The BE LOGIC tools in the context of the e-freight concept

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Research and Consulting

Mobycon | Concordis Groep
Content of presentation

- Project introduction
- Logistics Benchmarking tool
- European Intermodal Route Finder (EIRF)
- BE LOGIC and the e-freight concept
Project facts and figures

- **Objective:** improve the efficiency within and across different modes of transport
- **Special attention to SMEs**
- **Duration:** 1 September 2008 – 28 February 2011
- **9 partners representing 8 EU countries**
Main results of BE LOGIC project

- **Logistics benchmarking tool** to support company’s search for improvement due to modal change
- **Intermodal Route Finder** enables users to construct intermodal routes via waterborne and rail transport across 29 European countries
- Recommendations on the **need for new quality standards** in transport logistics
- Recommendations on how the European transport logistics **policies and framework conditions** can be improved
The BeLogic Tools are online

European Intermodal Route Finder  Logistics Benchmarking Tool

BE LOGIC is a Collaborative Project co-founded by the European Commission in the scope of the 7th Framework Programme for Research and Development.

The Project has officially started on September 1st, 2006, with a duration of 30 months.

The aim of BE LOGIC project is to improve the quality and efficiency within and across different modes of transport, by means of benchmarking in logistics and co-modality.

A benchmark of logistics chains can give SMEs insight into the potential gains of reconsidering their logistics choices in terms of costs and performances, environmental impact, quality of service.

The project will define different benchmarking methodologies and analyze a number of relevant real cases, which will contribute to the definition of a web-based benchmarking tool.
Objectives and KPIs

Objectives of the Tool

- To show shippers, forwarders and transport companies that alternatives exist to ‘road only’
- Support users (i.e. shippers and forwarders) when searching for potential strategic and tactical improvements through modal change
  => promoting co-modal transport

- 6 criteria (KPIs) to compare current practice with alternatives:

  **Quantitative**
  - Time
  - Cost
  - Sustainability

  **Qualitative**
  - Reliability
  - Quality
  - Flexibility
Example

Case: transport from Stadskanaal (NL) to Vigonza (IT) by truck

Alternative: by rail via Rotterdam
# Input Data (Example)

Values to be filled in on the KPI’s (example):

<table>
<thead>
<tr>
<th></th>
<th>Road</th>
<th>Rail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>€ 2500</td>
<td>€ 3200</td>
</tr>
<tr>
<td>Transit time</td>
<td>36 hours</td>
<td>108 hours</td>
</tr>
<tr>
<td>Flexibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand adaptability</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Timetable adaptability</td>
<td>5</td>
<td>4,3</td>
</tr>
<tr>
<td>Reliability of service</td>
<td>4</td>
<td>3,7</td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tracking &amp; tracing</td>
<td>5</td>
<td>4,3</td>
</tr>
<tr>
<td>Presence quality system</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C02-emission</td>
<td>2,19 tons</td>
<td>0,69 tons</td>
</tr>
</tbody>
</table>
Output of the Tool

The tool visualises results of the analysis in tables

**Final Results Of Transport Chain**

Session Indicator weights:

<table>
<thead>
<tr>
<th>Transport Time</th>
<th>Transport Cost</th>
<th>Flexibility</th>
<th>Reliability of service</th>
<th>Quality</th>
<th>Environmental Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>30</td>
<td>15</td>
<td>15</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

Scores by indicator:

<table>
<thead>
<tr>
<th>Alternative Name</th>
<th>Main Mode</th>
<th>Total Transport Time</th>
<th>Total Transport Cost</th>
<th>Total Flexibility</th>
<th>Total Reliability of Service</th>
<th>Total Quality</th>
<th>Total Environmental sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pekela - Vigonza (road)</td>
<td>Road</td>
<td>36.00</td>
<td>2500.00</td>
<td>3.75</td>
<td>3.25</td>
<td>3.50</td>
<td>2.19</td>
</tr>
<tr>
<td>Pekela - Rotterdam - Vigonza (road/rail)</td>
<td>Rail</td>
<td>110.00</td>
<td>3200.00</td>
<td>3.88</td>
<td>3.17</td>
<td>3.39</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>Hours</td>
<td>€</td>
<td>Score (1-5)</td>
<td>Score (1-5)</td>
<td>Score (1-5)</td>
<td>Amount of Emissions</td>
<td></td>
</tr>
</tbody>
</table>

