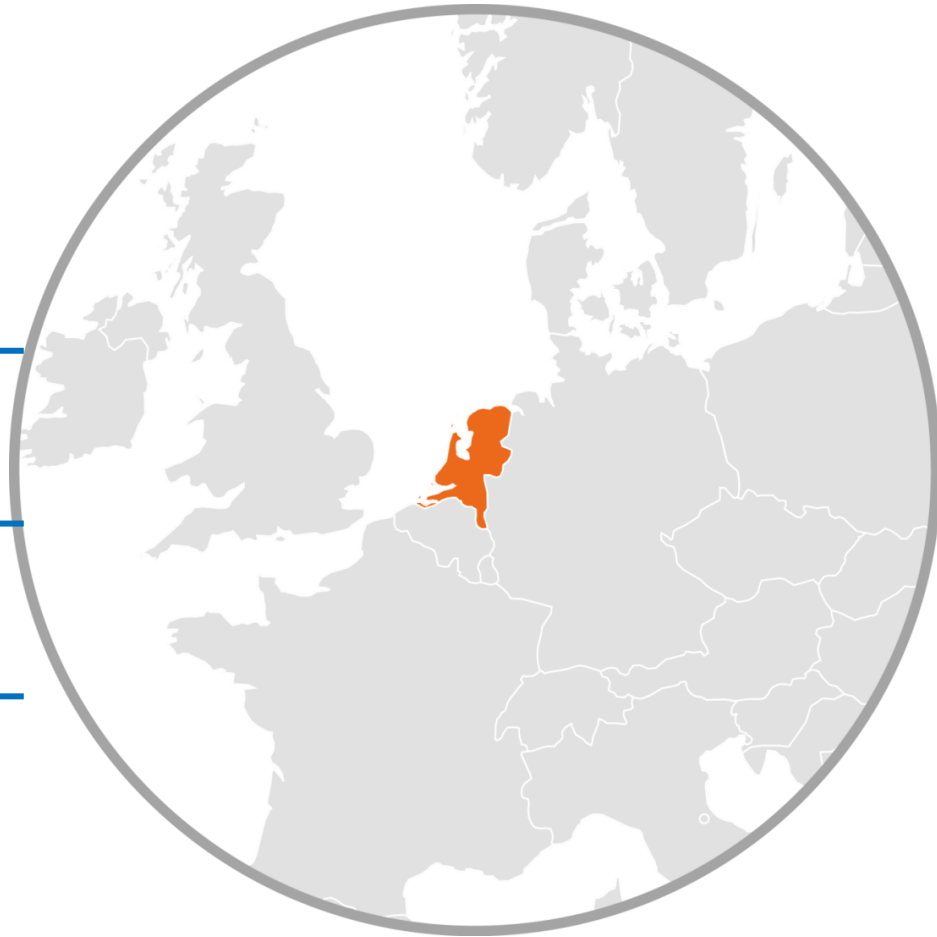
Optimal use of transport
modality networks in Europe



Savings in costs and decreased
pressure on the environment by
combining different modalities



New logistics knowledge and
new profitable business activities
(incl. new jobs);



Intermodal innovations and solutions

Synchromodal transport: intermodal transport in an optimal way



Shippers: A-modal bookings!

- Lower Price
- Fixed Time of delivery
- Higher Quality (safety, sustainability)



Logistic service provider:

- Optimization of assets
- Increased frequency of services
- Flexibility between modalities



Synchromodal innovation:

- a-modal booking for shippers
- Capability of IT systems
- Intermodal Infrastructure
- Contracts flexible
- Network business models
- Trust: mental shift required



Multimodal hinterland connections expertise in the Netherlands



The Netherlands = Logistics



Geographical position as gateway to Europe



Excellent Mainports (Rotterdam, Schiphol/Amsterdam)



Excellent hinterland connections (road, rail, barge, shortsea)

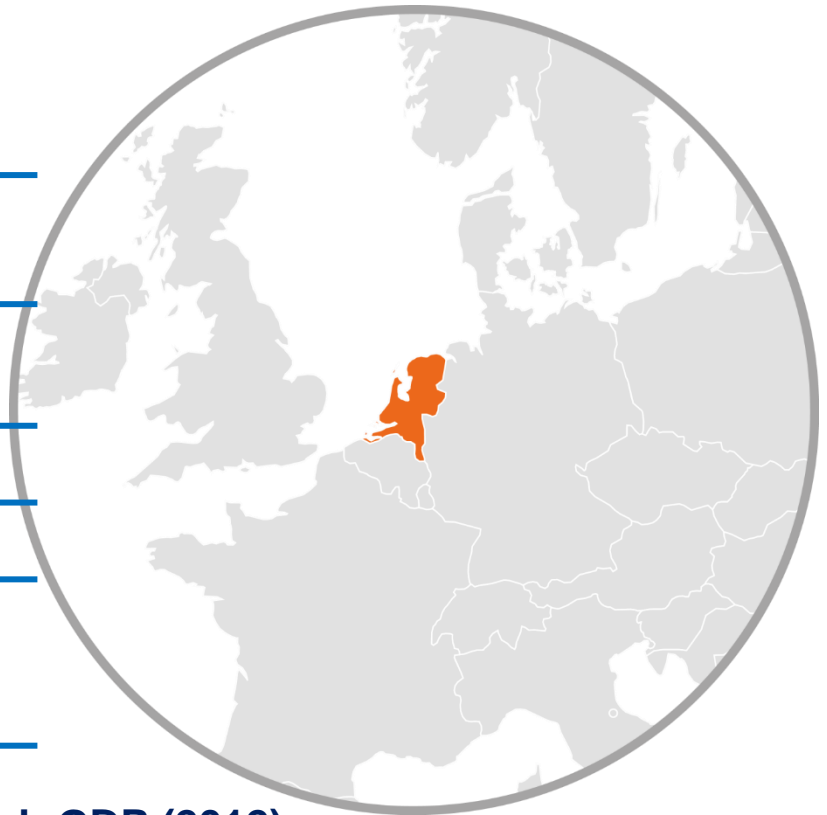


Logistics Service Providers (1PL-4PL)

Legislative framework & customs



High level of knowledge:
8 research universities and 11 Universities
of Applied Sciences specialized in logistics,



**Logistics/transport sector essential for Dutch GDP (2012):
65 billion euros (10% of GDP); 813,000 jobs (12% of Dutch workforce)**

Multimodal hinterland service expertise

the Netherlands

Developed by different kind of service providers and some examples of companies active in intermodal and synchromodal transport in the Netherlands

Type of company	Supply chain role	Examples in the Netherlands
Carrier Haulage	Services by shipping companies	Maersk, MSC
Merchant Haulage	Services by forwarders/ LSPs	Seacon
Terminal Haulage	Services by deep sea terminals or inland terminals	ECT, BCTN
Rail/barge Haulage	Rail or barge operators	Alcotrans, Contargo
Network Haulage	Services by 4PLs	Wayz



Focus on Inland waterway innovations

Sharing of (digital) information and cooperation in the logistics chain, more appealing inland navigation (non-polluting, fast and safe) and reliable voyage times and preparing the inland navigation sector for a growth in cargo transportation,



Ambition:

Accommodate high quality barge transport as alternative for road transport



Projects in 3 clusters: sharing information, Co-operation in logistics chains and reliable voyage times



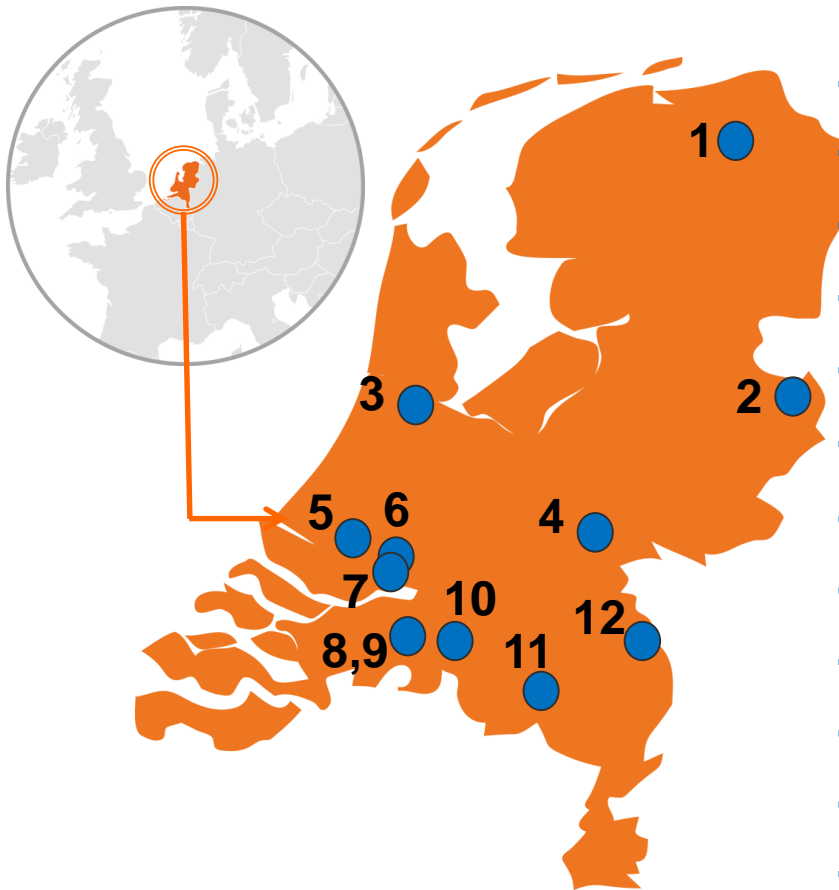
Improve logistic networks for ports and hinterland destinations



133,000 TEU transferred from road to waterways saving 12.8 million KM's by road and a reduction of 6,500 tons of CO2.

Main Logistics courses at Universities

developing knowledge for multimodal hinterland connections



1. University of Groningen

2. University of Twente

3. University of Applied Sciences Amsterdam

4. University of Applied Sciences Arnhem Nijmegen

5. Delft University of Technology

6. Rotterdam University of Applied Sciences

7. Erasmus University Rotterdam

8. University of Applied Sciences Breda (NHTV)

9. Dutch Institute for Advanced Logistics (Dinalog)

10. Tilburg University

11. Eindhoven University of Technology

12. University of Applied Sciences Venlo (Fontys)

Innovation in multimodal hinterland connections in the Netherlands





Logistics priority in economic policy

Logistics is one of the nine priority sectors in Dutch economic policy. Government, business and academia work together to increase competitiveness, in business climate, education, infrastructure and innovation.



Ambition of logistics priority sector

In 2020, the Netherlands holds an international top position

1. in handling transport flows through the NL,
2. as supply chain coordinator of international logistic activities and
3. as a country with an attractive innovation and business climate

Dutch collaborative innovation in logistics



1.

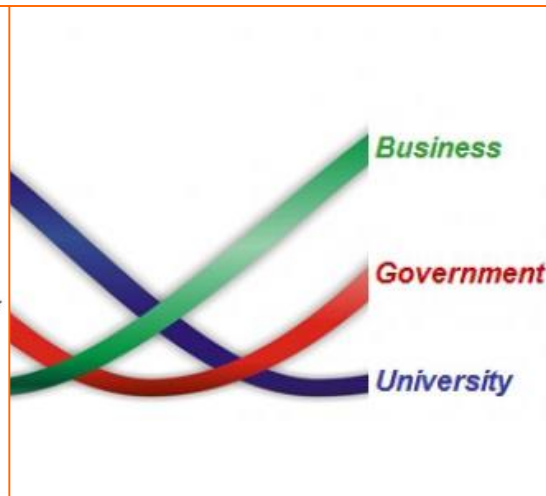
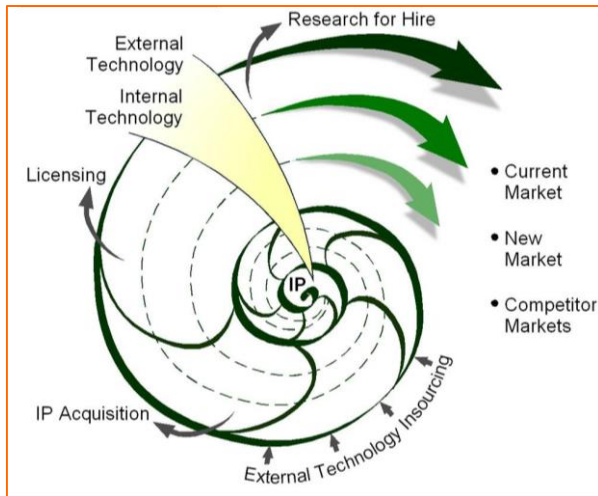
Open innovation

2.

**Public private partnerships:
triple helix collaboration**

3.

**Supply chain collaboration
and coordination**



National innovation program in logistics



The National Innovation program of the economic priority sector Logistics in the Netherlands focuses on six innovation roadmaps, in which innovation is driven and carried out by all partners in the supply chain.

1. Neutral Logistics Information Platform
2. Trade compliance and border management

3. *Synchromodality*

4. Cross Chain Control Centers
5. Service Logistics
6. Supply Chain Finance

The set up and use of multimodal hinterland connections, including synchromodal innovations, has been recognized as one of the internationally competitive areas of the Netherlands, with further development potential. Resources have been allocated to advance this competitive position even further.

Innovation roadmap supply chain coordination

collaborative research and development

- The Netherlands has set up a specific innovation program for synchromodal transport, driven by the Dutch Institute for Advanced Logistics TKI DINALOG.



