Proposition Multimodal Hinterland Connections

Summary

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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 "

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 ."



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





Multimodal hinterland connections

connecting the Netherlands with European consumer markets

- Multimodal transport: different modalities
- Intermodal transport: using standard loading units, e.g. containers
- Multimodal hinterland connections:
 - Maritime/Shortsea
 - Inland waterway/barge
 - Rail
 - Road
 - Also air and pipeline
- Dutch ports: sea connections to ports at edge of logistics regions
- Multi/intermodal planning services





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



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





Multimodal hinterland connections

Intermodal corridors; an example from Rotterdam to the hinterland



Holland

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





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 shippersCapability of IT systems
- Intermodal Infrastructure
- Contracts flexible
- Network business models
- Trust: mental shift required



Benefits

of using multimodal hinterland solutions



Optimal use of transport modality networks in Europe

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



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



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)



Extensive expertise in hinterland logistics The Netherlands



EUROPEAN GATEWAY SERVICES

ORTEC

OPTIMIZE YOUR WORLD

LSPs and deep sea terminals offering optimized intermodal and synchromodal solutions. IT Companies, including global players, offer a broad range of IT solutions to manage hinterland supply chains.



Dutch universities, together with industry parties, have carried out world-class research into Hinterland Logistics solutions leading to knowledge-intensive innovations



Dutch education institutes offer highly skilled graduates.





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 roadmap for Synchromodality 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.



Improving IT tools

Set up and Implementation

- Innovation of synchromodal concepts
- Shippers and logistics service providers



• 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



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



Airports

CARGONAUT Front runner in information services for the air cargo industry

Sector co-operation



Platform offering connections between al logistic partners in floriculture sector



Intermodal and synchromodal logistics services

Dutch solutions: Providing a-modal logistics services







Multimodal planning IT solutions

Dutch solutions: control towers for efficient synchromodal networks