Best alternative selection:

On the basis of the scores per indicator and the relevant weights, a comparison is made between all the alternatives. The results of these comparisons are used to calculate a total score to rank the different alternatives, as reported below.

<table>
<thead>
<tr>
<th>Position</th>
<th>Name of Alternative</th>
<th>Total Score After Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pekela - Vigonza (road)</td>
<td>10.60</td>
</tr>
<tr>
<td>2</td>
<td>Pekela - Rotterdam - Vigonza (road/rail)</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Main conclusions benchmarking tool

- Logistics Benchmarking tool is a well-structured support to strategic decision making.

- The tool helps to communicate the pro’s and con’s of alternatives with colleagues, managers or customers.

- Shippers see potential for using the Logistics Benchmarking Tool when evaluating and comparing incoming tender applications.

- Tool can be used to benchmark alternative modes on the green/freight corridors.
The BeLogic Tools are online

- European Intermodal Route Finder
- Logistics Benchmarking Tool

**14/06/2010**

The preliminary BE Logic results have been presented during the Transport Research Arena (TRA) Conference 2010, held

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The European Intermodal Route Finder (EIRF) – some facts

- Overview of European Container Terminals in EU27, Norway and Switzerland
- Information:
  - Connections (more than 4,000 direct, over 70,000 indirect relations!)
  - Transit times
  - Frequencies
- Added value: supporting the e-tool by providing information to select realistic alternative transport routes/modes
- Better use of intermodal transport opportunities!
Show Results

Possible connections sorted by total transit time (TT)

<table>
<thead>
<tr>
<th>Terminal Name Origin</th>
<th>Terminal Operator</th>
<th>Total Link</th>
<th>1st Segment</th>
<th>Transhipment</th>
<th>2st Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurogate</td>
<td><a href="http://www.eurogate.de">http://www.eurogate.de</a></td>
<td>2 5</td>
<td>Rail 5</td>
<td>Germany</td>
<td>Bremen</td>
</tr>
<tr>
<td>North Sea Terminal</td>
<td><a href="http://www.ntb.eu">http://www.ntb.eu</a></td>
<td>2 5</td>
<td>Rail 5</td>
<td>Germany</td>
<td>Bremen</td>
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<tr>
<td>Bremerhaven</td>
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<td>Inland 1</td>
<td>Germany</td>
<td>Bremen</td>
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<tr>
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<td></td>
<td></td>
<td>Mannheim-Handels Hafen</td>
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<tr>
<td>Bremerhaven</td>
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</tr>
</tbody>
</table>
**Demonstration of European Intermodal Route Finder (EIRF)**

**Infogate - Unser Kundenportal**

*Infogate Portal*
Hier finden Sie Container- und Schiffsinformationen, können Container freistellen...

**EUROGATE Container Terminal Wilhelmshaven**

Deutschlands einziger Tiefwasserhafen

Grafik / Quelle JadeWeserPort Realisierungs GmbH & Co. KG

**Umweltschutz bei EUROGATE**

Hier erhalten Sie ausführliche Informationen zum Thema Umweltschutz bei EUROGATE

**Schiffsabfahrtslisten**

- Schiffsabfahrtsliste (bremenports)
- Schiffsabfahrtsliste (Hafen Hamburg Marketing)

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**EUROGATE - Wir bewegen Wirtschaft**