Ambition:

International top position in setting up synchromodal tools and execution



Coordinate and control international synchromodal transport flows



Support international synchromodal solutions from the Netherlands



Increased share of GDP in synchromodal solutions

Innovation roadmap synchromodal transport

Core activities

Set up and Implementation

- Innovation of synchromodal concepts
- Shippers and logistics service providers



Improving IT tools

- Set up of control towers
- Advanced planning tools
- Automated synchromodal booking platforms

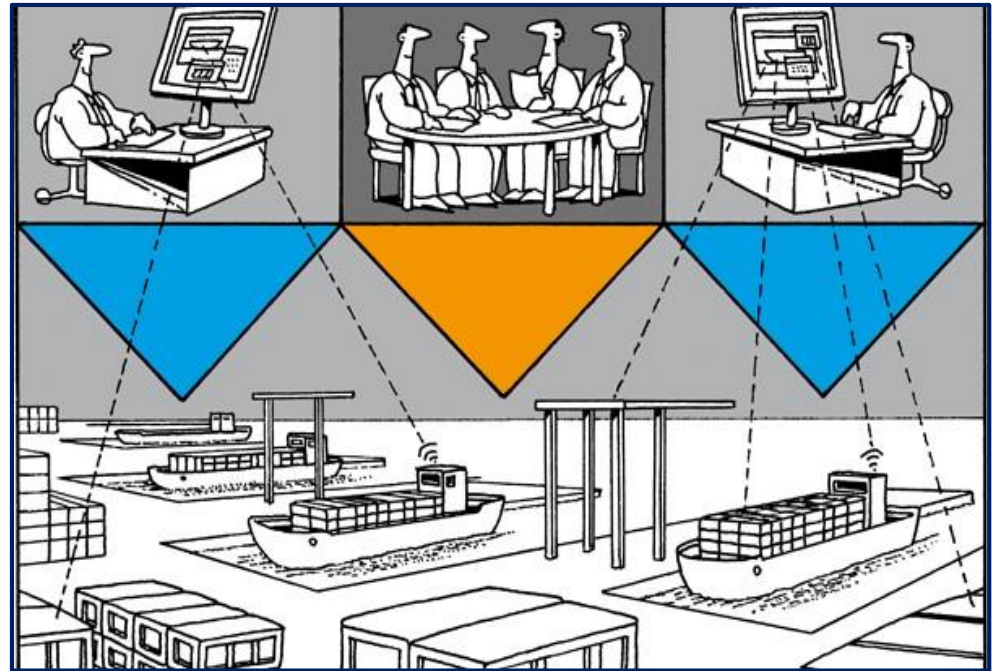
Orgware

- Mental shift at companies
- Distributed business community system
- National collaboration networks
- Regional synchromodal hotspots

Innovation project ULTIMATE

Developing efficient multimodal hinterland networks for smooth transport

- An Extended Gate principle for use in the hinterland, where multi-modal choices can again be made, releasing the operational and administrative bottlenecks in sea ports by optimal use of information.
- Incorporation in supply chains
- Multimodal network design
- Port authority involvement
- Legal transport position of terminals
- Software algorithm for efficient planning in case of disruptions
- Potential cost reduction of 1 million euros

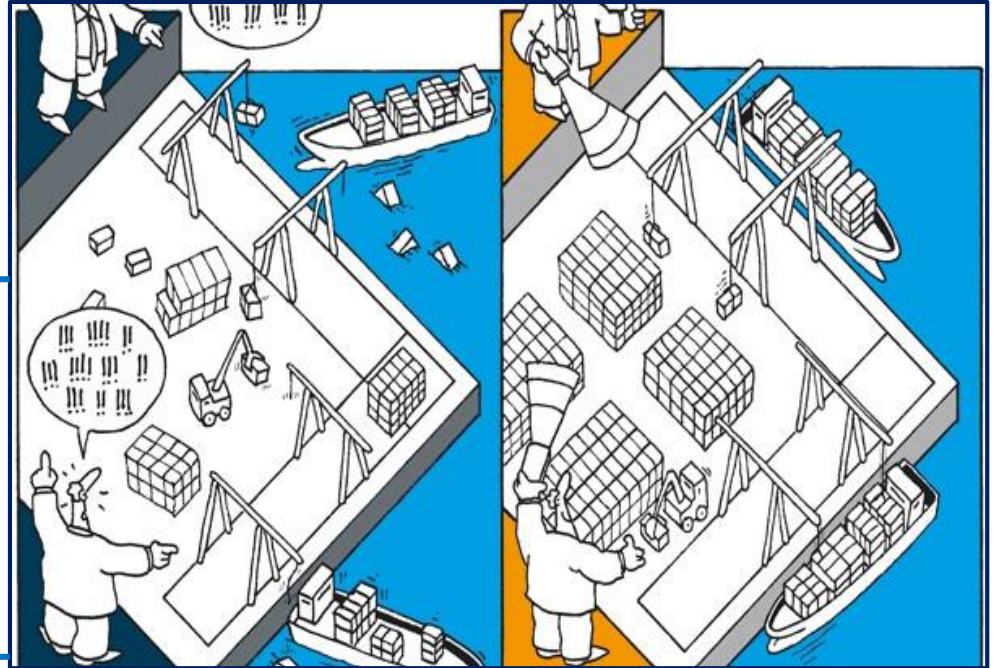


ECT Participations BV, Port of Rotterdam NV, Modality Software Solutions BV, PORTB ASE BV, KEYRAIL BV, Port of Amsterdam, Brabant Intermodal BV, NV Region Venlo, Erasmus University Rotterdam, Eindhoven University of Technology

Innovation project SALOMO

Situational Awareness for LOfistic Multimodal Operations in container supply chains and networks

- Higher volumes, larger transportation sizes, dynamics in the sea and hinter-land connections hinder effective planning and decision making
- develop and enhance understanding of situational awareness,
- develop and test training suite for planners and decision makers to plan based on a holistic shared situational awareness and in a more collaborative fashion.
- model for situational awareness and collaboration in supply chain planning and decision making;
- toolbox and training suite for planning and decision making;

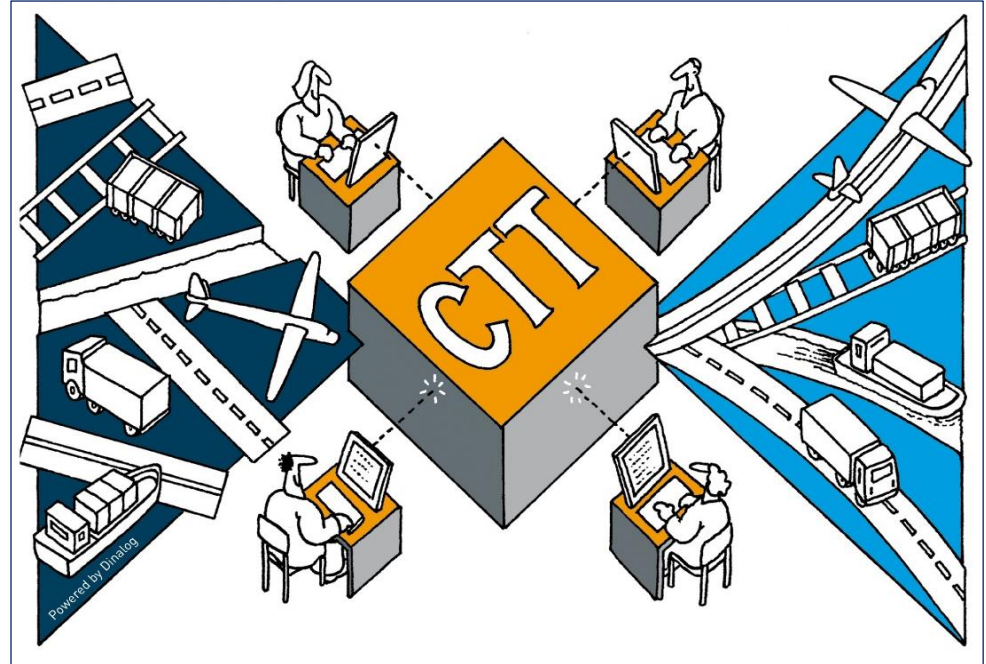


TRAIL Research School, TU Delft, Open University, University of Maryland, TBA, In There, Rotterdam World Gateway, APM Terminals Maasvlakte 2, TeamSupport

Innovation project SIEEG

Secure Information Exchange Extended Gate

- Improving efficiency in hinterland operations by an innovative methods along the entire logistics chain of main ports.
- Public extended gate solution at hinterland terminal with completely computerized gate processing and OCR empowered visual gate at the hinterland terminal ensures extra safety and speed in the operation.
- 24/7 access to relevant data on handling and transport of goods
- Throughput time for registration, security and safety reduced from 15 minutes to 65 seconds
- 32% Reduction CO2 emissions



CTT
INTERMODAAL TRANSPORT

BURGER
ROYALBURGERGROUP

MCS

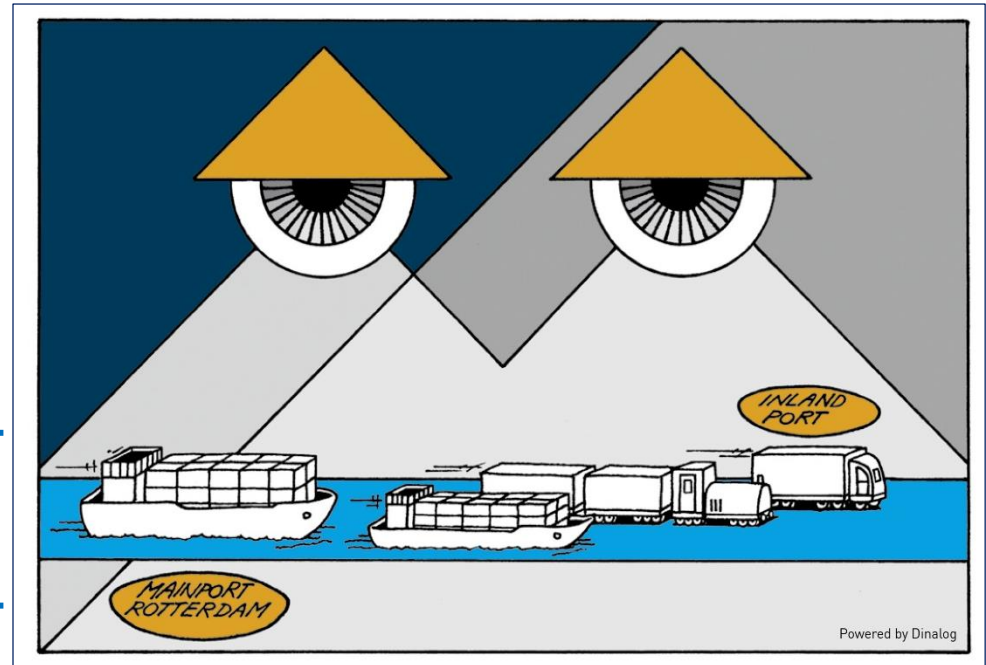
UNIVERSITEIT TWENTE.

BOLK
TRANSPORT

Innovation project SIEEG

Secure Information Exchange Extended Gate

- Reinforce the logistic chain and enable synchromodal transport to support an efficient, sustainable and reliable handling of the increasing flow of goods from mainports of Antwerp and Rotterdam through inland terminals to the European hinterland.
- Real-time insight and influencing supply chain events with synchromodality decision support
- Enriched real-time datasets as input for decision support tool for synchromodal transport service
- Stretch delivery window by 50%
- Webbased API for SPoT-platform



CTT
INTERMODAAL TRANSPORT

Hartman

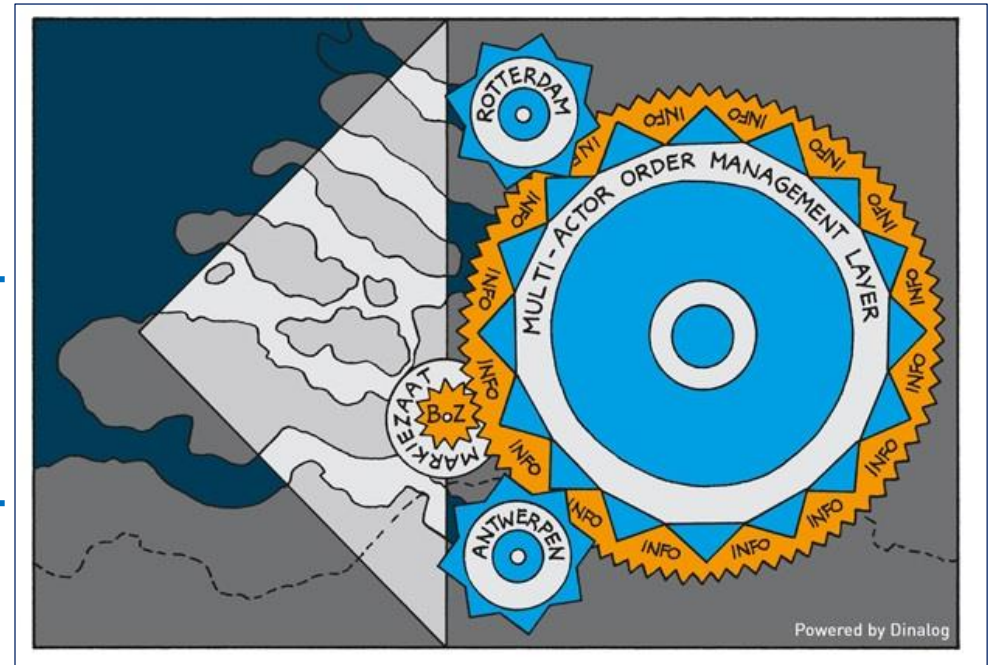
UNIVERSITEIT TWENTE.

APL
Logistics

BOLK
TRANSPORT

Innovation project Modal Shift in Total Logistics

- Collaboration between shippers, service providers and inland terminal with corresponding inland shipping links from and to Rotterdam and Antwerp.
- Realize an integrated method through the establishment of a Synchromodal Service Center with integrated control function
- Integration of multi-actor order management layer in information system for paperless information exchange facilitating optimal operational decisions with greater modal split opportunities barge/rail and improved import and export exchange



MEEUS
GROUP



COFANO



sabic



Breda University
of Applied
Sciences

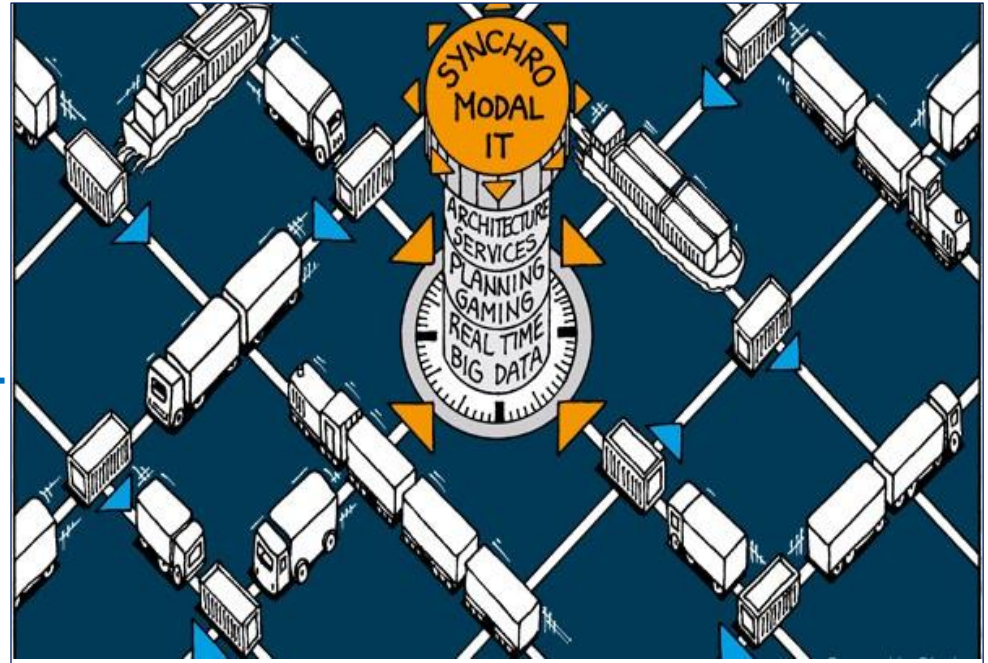


Lamb Weston

Innovation project Synchromodal IT

Addressing the need for:

- unified European logistic network
 - improving efficiency and sustainability of logistics services
 - the “mental switch” among shippers and 4PLs, towards synchromodality.
-
- Design of synchromodal logistics network model and integrated service platform;
 - Development of planning and scheduling policies and decision support through serious gaming.
-
- IT, operations research techniques, and serious gaming for synchromodal planning.



