

# Final report activity 5.1 for **NECL II** **<WP 5: Logistic ICT solution for operative transport matching>**

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### Introduction

A logistic ICT solution (a *portal*) for matching of intermodal transports was pointed out in the former NECL I as one of the most important issues for further development in the transport sector of the Mid Nordic Corridor. Since the end of the NECL I project a prototype of such portal has been developed and managed by NECLA and the Mid Sweden University (MIUN). Further development of this portal started in this project in January 2011 as work package 5 and the first activity 5.1 has ended in January 2012 according to the plan. This activity will be reported here.

### Purpose

The overall purpose is to further develop the ICT system through case studies with cargo owners and shippers in the mid Nordic corridor. The purpose with activity 5.1 is to transform the old portal solution to a modern portal that can be used for real world tests and development on the internet during the rest project.

### Goal

The goal with the activity 5.1 was to 1) tailor the old prototype to latest technology regarding database management and internet connection and 2) Set up at least one case study with real world data that can be extended to allow testing in the later activity 5.5.

### Deliverables

In the project plan the following activities was stated to be performed during activity 5.1.

- 1). Identification of test cases
- 2). Definition of test cases
- 3). Reference group for first test case
- 4) The test case in Sundsvall area
- 5) Development of database management system
- 6) Documentation and reporting

All these point has been delivered in time and the result for each of this six point are described in the result section

### Result

#### Identification of test cases

During the year four possible test cases has been indentified

- 1) Empty container management in the port of Söråker (Sundsvall area) in Sweden
- 2) Transports of goods from port of Kaskinen (Finland) into Russia with connection to the Russian railway system.
- 3) Transports of goods on the route 61 between port of Rauma and port of Gävle
- 4) Transports of fish from Norway to Russia

Furthermore, discussions of other usage of the portal have been performed. One of these is to use it as decision support for transport flow analysis. This is related to the work in work package 4 in this project.

### **Definition of test cases**

The first test case has started at the Delta terminal AB that operates the container management at the port of Söråker and will be further described in the two points to follow.

The second case has been discussed with the port captain of Kaskinen, LogiWin and the Seinäjoki business center as well as RZD logistics that is interested in goods from this area of Finland in to Russia. This will be further discussed during the spring with Finnish partners as well as with RZD logistics during the Transrussia fair in Moscow 24-27 April 2012.

The third case was discussed by representatives from the port of Rauma, port of Gävle, SAMK, Österströms, Eurports Rauma Stevedoring and Gävle Co Stevedoring at a meeting in the port of Gävle this summer. The discussion is ongoing regarding using the portal as a booking system for the new ferry line named Route 61 between Rauma and Gävle.

The fourth case was discussed at a conference in Norway in November 2011 and is regarding a possible cooperation between our project and the Marco Polo project Ace Green with aim use an intermodal transport solution for transports of fish to Russia.

Currently only the first case has started and will be described below. Of the other the aim is to test at least two of them or to add them as an extension of test case 1 (could be possible for case two and four). This has to be decided during 2012 as a part of the activity 5.5.

### **Reference group for the first test case**

A reference group has been defined for the test case in the port of Söråker. It consists of the companies involved e.g.

Johan Sten, Delta Terminal AB, Björn Amnow, Necla, Dick Jansson, Mid Sweden chamber of Commerce, Bo Lantz, Sundfrakt AB . Depending on the actual agenda representatives from the other involved companies will be invited to the reference group meetings. These companies are MSC, Green cargo, Kubal and PacWire AB.

This group will on regular basis meet and evaluate the development of the portal. There have been two meetings during the 2011 with this group.

### **The test case in Söråker (Sundsvall, Area)**

The test case at Delta Terminal AB in Söråker is depicted in Figure 1 and described below.