**Aktuelles bei Eurogate**

CMHI und EUROGATE vereinbaren strategische Marketingkooperation

EUROGATE Hamburg: 33.333 Container in 40 Jahren

MSC Irene bei EUROGATE in Hamburg und Bremerhaven
Bremen, 17. August 2010 +++ Das Containerschiff MSC Irene, mit einer Ladekapazität von 14.000 TEU eines der größten Containerschiffe der Welt, wird am 18.08.2010 erstmals am EUROGATE Container Terminal Hamburg und am 19.08.2010 am MSC Gate Bremerhaven, einem Joint-venture von EUROGATE und TIL, festmachen. EUROGATE hat in der Vergangenheit bereits mehrere
Possible connections sorted by total transit time

From: Germany
To: Netherlands

Bremerhaven
Rotterdam
9 destination terminal(s)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
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<td>Rail</td>
<td>5</td>
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<td>Bremen</td>
<td>Roland-Umschlag</td>
<td>Rail</td>
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<td>Rail</td>
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<td>Germany</td>
<td></td>
<td></td>
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<td><a href="http://www.ntb.eu">http://www.ntb.eu</a></td>
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<td>1</td>
<td>Inland Shipping</td>
<td>1</td>
<td>Germany</td>
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</tr>
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<td>5</td>
<td>Rail</td>
<td>7</td>
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<td>Switzerland</td>
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<td>1</td>
<td>Inland Shipping</td>
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<td>Rail</td>
<td>6</td>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Terminal Information

Country: Germany
City: Bremerhaven
Terminal name: Eurogate
Adresse: Senator-Borttscheller-Str. 1
Postal code: 27568
Website: http://www.eurogate.de
Telephone: +49 471 142502
Email: ctb@eurogate.de
Terminal operator: Eurogate
Road: Y
Rail: Y
Inland shipping: Y
Sea: Y
Info:
Foreseen developments

- Extend search functionalities (nearest terminal(s), direct relations only, one mode only, all services on country level, etc.)
- Include the companies that provide the transport services (shuttle operators, barge operators)
- Extend EIRF with services to Russia, Ukraine, Turkey, with pre- and end haulage by road and with other relevant information on terminals (facilities)
- Present services on precise week days
- Development of EIRF mapping tool
- Development of EIRF web-based data upload facility
BE LOGIC within e-freight concept (1)

- FREIGHTWISE has developed a framework consisting of 4 roles and 6 information packages.
- Transport Users (‘shippers’) should be able to receive a Transport Service Description (TSD) from a Transport Service Provider (‘transport company’).
- The TSD is used to publish information about a transport service. Required information elements:
  - Company Responsible
  - Transport Service Description
  - Service Area
  - Service Charge
  - Service Goods Type
  - Environmental Profile
  - Service Load Unit Type
BE LOGIC within e-freight concept (2)

- TSD - Transport Service Description
- TEP - Transport Execution Plan
- TES - Transport Execution Status
- GII - Goods Item Itinerary
- TNS - Traffic and Network Status
- TOS - Transport Operation Status
BE LOGIC within e-freight concept (3)

- EIRF can be seen as a starting point (first implementation) of a basic version of the TSD, consisting of:
  - Transport Service Description: transport by IWT, Rail, Short Sea
  - Service Location (from - to)
  - Frequency (times per week)
  - Duration (days)

- EIRF is **not** a distributed application that searches the internet for TSDs (as intended in FREIGHTWISE).

- EIRF is a centralized system, that collects standardized TSDs and connects the various TSDs to find alternative intermodal routes between point A and B, with or without intermediate interchange points.
BE LOGIC within e-freight concept (5)

- In the future it is foreseen that the TSD for the EIRF will consist of:
  - Transport Service Description: transport by IWT, Rail, Short sea
  - Service Location (from - to)
  - Departure day/time
  - Arrival day/time
  - Service Goods type (restrictions with respect to e.g. dangerous goods)
  - Service Load Unit Type (type of containers)

- The TSD for the EIRF will not include:
  - Service Charge
  - Environmental profile
Contacts

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