Universiteit Twente (UT), Thales Nederland B.V., Combi Terminal Twente (CTT), Post-Kogeko Logistics, CAPE Groep, NexusZ Hengelo, ARCADIS, Simacan, OV Software

Dutch solutions: Hinterland IT Platforms



Setting up hinterland IT platforms

Dutch solutions for optimal multimodal networks



Modalities



- Market place for rail cargo transport in Europe



- Market place for inland waterway cargo transport in Europe

Ports



Port Community System (PCS), the digital connection to smart Dutch ports.

Airports



Front runner in information services for the air cargo industry

Sector co-operation



- Platform offering connections between all logistic partners in floriculture sector

Nextlogic

platform optimizing freight flows in the hinterland network



Nextlogic is a project of the Port of Rotterdam Authority, the Ministry of Transport, deep sea terminals, depots, barge operators/inland terminals and shipping companies



Unreliable and unpredictable turnaround time of barges at deep sea terminals, inefficient use of the quays, cranes and barges, too many (small) sea port calls.



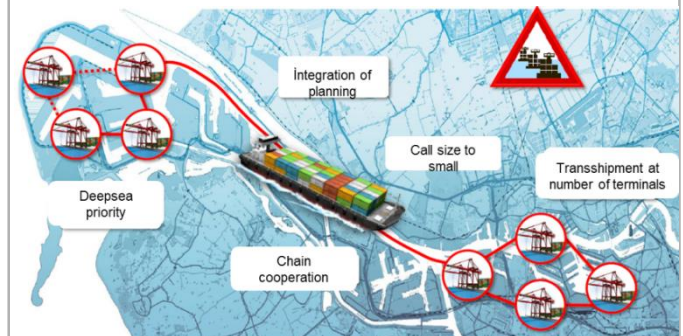
Information exchange plus the Port Community System based on neutral integrated planning, call optimization and performance measurement.



Extensive cooperation between all logistics chain parties.

Nextlogic's three pillars

Nextlogic's approach is based on three pillars: neutral integrated planning, call optimisation and performance measurement. Information exchange is the foundation of the Nextlogic pillars.



Bargecloud

platform for cooperation between inland container terminals

Bargecloud

Cooperation between inland terminals in the Southern parts of the Netherlands With support of tools for ordering, calls en tripview.



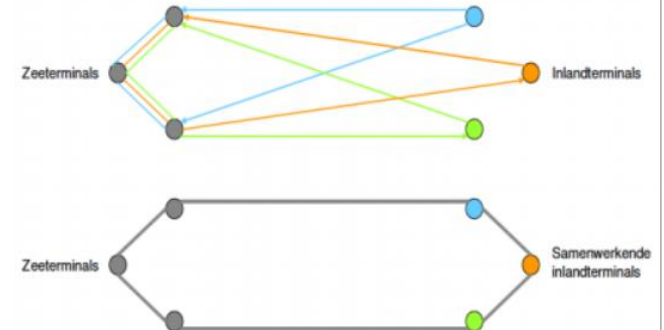
How to increase efficiency and service levels of hinterland transport of containers to low density areas?



Develop a shuttle service from extended gate to Rotterdam and offer support with bargecloud tool and empty container exchange between partners by barge



Reduction of truck kilometers (415.000 per year) and 550.000 kg CO2



Portbase

Port Community System in digital connection to smart Dutch ports



Via the Port Community System, Portbase currently offers over 40 different services to approximately 3,200 customers in all Dutch port sectors



How to organize information exchange in ports?



Application layer services, a platform with common facilities for all services and a central database where all the information comes together that companies and governments exchange.



Information services through a single hub leading to greater efficiency, lower costs, better service provision, more transparent planning, throughput times and fewer mistakes;

THE PCS INCLUDES THREE MAIN COMPONENTS

- 1 The application layer services.
- 2 A platform with common facilities for all services.
- 3 A central database where all the information comes together that companies and governments exchange via Portbase.

portbase Road planning

Overzicht Toevoegen Instellingen

Invoer voormeldingen

Voormelding, nieuw

Terminal Type voormelding

Container info

Onderstaande invoergegevens zijn terminalspecifiek en samengesteld in samenspraak met de betreffende terminal

Naa	SV	V/L	Container	ETA	Termin
Cor					
Gep					
Bru					
TAI					
	<input type="checkbox"/>	Leeg	CBHU8208332	22-10-2013 10:11	
	<input type="checkbox"/>	Vol	CXRU1259840	25-10-2013 09:38	
	<input type="checkbox"/>	Leeg	EGHU9049621	24-10-2013 15:21	
	<input type="checkbox"/>	Leeg	EISU9219638	24-10-2013 17:14	
	<input type="checkbox"/>	Leeg	HJCU1509802	22-10-2013 14:04	
	<input type="checkbox"/>	Vol	HLXU3742284	21-10-2013 07:51	

Dutch solutions: Hinterland IT solutions



Quyntess

IT solution supply chain coordination



Providing supply chain solutions as a service in the cloud using Business Networks simplifying supply chain collaboration.



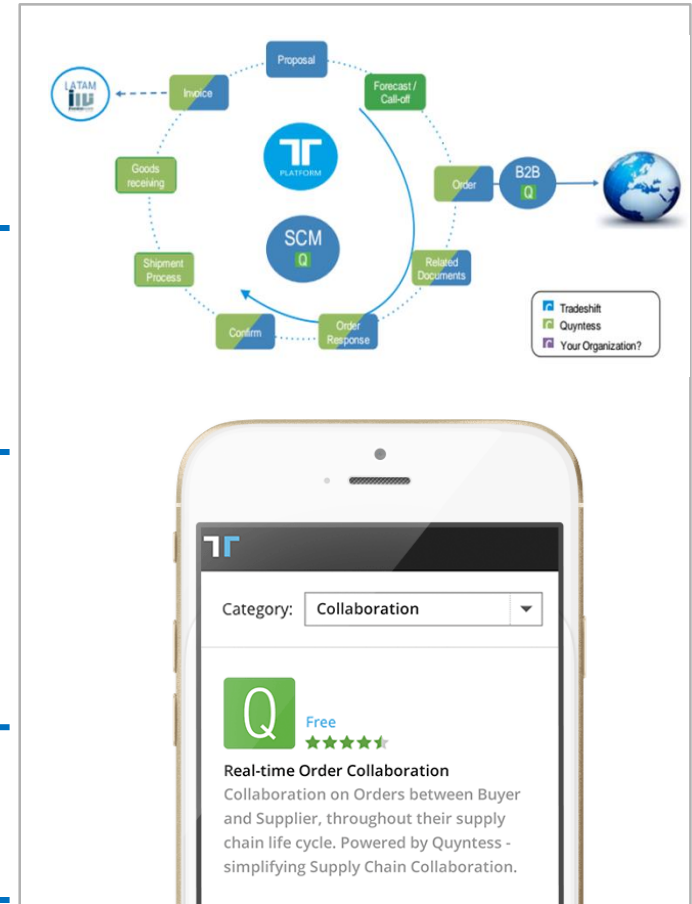
No seamless supply chain collaboration process for your entire supply chain. No flexible onboarding due to lock-up in current legacy B2B integration solution.



Advanced and scalable Supply Chain Collaboration solutions. These SCM Apps enable companies to connect, manage and control crucial supply chain processes and business transactions.



Future proof supply chain process with merged capabilities in one fully integrated platform based collaboration.



Covadem

optimal use of water depth of rivers with up to date data



IT solution provider of cooperative navigable inland waterways depth measurements



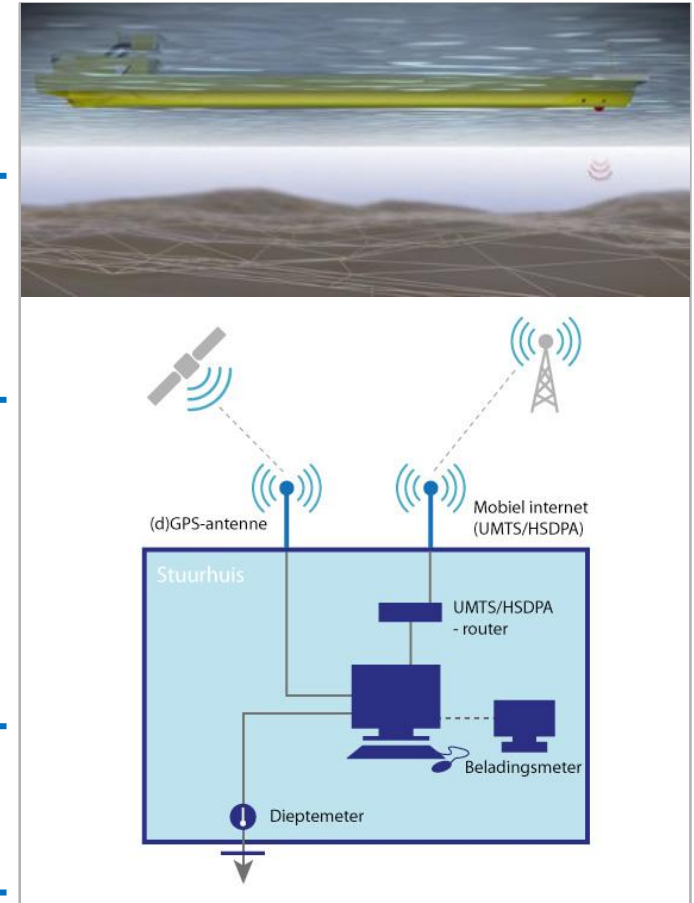
How to predict the actual water depths of the route to be navigated and support inland vessels to make maximum use of the navigable area.



Vessel system to read the water depth data from existing sensors and send this to shore. The keel clearance is converted into the actual water depth of the route being navigated, made available to shipmasters



5-10% better use of load capacity of the vessels navigating on rivers



Dutch solutions: Multimodal logistics services



European Gateway Services (EGS)

synchromodal logistics services to the European hinterland



EGS offers high frequent rail and barge connections between Rotterdam and an integrated and rapidly expanding network of inland terminals in the European hinterland.



How to synchronize multimodal transport from deepsea port to the hinterland?



EGS offers the synchromodal organisation of hinterland transport. For each trip, the modal choice (rail, barge, feeder, truck) is based upon the most efficient and sustainable solution.



Shorter lead times, reliable transport, carbon reduction



Synchromodal service Rotterdam-Tilburg

synchromodal service in hinterland transport



MCT: inland terminal located midway between Rotterdam and Antwerp



Railport Brabant/BTB: trimodal terminal located in logistic hotspot Tilburg



How to optimize transport from deepsea port to the hinterland?



Mode free booking of container transport from seaport to warehouses in Tilburg through a synchromodal cooperation with terminal operators, transport services and shippers



Number of truck trips with containers is reduced with 50% resulting in an improvement of the carbon footprint with 250 tons per year

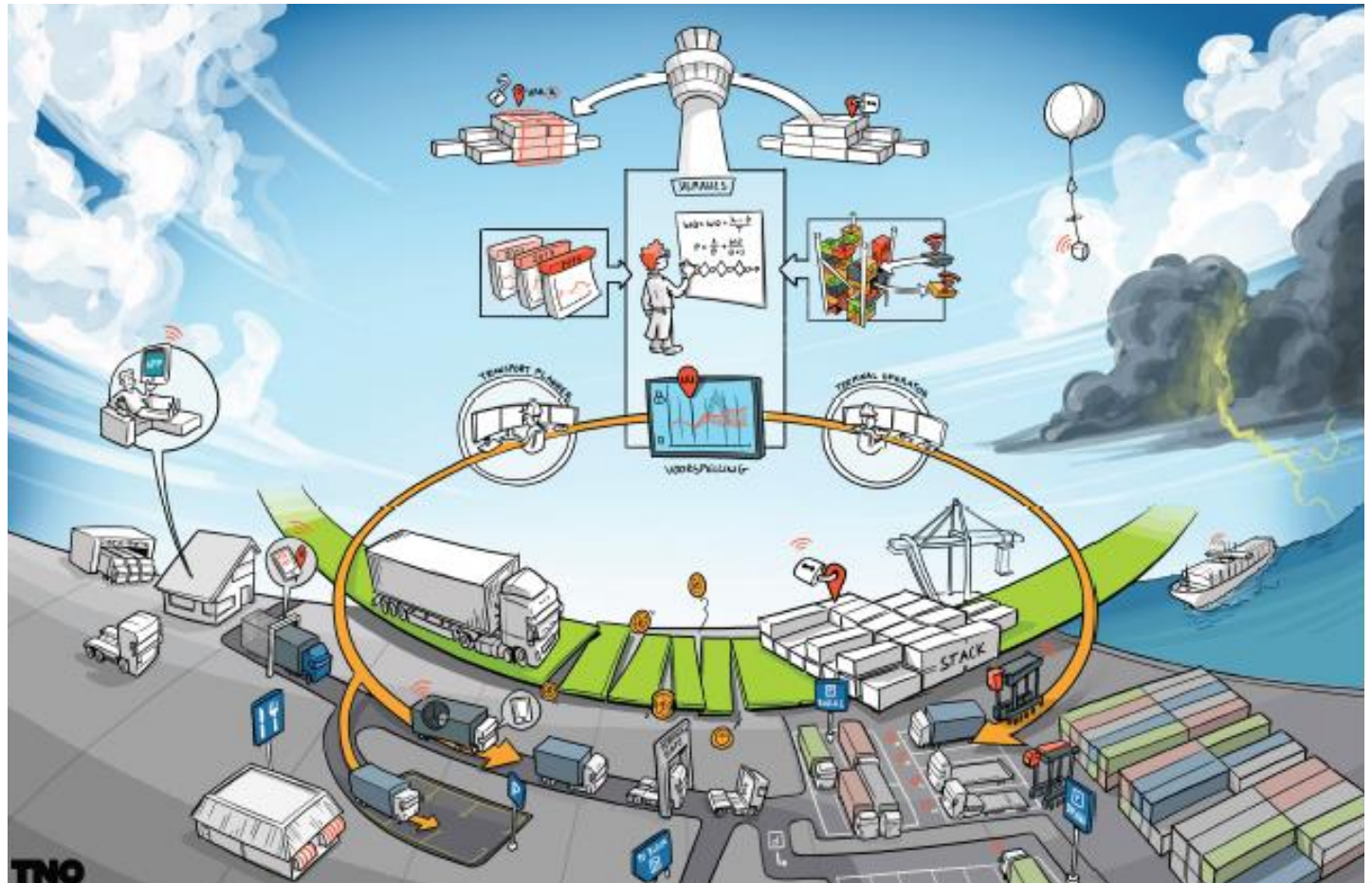


Dutch solutions: Multimodal control towers



Multimodal planning IT solutions

Dutch solutions: control towers realising efficient synchronomodality



Wayz

Synchromodal control tower



Wayz researches/surveys logistics flows, advises optimization of logistic processes, and supports shippers and logistic service providers to implement innovative and sustainable projects.