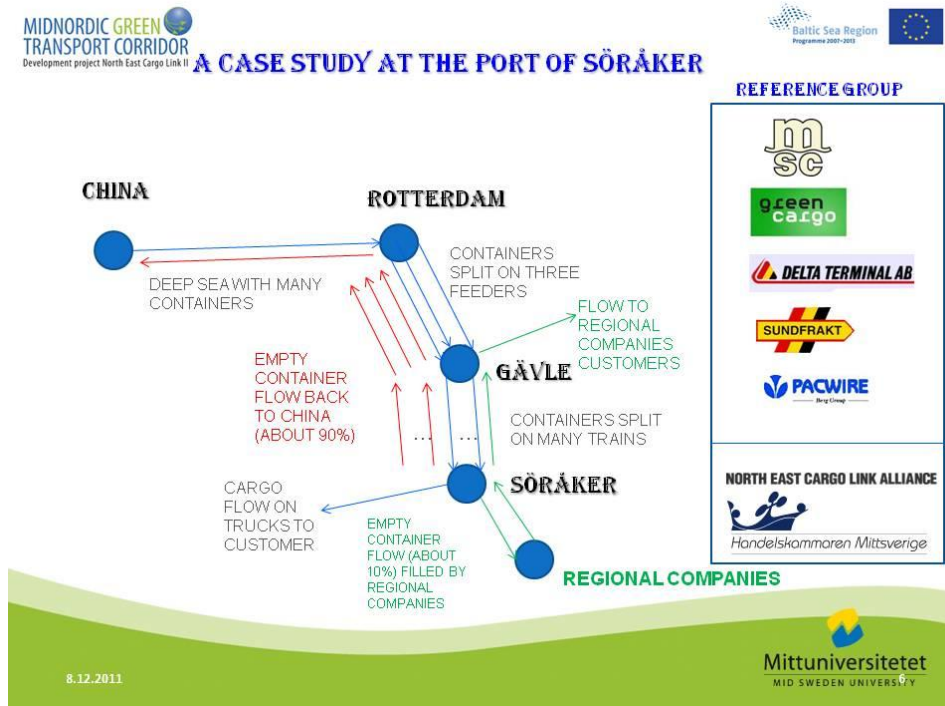


Figure 1: An illustration of the case study in Söråker. The red flow of empty containers we hopefully can fill with goods in the future.

Containers are incoming from China to Delta terminal AB that operates the container management in Söråker. The Route is today with deep sea vessels from China to Rotterdam where the containers are reloaded to smaller feeder vessels and arriving the Gävle Container Terminal. This part is operated by the shipping line MSC. In Gävle the containers are further split and loaded on trains that arrive on daily bases to Söråker by Green Cargo. The goods are then moved from the containers to trucks operated by Sundfrakt and send to the customer leaving empty containers at Delta terminal AB in Söråker.

Today approximately 10% of these containers are used for goods in the other direction mainly origin from the Söråker based company Pacwire AB. Hence, 90% is usually going back empty the whole to China. This is of course a very high amount of empty containers and the aim is to use the portal developed in this project to match regional company's goods to these empty containers.

In this way emissions as well as costs will be reduced substantially even with a modest increase of the load factor.

For contact with regional companies Necla (association of about 60 companies) and The mid Sweden chamber of commerce that are associated partners in Necl II supports the project and is also taking part in the reference group.

Data is currently under extraction to be used in a real world test during the spring of 2012 in the activity 5.5.

### Development of database management system

The database management system has been completely changed to modern technology supporting the new computer standard (64 bit processor instead of 32 bit processor). Currently static data from case 1 is used and some old data to test this together with a new version of the optimization module (activity 5.2) and a newly developed GUI (activity 5.4) to be able to use this portal on internet.

Therefore the old .NET based environment has been changed to latest cloud based technology and the first test was performed successfully on the internet in the beginning of 2012. This has been the main activity during activity 5.1 and since the old prototype was four years old almost everything has to be changed. However, we end the activity 5.1 with everything working and with a connection to internet that can be set swiftly.

### Documentation and reporting

Documentation has been performed for this and other activities within WP 5 on regular monthly basis in status reports to the project manager and the results are summarized in this report.

### Discussion

According to the project plan and the purpose and goal for the activity 5.1 we feel that all these things have been accomplished in time. Activity 5.1 has therefore fulfilled the purpose, to transform the old portal solution to a modern portal that can be used for real world tests on the internet.

However, there have been some problems with aggregating of real world data for tests and the test phase of the project (activity 5.5) has therefore been slightly delayed. However, the project intended to start in September 2010, but since the grant contact was received in the middle of January 2011 the development started, after some preparations, in the February of 2011. Therefore we feel that we have performed this activity in time, as well as, the other activities that are currently ongoing in the project and will be reported later on.

Sundsvall

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