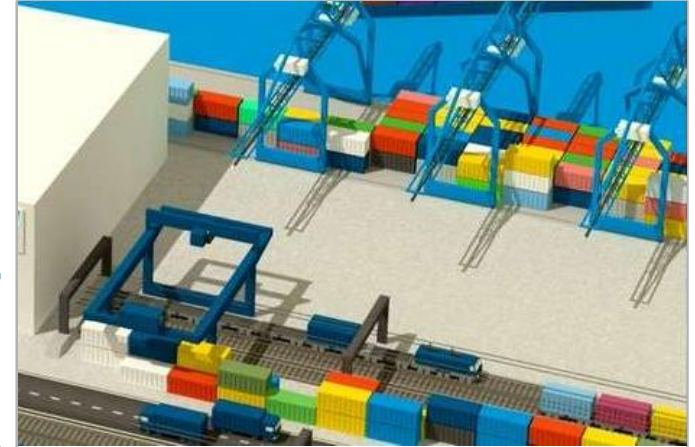
How to manage strong growth in container transport from deepsea port to cooled warehouses in the region?



The Wayz Control Tower facilitates increased synchromodal transported refrigerated containers between the Maasvlakte and Westland.



Peak shaving, simpler use of inland shipping, improved response to future demands of terminals and 18 tons reduction of CO2 emissions in 2014



Seacon and CAPE

Synchromodal Control Tower for successful synchromodal planning



CAPE Groep supports the optimization of logistic operations and management and collaboration in logistic chains. Seacon Logistics is leading logistics chain director and leading in applying the multimodal transport concept.



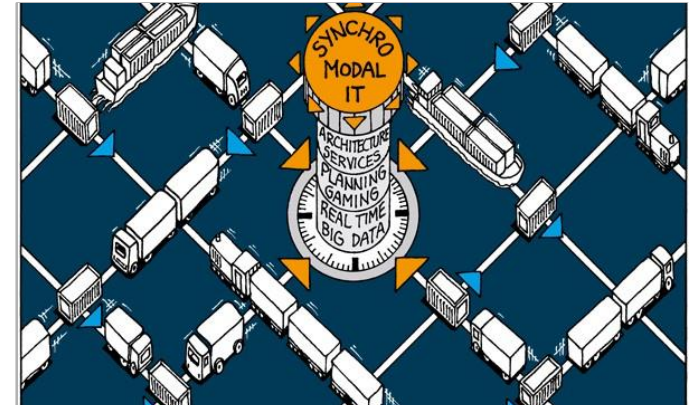
How to support synchromodal planning and solutions in a control tower?



Control to support synchromodal services. Combination of maritime and continental freight flows from and to Spain, Germany, Poland, Italy.



Modal shift of 10.000 TEU per year resulting in a reduction of CO2 emissions of 1900 tons



Greenway Logistics/ Ewals Logistics

Control tower solution supply chain coordination



Ewals Cargo Care

Ewals operates as a Lead Logistics Provider (LLP) and manages total logistics flow. Greenway is active in mediation, buying and selling of logistic services, developing logistic concepts, IT, advice and consultancy.



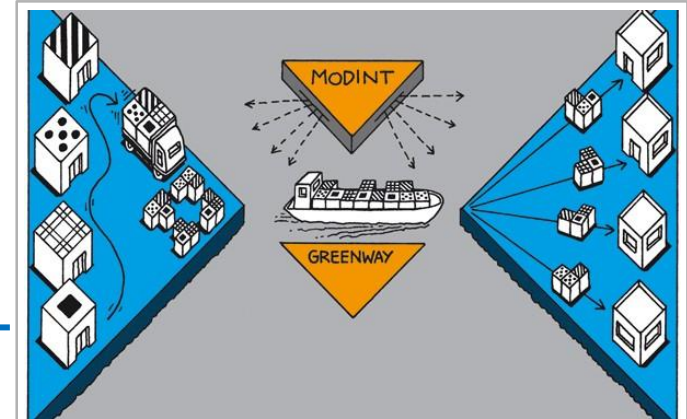
How to increase the efficiency of shipments from various Chinese suppliers to individual Dutch stores?



Design and realization of central organization for "Bundling at source location", working IT SAAS platform and execution for inbound transports from Shengzhen.



Reduction of handling costs of 30-40%
Reduction of distribution costs of 7%
Reduction in lead times



Multimodal hinterland logistics analysis target markets



Global developments

freight markets



Industry comprises of **shipping, warehousing**, courier and road/rail and air freight.



Research indicates that **global market value** of logistics has surpassed **\$4 trillion**, which equates to **10%** of global GDP.



Transportation sector is fastest growing sector. **7% increase** each year since 2011.



Transport sector alone expected to generate **\$3.8 trillion** in revenue in **2016**.



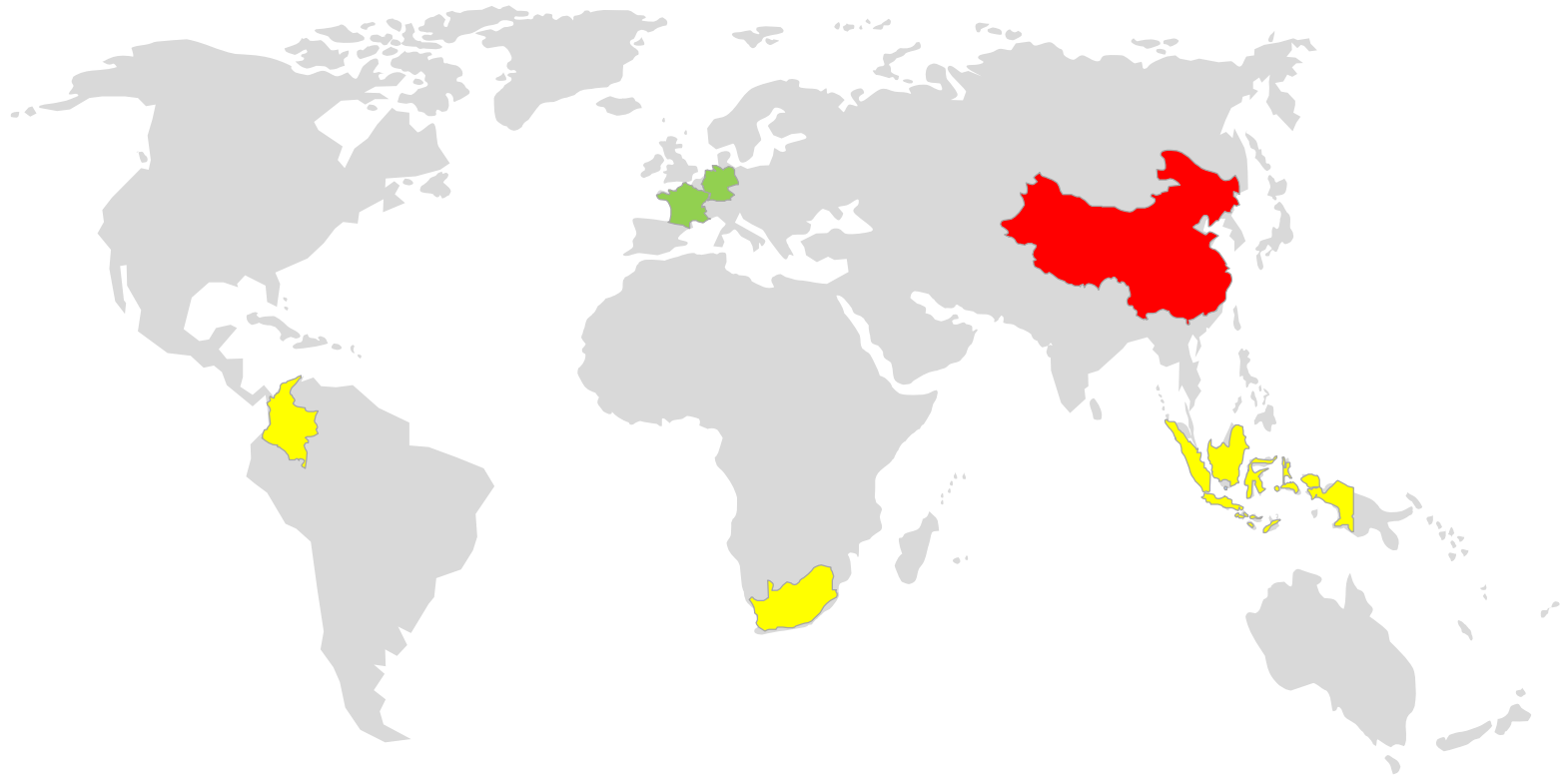
United States currently accounts for over **42%** of global transportation services sector.



Emerging markets such as **China and India** are expected to have increasing influence in global logistics in coming years.

Source: Freightxtension (2014)

Target markets multimodal hinterland connections - selection



Neighbouring countries

Fast growing markets

Developing markets

European market trends & developments

1. **Vertical integration:** when carriers and shippers increase profit pools by "conquering" additional parts of the value chain
2. **Yield Decline** as shippers and carriers seek to exploit volatile freight rates to protect their own profit margins
3. **Modal split** as demand shifts from air freight to predominately ocean and, increasingly, rail to reduce costs of supply chains
4. **Volatility of freight rates** is increasing and demands greater sophistication in steering hedged capacities
5. **Specialization and value added services** become key USPs as complex supply chains will call for specialized logistics service providers
6. **Industry specific solutions** increasingly key, both in terms of IT and know-how, to meet complex customer demands
7. **Shift in the trade landscape** with legacy trade lanes losing importance – emerging markets are new major trading nations
8. **Hinterland connections** efficiency is of increasing importance – and even an entry condition for business with Chinese shippers
9. **Contract logistics** – challenges from the tendency toward shorter contract lifecycles will increase hurdles to achieve an appropriate ROI
10. **Globalization** vs. regionalization: demand will either grow for "global total solutions" or revert back to regionalization

Source: Fraunhofer SCS, 2015 & Roland Berger 2014



Germany

overview



Fast facts

GDP 2014 (Bill. Euro)	3.502
GDP per Capita (Euro)	36.107
Population 2014 (Mill.)	81
Rail network (km in 2009)	33.446
Road network (km in 2011)	643.702

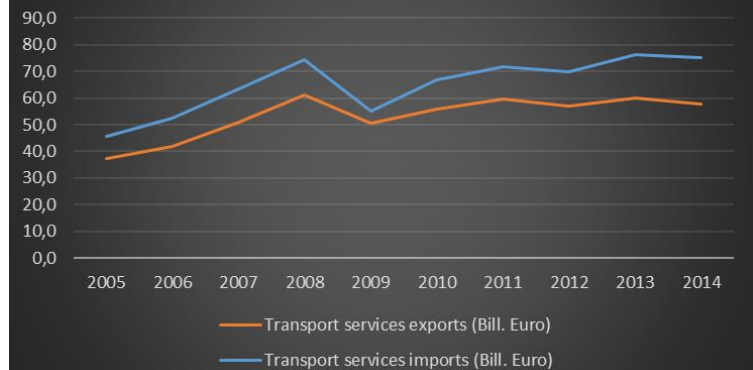
Logistics Performance Index (LPI)



Merchandise Trade



Transport services (import/export)



Source: WTO and WB

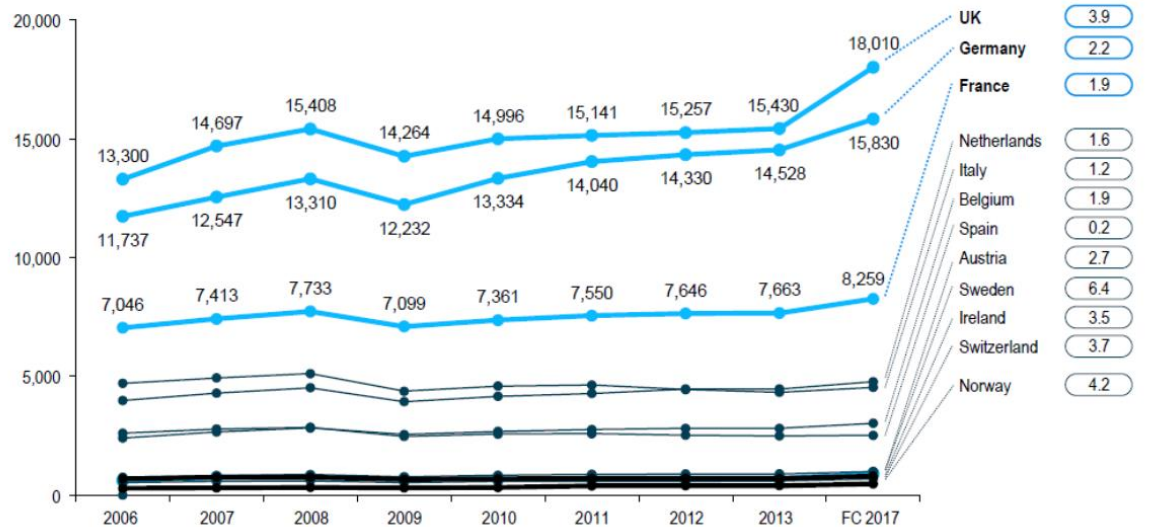


Germany

market size & development

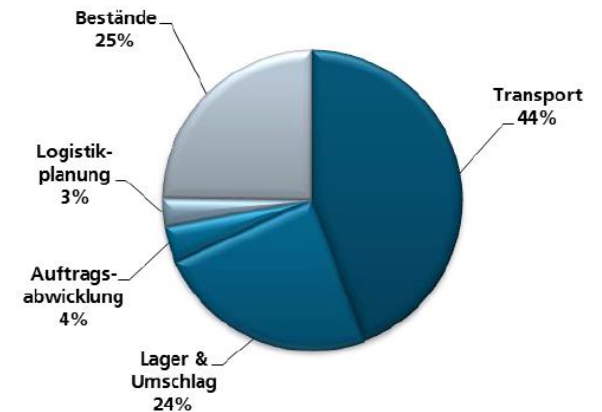


Contract logistics market size per country [EUR m] WESTERN EUROPE



Source: Roland Berger 2014

Logistikumsätze nach Leistungsart in %



Source: Fraunhofer SCS, 2014

Germany

logistics service providers



Rank	Company	Data Quality	Logistics revenue 2014 in m. €	National employees	Logistics revenue 2014 in Europe in m. € (excluding »Mail«)	Notes
1	DEUTSCHE POST DHL (DE)	*	7,340	170,596	29,700	diversified
2	DB MOBILITY LOGISTICS (DE)	***	7,121	122,970	15,107	div., via DB SCHENKER LOGISTICS and DB SCHENKER RAIL
3	DACHSER (DE)	***	2,850	13,058	4,895	forw. / LTL / food log.
4	KUEHNE + NAGEL (CH)	***	2,623	n/a	11,745	forwarder / net forw. rev.
5	RHENUS (DE)	***	2,300	n/a	4,135	forwarder
6	VOLKSWAGEN KONZERNLOGISTIK (DE)	*	1,800	n/a	2,400	VOLKSWAGEN owned contract logistics
7	UPS EUROPE (BE)	*	1,700	18,000	6,000	CEP service provider
8	HERMES EUROPE (DE)	*	1,650	n/a	2,230	CEP, forwarding
9	GEOPOST (FR)	***	1,585	7,500	4,921	CEP, via DPD
	CARGOLINE (Cooperation) (DE)	***	1,415	n/a	2,054	LTL cooperation
	E.L.V.I.S. (Cooperation) (DE)	***	1,388	n/a	2,018	part load network
10	HELLMANN WORLDWIDE (DE)	***	1,364	n/a	1,810	forwarder
	Sum Top 10		30,333			
11	ARVATO (DE)	*	1,250	40,846	2,000	contract logistics
12	IMPERIAL LOGISTICS (DE)	***	1,210	4,982	1,560	forwarder / diversified
13	KRAFTVERKEHR NAGEL (DE)	**	1,200	n/a	1,700	chilled goods distribution
	IDS (Cooperation) (DE)	***	1,192	n/a	1,800	LTL cooperation
14	PANALPINA (CH)	***	1,032	n/a	2,159	forwarder / net forw. rev.
15	PIEGE LOGISTIK (DE)	*	1,000	n/a	1,400	contract logistics
	Sum Top 15		36,025			

Most of the largest logistic players in Germany do also have their headquarters in Germany. Only UPS, GeoPost and K+N have their HQ abroad.

The combined top 10 turnover is just over Euro 30 bn. and equals about 13% of the total German market.

Source: Fraunhofer SCS, 2015

Germany

trends and challenges

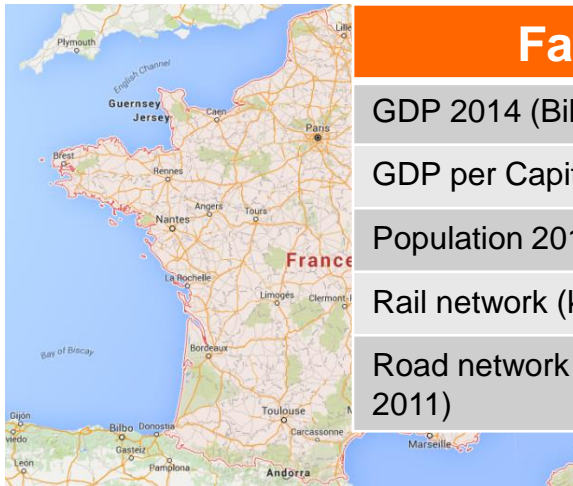
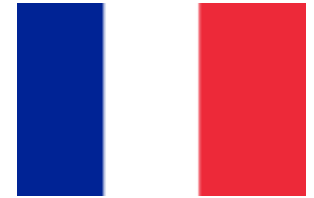


- As the evolution of Germany as a logistic location is highly dependable on the economy, the positive GDP forecast will also lead to increasing importance.
- Despite its well developed logistics infrastructure, investments are urgently needed, especially on ports to prepare for larger container vessels , rail to solve several bottleneck and road which in places over-crowded.
- Because of a lack of funding prioritizing (new) infrastructure projects is needed.

Source: Fraunhofer SCS, 2015 & Roland Berger 2014

France

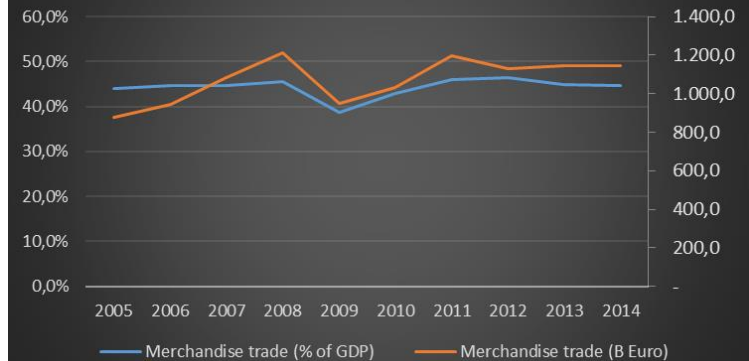
overview



Fast facts

GDP 2014 (Bill. Euro)	2.572
GDP per Capita (Euro)	32.424
Population 2014 (Mill.)	66
Rail network (km in 2009)	30.013
Road network (km in 2011)	1.052.380

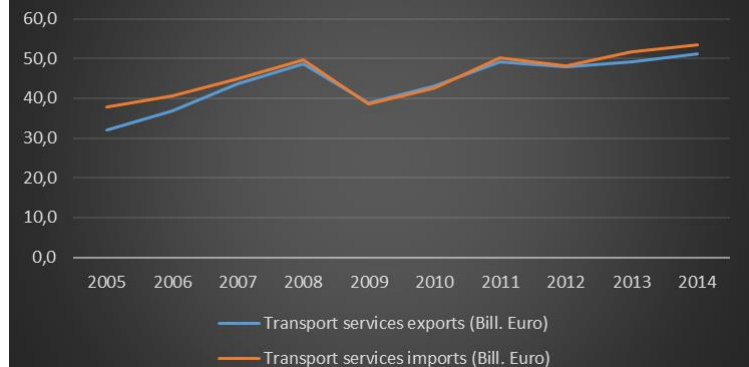
Merchandise Trade



Logistics Performance Index (LPI)



Transport services (import/export)



Source: WTO and WB



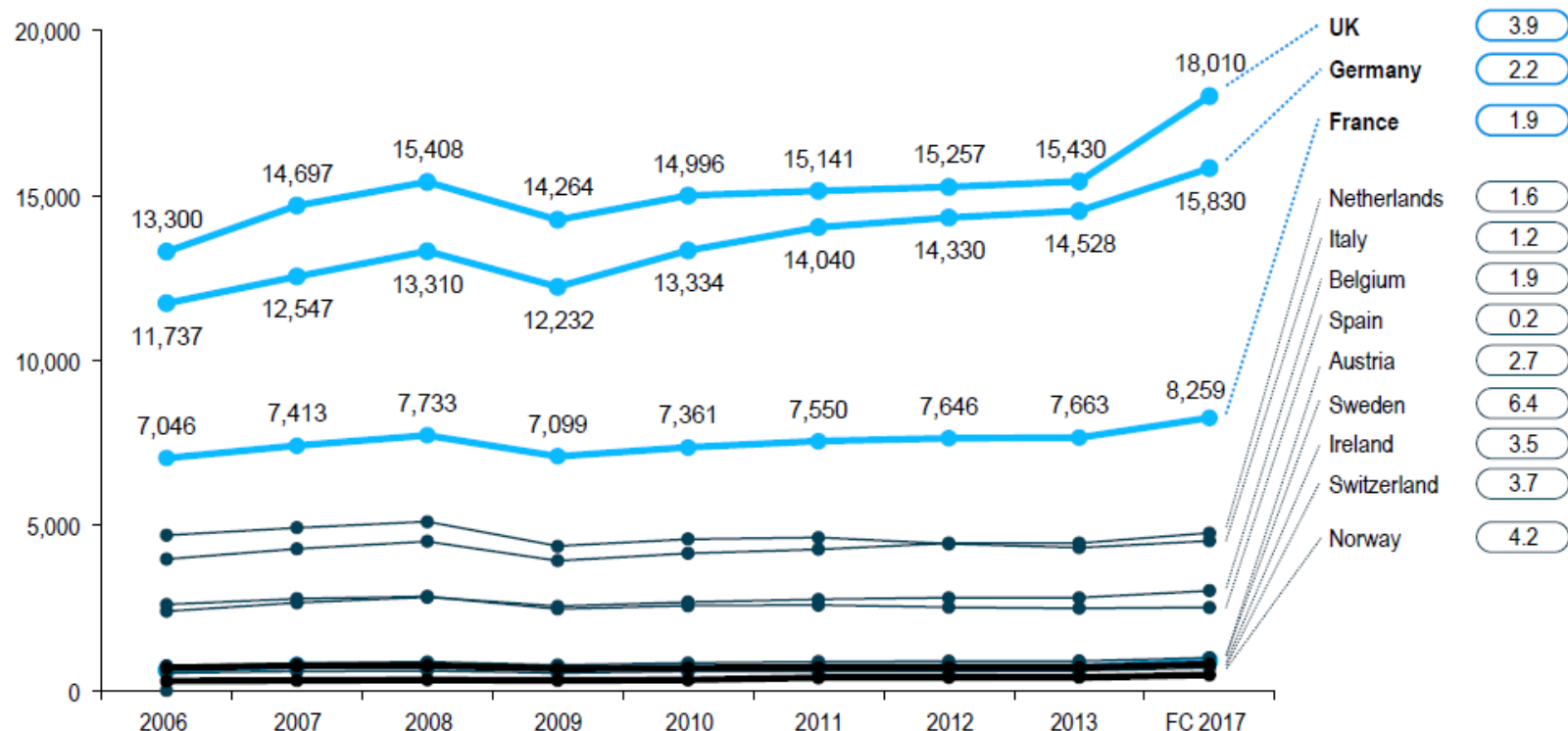
France

market size & development



Contract logistics market size per country [EUR m] WESTERN EUROPE

CAGR '13-'17 [%]

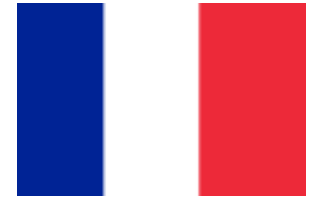


Source: Roland Berger 2014



France

logistics service providers



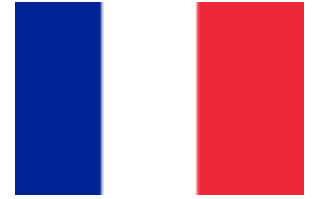
Rank	Company	Data Quality	Logistics revenue 2014 in m. €	National employees	Logistics revenue 2014 in Europe in m. € (excluding «Mail»)	Notes
1	SNCF (FR)	**	4,880	n/a	9,041	rail cargo / forwarder, via GEODIS CALBERSON
2	CMA-CGM (FR)	*	3,450	n/a	n/a	ocean cargo
3	LA POSTE (GROUP) (FR)	**	3,385	n/a	7,180	CEP, also via GEOPOST
4	STEF (FR)	***	2,162	12,735	2,370	contract logistics / food
5	GEFCO (FR)	*	2,137	n/a	3,037	diversified
6	XPO LOGISTICS (UK)	***	1,690	n/a	4,400	forwarder, formerly NORBERT DENTRESSANGLE
7	BOLLORE HOLDING (FR)	***	1,689	5,034	2,252	forwarder
	ASTRE GROUP (Cooperation) (FR)	*	1,435	n/a	1,435	forwarder
8	DB MOBILITY LOGISTICS (DE)	***	1,386	7,222	15,107	div., via DB SCHENKER LOGISTICS and DB SCHENKER RAIL
9	DEUTSCHE POST DHL (DE)	*	1,350	n/a	29,700	diversified
10	KUEHNE + NAGEL (CH)	***	1,247	n/a	11,745	forwarder
	Sum Top 10		23,376			
11	TNT EXPRESS (NL)	***	736	4,443	2,743	CEP service provider
12	DACHSER (DE)	***	717	n/a	4,895	forw. / LTL / food log., former GRAVELEAU
13	UPS EUROPE (BE)	*	698	2,500	6,000	CEP service provider
14	EASYDIS (FR)	***	548	n/a	548	FMCG distribution
15	CAT GROUP (FR)	*	530		1,024	automotive contract log.
	Sum Top 15		26,605			

The France logistics market is dominated by French companies. The top 5 only contains French LSP's which are supported by a protective government. As in many countries the national railway company leads the list.

Source: Fraunhofer SCS, 2015

France

trends and challenges

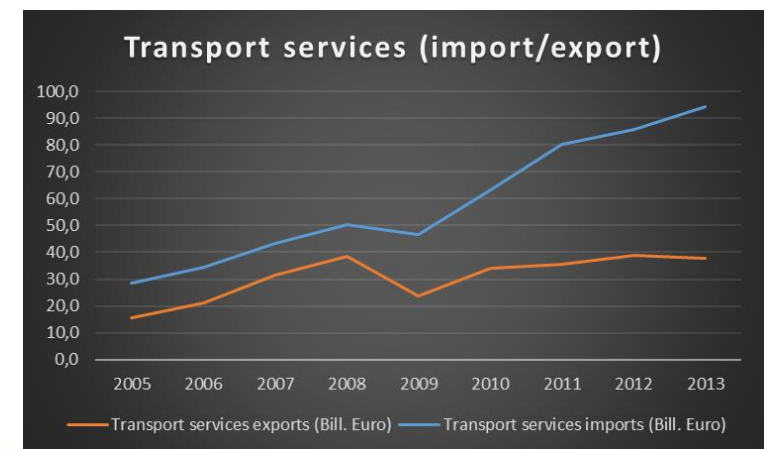
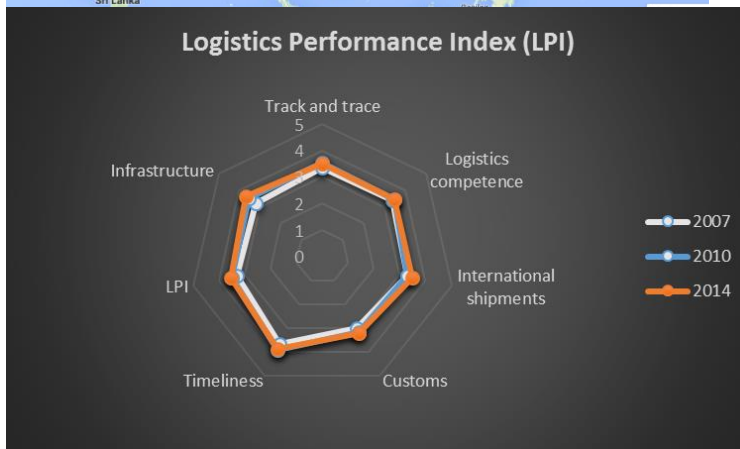
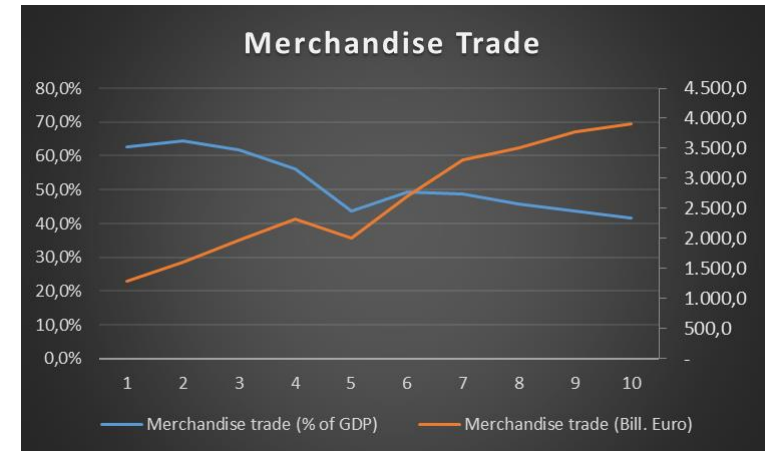
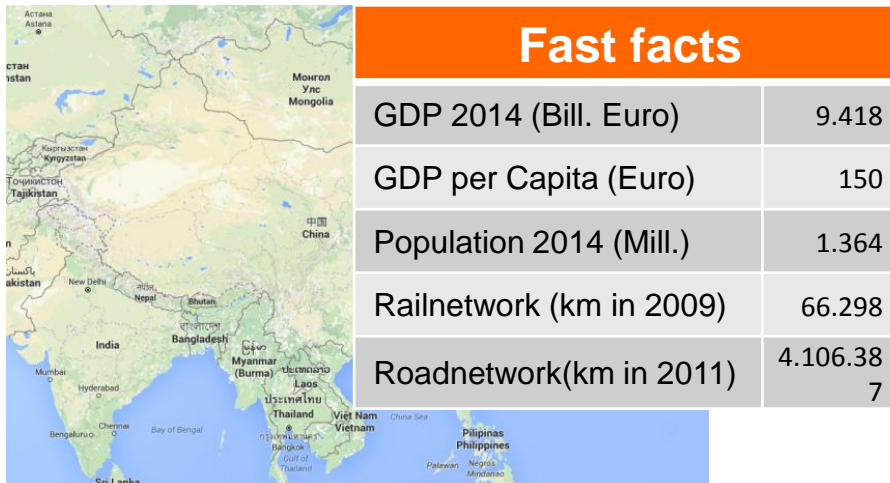


- The national government is demanding increasing awareness of the environment in logistic. For example a leading initiative is “Distripolis”, a city logistics concept executed by Geodis on now rolled out to many French and maybe other European cities.
- In 2017 the new channel Seine-Nord (CSNE) will be opened offering an alternative freight route between Paris/ La Havre and Belgium/ Netherlands/ Germany
- Next to increasing awareness French government also stimulates alternative freight transportation with the aim to reduce road freight transport.

Source: Fraunhofer SCS, 2015 & Roland Berger 2014

China

overview



Source: WTO and WB

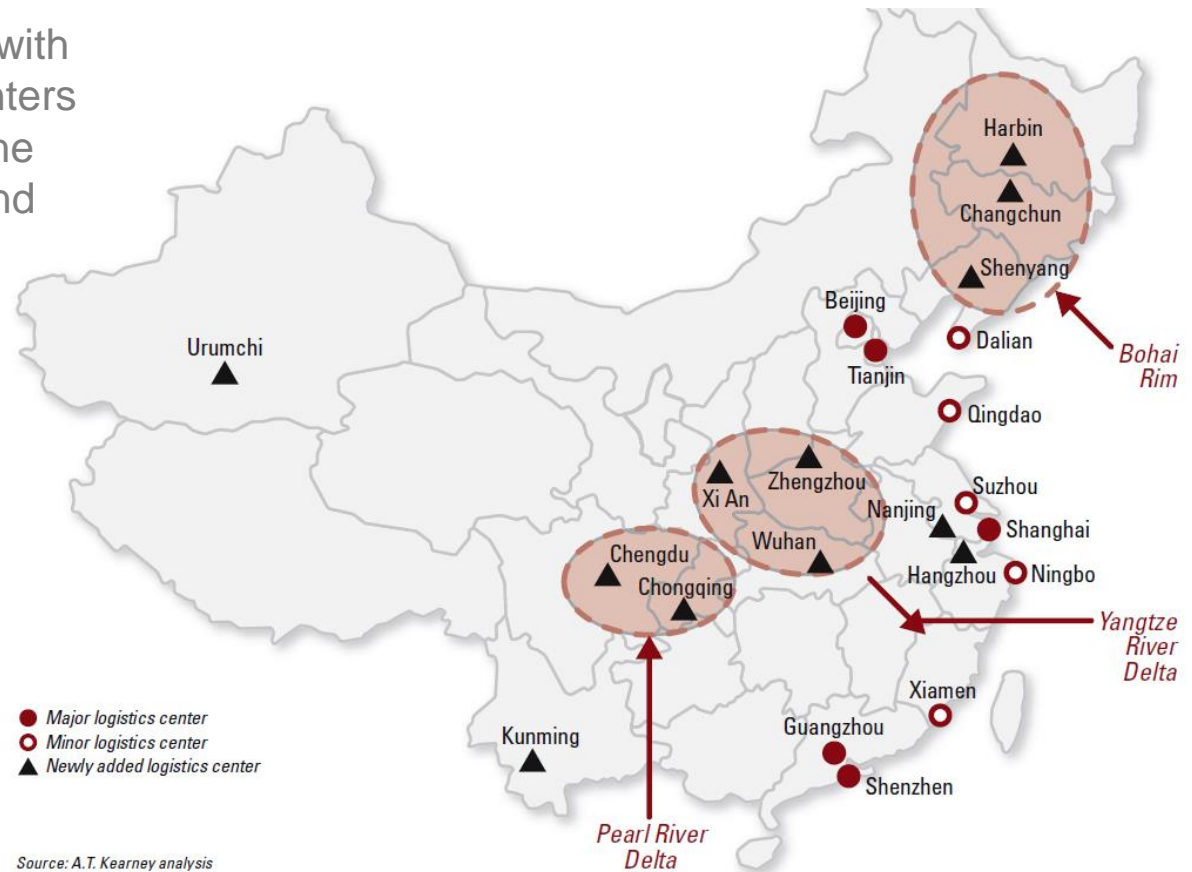


China

hinterland connections



Especially in the regions with newly added logistics centers new roads will increase the need for transportation and logistics.



China

hinterland connections



*Freight traffic in China
(million tonnes)*

	2010	% total	2011	% total	2012	% total
Road	24.481	76%	28.201	76%	31.885	78%
Rail	3.643	11%	3.933	11%	3.904	10%
Air	6	0%	6	0%	6	0%
Water	3.789	12%	426	1%	4.587	11%
Pipeline	500	2%	571	2%	612	1%
Total	32.418	100%	36.970	100%	40.994	100%

- **Road:** Road transport is the major freight transport mode in China. In 2012, over 75% of cargo is transported by road. About one-third of transport costs in China are road tolls. Excessive highway tolls and price increases of fuel and labour reduce profitability of logistics companies considerable
- **Rail:** The Chinese Railway has been reformed in 2013 by introducing the China Railway Corporation (CRC) which is now responsible for all commercial activities. Some of most important changes are; a cargo plan is no longer required, handling charges are standardized, there are more business resources for handling high-value products and daily necessities and door to door service (instead of only station to station) is now available
- **Inland waterways:** With a navigable length of 123,495 km, China's inland water transport network is the largest in the world in length and in volume of cargo. It consists of more than 5,000 rivers, of which the 6,300-km Yangtze and its tributaries is the longest

Source: Fung Business Intelligence Centre, 2013

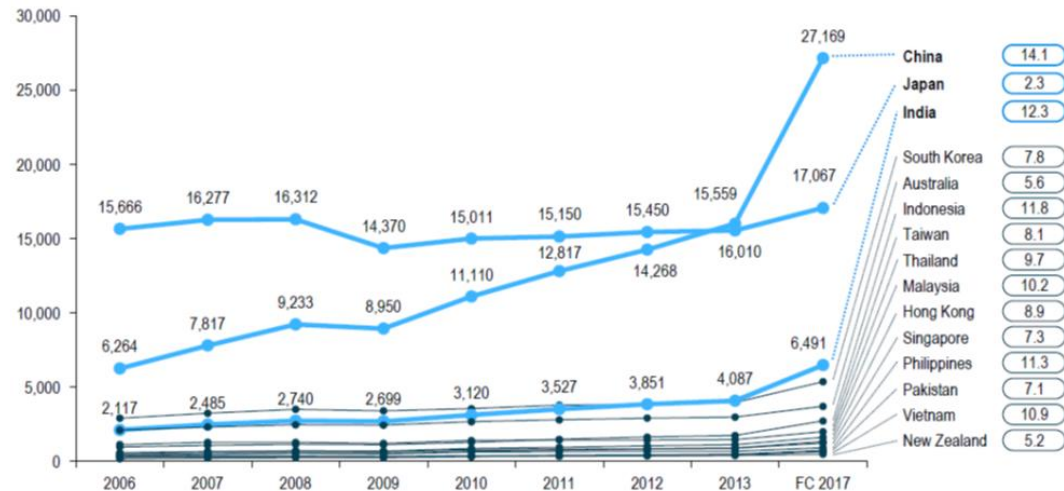
China

market size & development

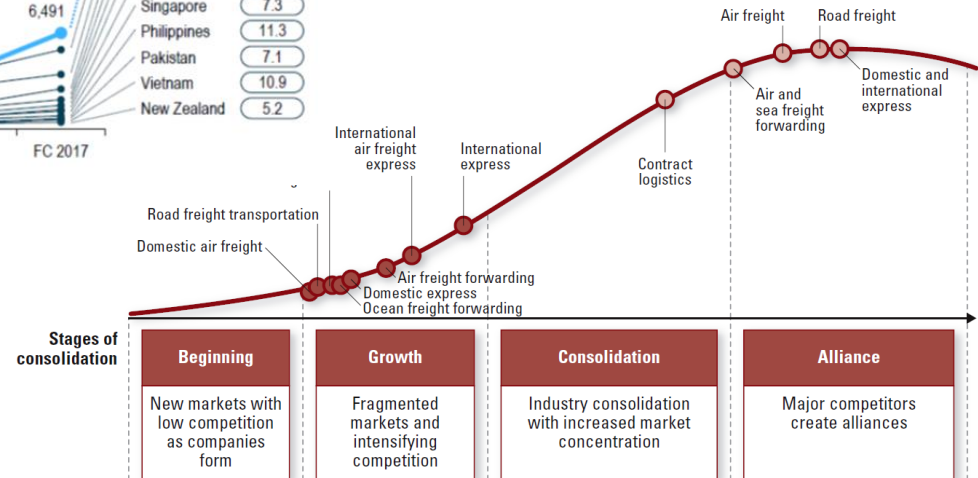


Contract logistics market size per country [EUR m] ASIA PACIFIC

CAGR '13-'17 [%]



Despite Chinese extraordinary success, China's transportation and logistics industry as a whole remains in the early stage of development



Source: Roland Berger 2014

China

logistics service providers



Nr.	Name	Revenue (Euro) Million
1	China ocean shipping (group) corporation,	14.946
2	Sinotrans changhang group co., LTD.,	10.232
3	China Shipping (group) corporation	6.372
4	Kailuan group international logistics co., LTD.	3.925
5	China material storage and transportation corporation	2.535
6	Xiamen xiangyu group co., LTD.	2.426
7	China railway materials group co., LTD.	2.012
8	Yizhong energy fengfeng group Hangdan Dingfeng logistics co., LTD.,	1.594
9	Chinese oil and gas transportation company	1.430
10	Henan coal chemical industry group the kingdom dragon logistics co., LTD.	1.259

China

trends and challenges

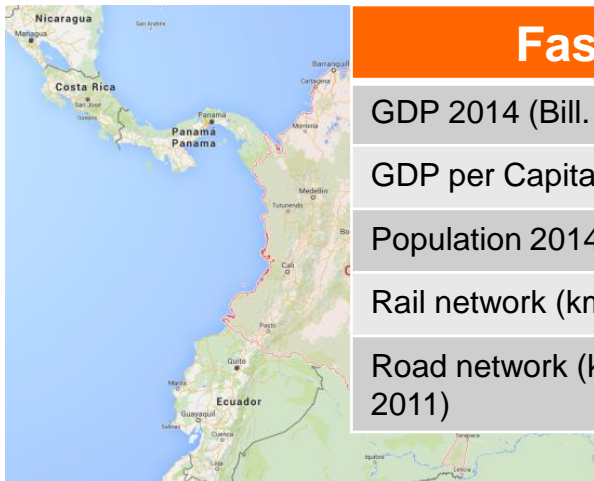


- Especially in the regions with newly added logistics centers new roads will increase the need for transportation and logistics.
- Companies' distribution models are moving from dealership models to multi-channel and direct sale models requiring higher density network with quicker response times
- Low carbon rules will force transportation and logistics companies to make environmental protection a primary goal
- Chinese shipping companies increasingly viewing logistics as strategic area that can provide key competitive advantage and therefore setting higher requirements on service levels and offerings.

Source: Fraunhofer SCS, 2015 & Roland Berger 2014

Colombia

overview



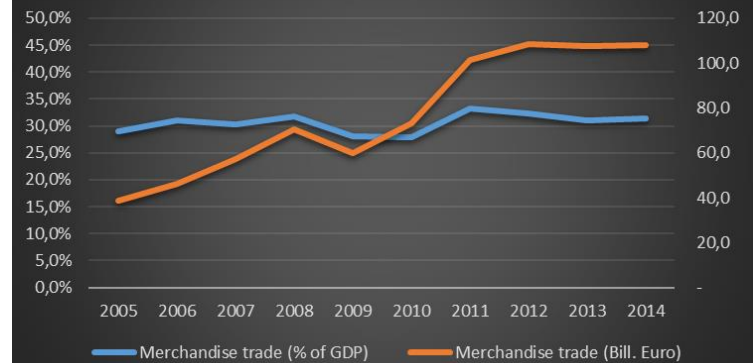
Fast facts

GDP 2014 (Bill. Euro)	343
GDP per Capita (Euro)	4.234
Population 2014 (Mill.)	48
Rail network (km in 2009)	1672
Road network (km in 2011)	214.433

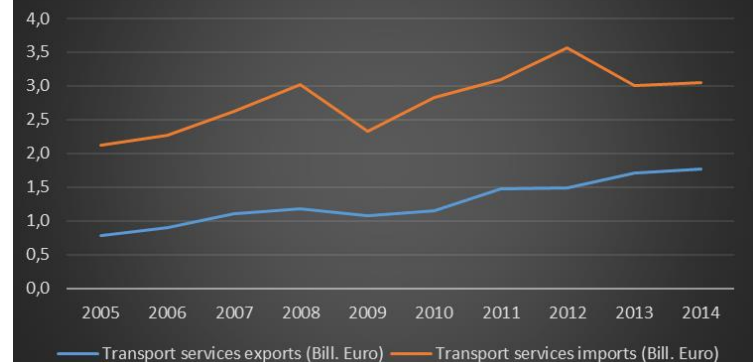
Logistics Performance Index (LPI)



Merchandise Trade



Transport services (import/export)



Source: WTO and WB



Colombia

hinterland connections



- Bogotá's El Dorado Airport is Latin America's busiest cargo airport.
- Colombia's highway network is largely outdated and in poor condition, heavy rains complicate this problem
- Over 90% of all imports and exports are transported by sea. Colombia's largest port is Buenaventura, (8,5m Tons) Other large ports are; Cartagena (7,1m tons) Santa Marta (3,3m tons) and Barranquilla (3.3m tons)
- Colombia is investing until 2020 about USD 50 billion in improving infrastructure (26 for road, 10 for railways, 8 for urban transport, 3 for port and 3 for inland waterways)



Colombia

hinterland connections



Only 1.5% of Colombia's freight is transported under a multimodal scheme, a very low figure compared to the 60 per cent rate achieved by European countries. Freight accounts for 35 per cent of the cost of exported goods, when in the rest of the world, that figure stands at just 6 per cent.

- **Road:** Approximately 75% of all roads are paved, but the quality varies significantly from region to region. Estimates indicate that 50% of all roads are in poor condition. Transporting a container from Bogota to other national ports costs \$ 2,200, whereas shipping it from there to China costs only \$ 1,000
- **Rail:** The railways have been built to connect the main cities to the Magdalena River and key ports, Colombia's, but the system is now mostly inactive. In 1986 the government decided that the only way to avoid complete closure of the rail network was to shut down all but a few links. Although 20% of Colombia's cargo is still moved by rail but 99% of this is coal.
- **Inland waterway:** The Magdalena River is the principal river of Colombia, flowing northward about 1,500 kilometres through the western half of the country. It is navigable through much of its lower reaches, but once the highways became the predominant logistical mode of no significant importance anymore. The government is now looking to make it navigable for 7,000ton ships by 2030. Recently a concession was granted to begin work. Besides the Magdalena River it is also to make the Rivers Meta, Putumayo, Guaviare partly navigable



Source: JLL Research (2015) & Colombian Chamber of Infrastructure

Colombia

trends and challenges

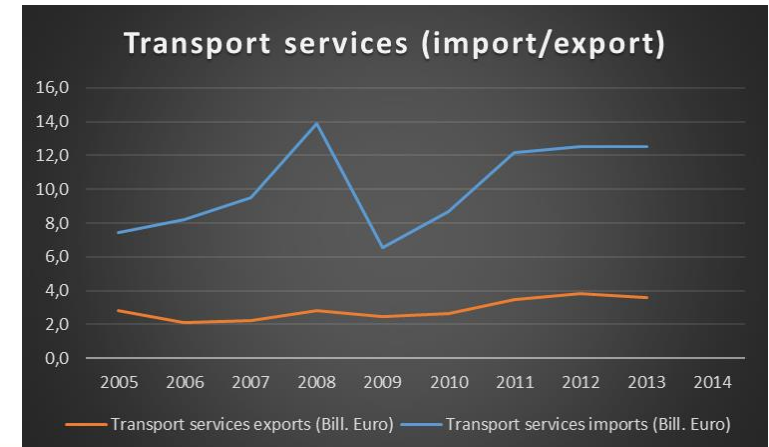
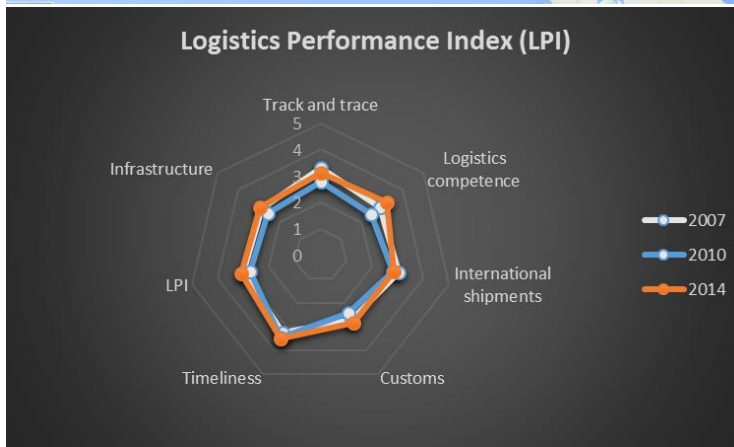
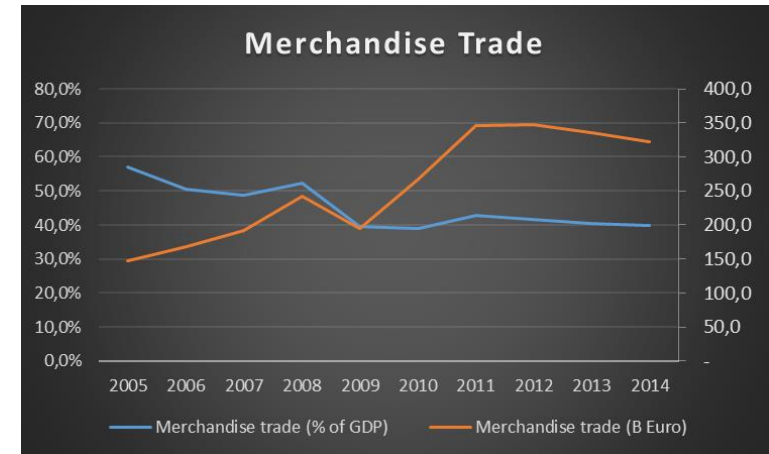
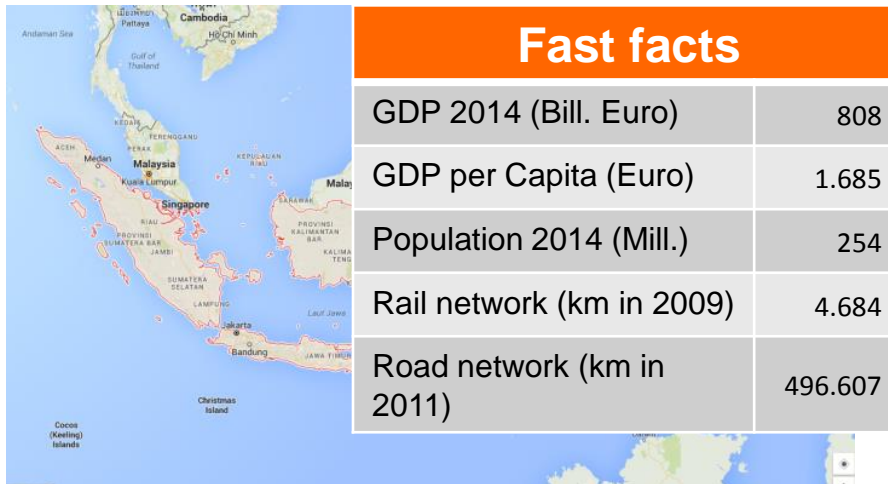


- The gap between business conditions (as expressed by market compatibility) and Colombia's market size, growth attractiveness and connectedness is striking.
- Despite increased investment in developing road infrastructure and defining an institutional structure, Colombia needs to diversify its transportation modal matrix (including rail and river transport) and optimize the use of its logistics assets

Source: Agility Emerging Markets Logistics Index, 2015

Indonesia

overview

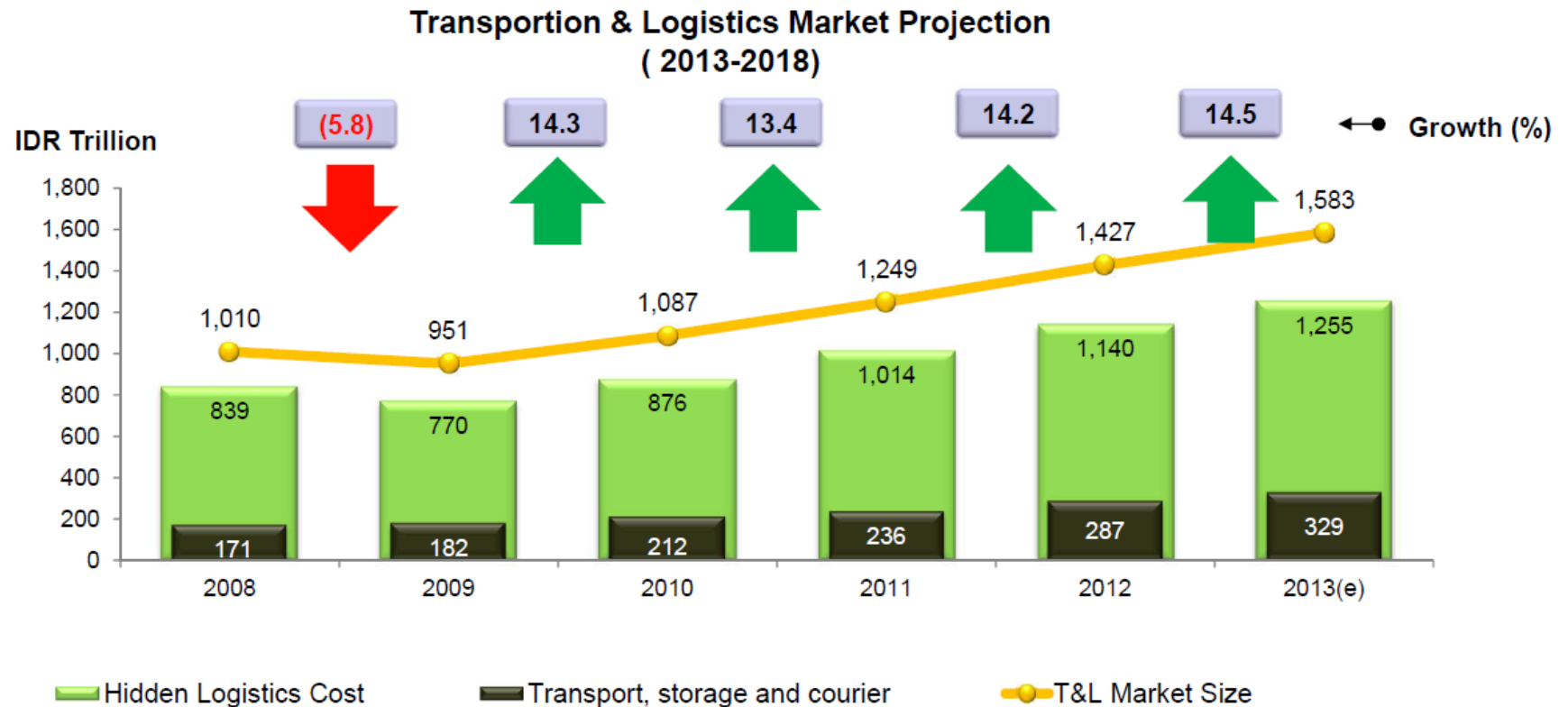


Source: WTO and WB



Indonesia

market size & development



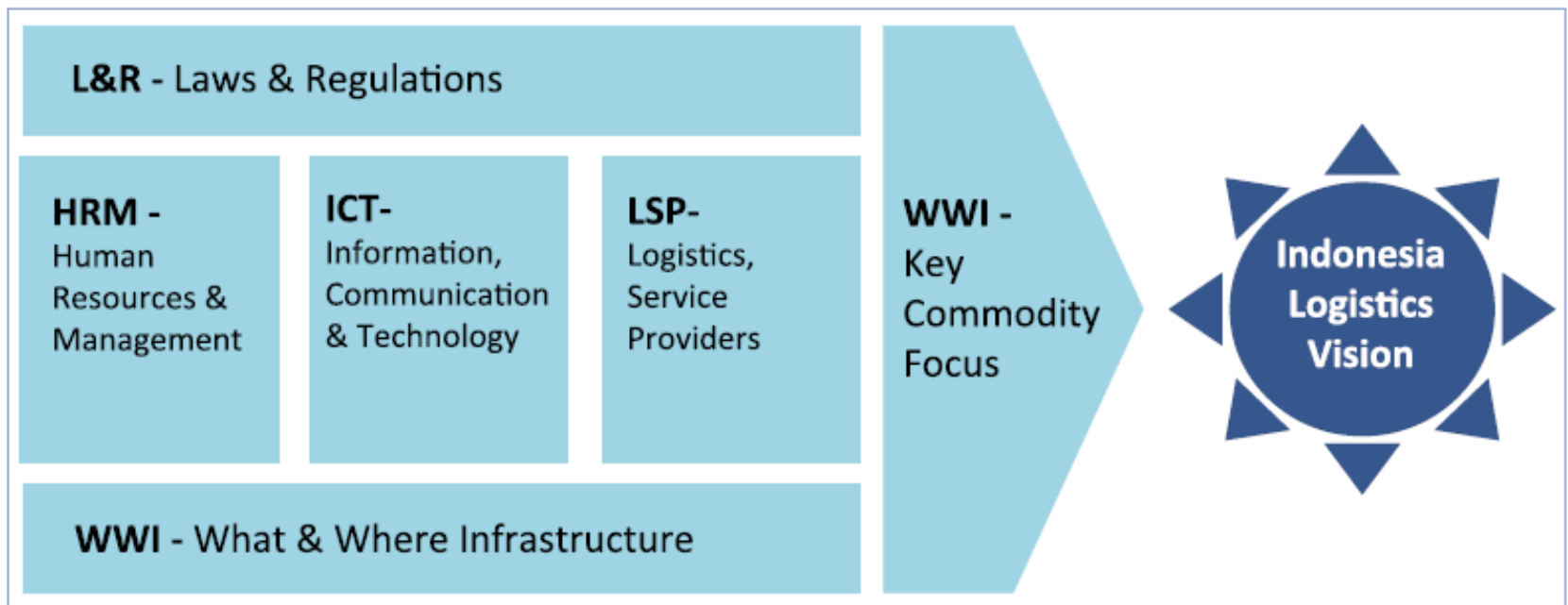
Source: Indonesian Statistical Agency

Indonesia

trends and challenges



To enhance its logistics industry Indonesia is developing a National Logistics System which is program running until 2025, the main goal is to to establish an integrated, effective and efficient logistics system to improve the national competitiveness on the regional and global markets, and to improve social welfare.



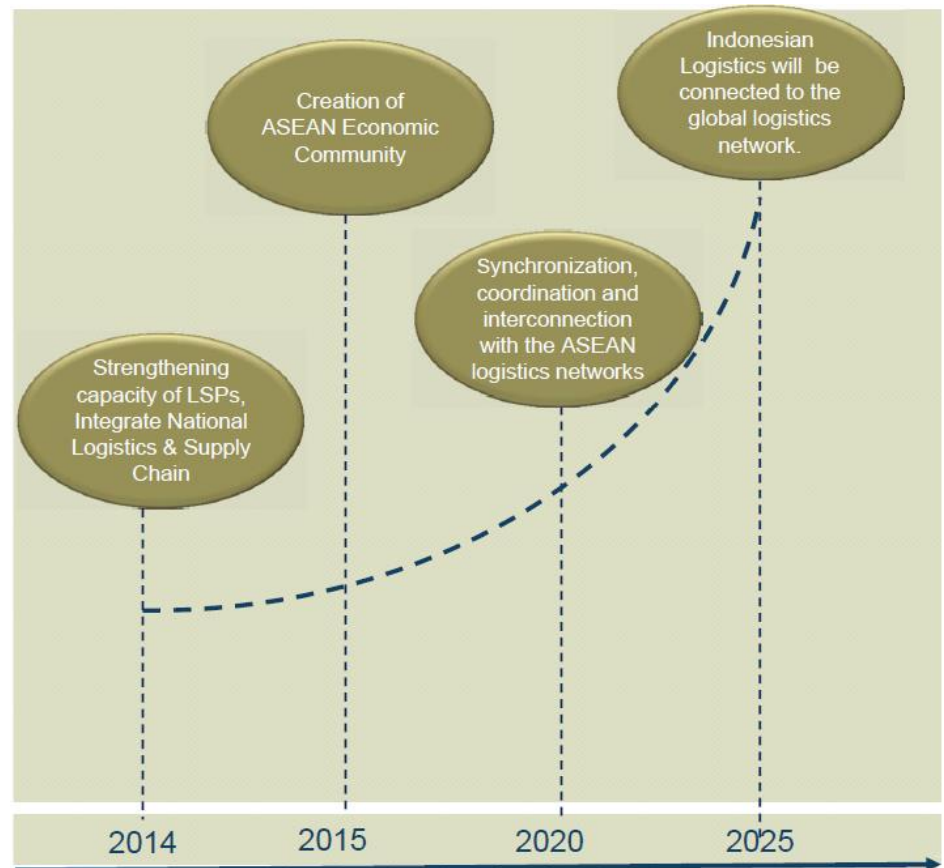
Indonesia

trends and challenges



Main goals:

- 2014-2015: Infrastructure development among ASEAN countries are expanded to support the transportation & logistics service in the region
- 2015-2020: ASEAN Logistics Network Integration
- 2020-2025: Integrated Global Logistics Network. Indonesia will be connected to the regional (ASEAN) and global logistics systems via International Hub Ports



Source: Frost & Sullivan Analysis

South Africa

overview



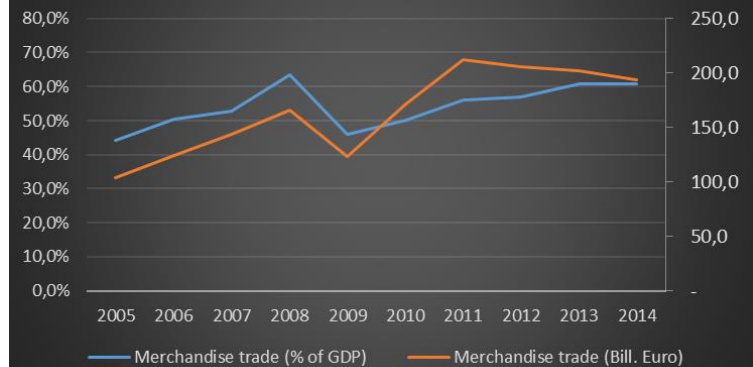
Fast facts

GDP 2014 (Bill. Euro)	318
GDP per Capita (Euro)	5.533
Population 2014 (Mill.)	54
Rail network (km in 2009)	20.500
Road network (km in 2011)	-

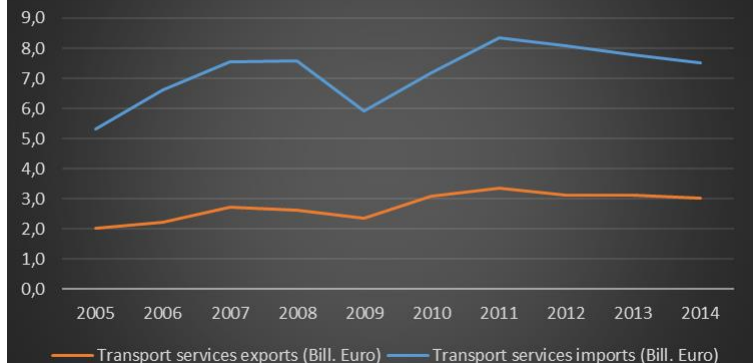
Logistics Performance Index (LPI)



Merchandise Trade



Transport services (import/export)



Source: WTO and WB

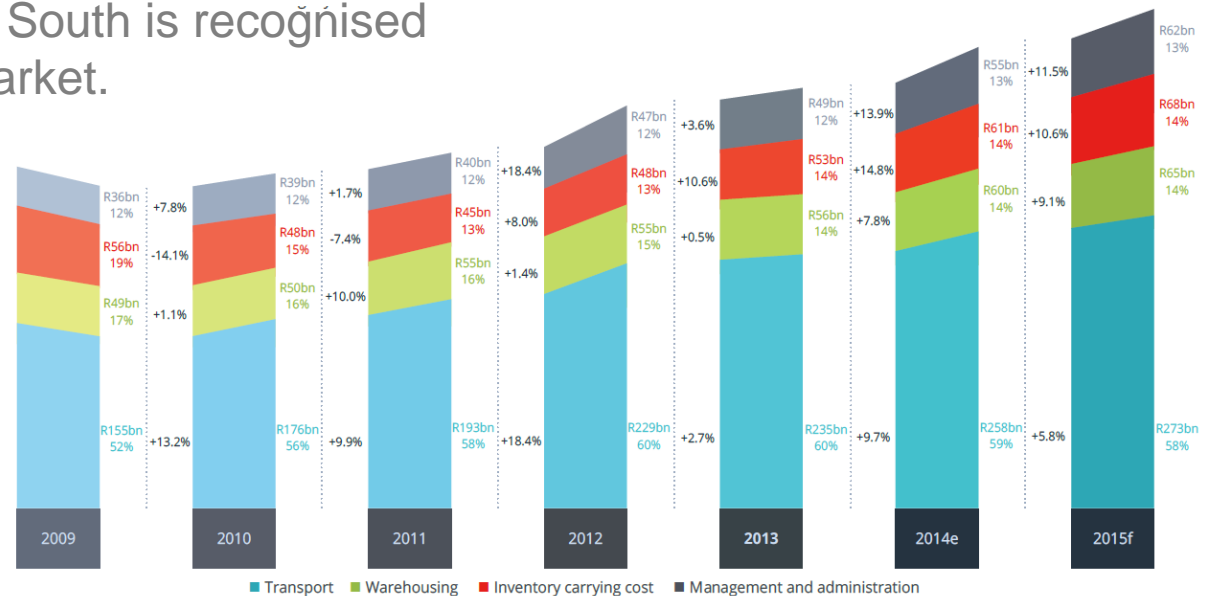


South Africa

market size & development



South Africa has the largest economy in Africa and is the most developed in Sub-Saharan Africa with the most advanced transport infrastructure. As a member of the BRICS countries, South is recognised as a key emerging market.



Source: Stellenbosch University, 2015

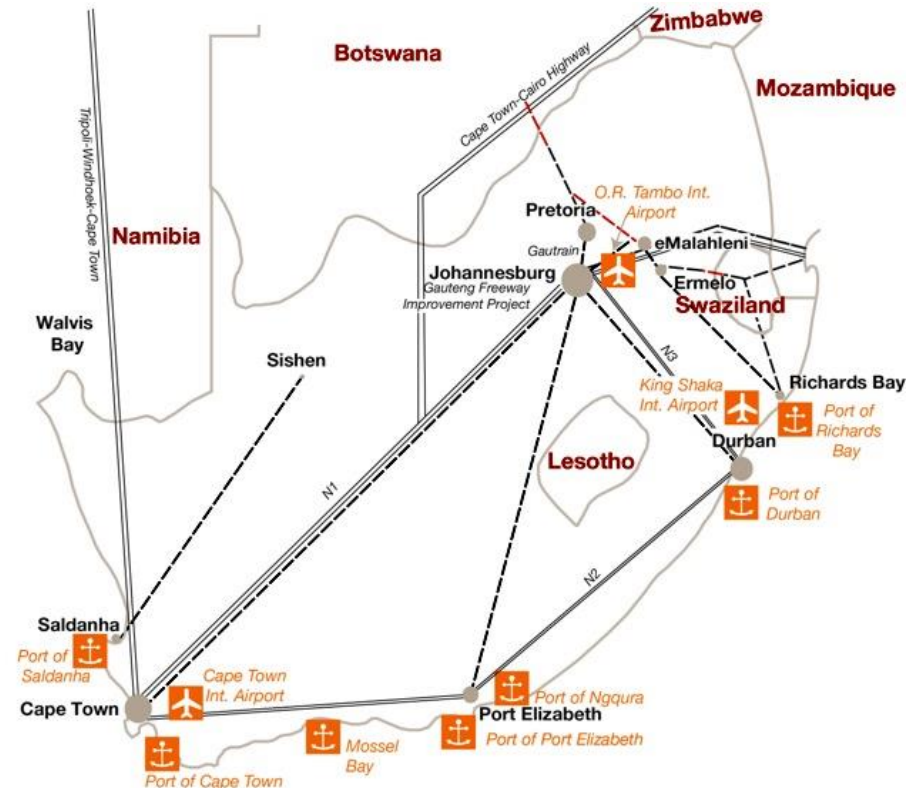
South Africa

hinterland connections



The need to move goods to inland centers of commerce have created a transport-intensive domestic economy. South Africa's logistics costs as a percentage of GDP in 2013 was 11.1% which is higher than developed countries but competitive when compared to other developing regions.

The air and rail networks are the largest on the continent. The major national roads are in good condition, but the provincial road networks have deteriorated considerably. South African port efficiency has improved considerably as a result on investment in new assets such as ship to shore cranes and other supporting handling equipment.



South Africa

logistics service providers



Barloworld: Barloworld Logistics is one of the leading logistics and supply chain management businesses in southern Africa, with complementary operations in China, the United Arab Emirates, Iberia, Germany and the United Kingdom.



Jonen Freight (Pty) Ltd. is an independent South African owned company who has been on the local market since 1979. They are one of the oldest of the medium sized freight forwarders on the South African market today



Logwin offers complete full service solutions. The service portfolio extends from branch-appropriate supply chain management and warehousing through to logistical value-added services to complete outsourcing projects. The business segment Solutions thereby has a high level of competence in process control and the development of customised IT solutions.



Managed Freight developed an online **freight management consultancy** to provide companies with an alternative to existing services and logistics service provider selection. Most of our clients are small to medium businesses that require support in their shipping department and do not have the volume to negotiate preferable terms and rates.

www.logisticssouthafrica.org



South Africa

trends and challenges



- In South Africa, there is much to be done about reducing the demand for logistics – in other words reducing the kilometres travelled by each tonne, how long it is stored and how often it is handled.
- A major objective is to achieve sustainable funding and maintenance for the infrastructure used by each transport mode.
- Reducing the monetary cost of logistics is an important goal but equally important is the reduction in societal costs such as emissions.
- More general Supply Chain challenges in S-A are:
 - Improving service levels to customers
 - Integration of technology
 - Lowering procurement costs and reducing order lead times
 - Improving visibility in the supply chain
 - Improving the flow of business intelligence
 - Aligning with key players in the supply chain.

Source: Council for Scientific and Industrial Research (CSIR), 2014 & Stellenbosch University, 2015