Round Table on Information and Communications Technologies for Innovative Global Freight Transport Systems

8-9 March 2010 — Genoa, Italy

FreightWise and beyond: DiSCwise
Digital Supply Chains for European SMEs based on the Freightwise Framework

Freightwise

Freightwise is a finalized FP6 project funded by DG TREN that introduces a conceptual framework to improve the interoperability between systems that are being used in intermodal transport management. See www.freightwise.info. Freightwise distinguishes a number of abstract roles that are participating in the freight management process:

- The *Transport User* is the role representing anyone that needs to have cargo transported. The Transport User also provides the Transport Service Provider with instructions and detailed information about the transport items to be transported.

- The *Transport Service Provider* is the role that ensures the transport of the cargo from the origin to the destination. This includes the management of the transport services and the operation of the transport means and handling equipment. A Transport Service Provider may also provide administrative services required for moving the cargo, such as cargo inspection.

- The *Traffic Manager* is the role that extracts all information available regarding the infrastructure (static or dynamic) related to planning and executing transport and makes this information available to the Transport User and the Transport Service Provider.

- The *Transport Regulator* is the role that receives all mandatory reporting (and checks if reporting has been carried out) in order to ensure that all transport services are completed according to existing rules and regulations.

A person or organisation may take on different roles. E.g. a freight forwarder is, on the one hand, a Transport Service Provider when communicating with clients (Transport User). On the other hand, the freight forwarder is a Transport User when acquiring services from subcontractors to ensure that a transport service is carried out between an origin and a destination.

Freightwise distinguishes a number of information packages that are used to exchange information between the abovementioned roles:

TSD – Transport Service Description: Used by the transport service provider to publish transport services available to the transport user.

TEP – Transport Execution Plan: Used between the transport user and the transport service provider to establish a contractual relation for using a service. It defines the exact use of a transport service in terms of cargo, locations, timing, etc.

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TES – Transport Execution Status: Used by the transport service provider to provide feedback to the transport user on the status of the transport service that is being executed.

TOS – Transport Operation Status: Used by the traffic manager to provide feedback to the transport user and/or transport service provider to indicate information on estimated/actual arrival times of individual transport means (like a vessel, train, etc.).

NTS – Network and Traffic Status: Used by the traffic manager to provide information about the condition of network infrastructure, traffic conditions, traffic incidents and weather information.

GII – Goods Item Itinerary: Specifies the route and the time schedule for a transport of a Goods Item. It may contain one or more transport segments, or legs. GII is used to record the actual progress in the form of new estimated times for departure and/or arrivals and the actual departure and arrival times.

Freightwise is a finalized project that will have its final conference in London on 15th April, see http://freightwise.info/cms/?mainnav=Final_FREIGHTWISE_Conference2010.

DiSCwise

The DiSCwise project aims to Develop, Demonstrate and Deploy a Reference Architecture for Interoperability in the Transport and Logistics Sector in an effort to achieve:

- Integration of small and medium sized transport service providers into efficient door-to-door supply chains at cost affordable to them.

- Facilitating a more sustainable European logistics by enabling transport users (large and small) to select environment-friendly alternatives.

- Making European supply chains more efficient by providing state-of-the-art tracking and management capabilities.

The DiSCwise project is funded by DG Enterprise and supports EU's Freight Transport Logistics Action Plan.

Requirements

Integration of small and medium sized companies into complete transport chains requires three essential capabilities:

- The service(s) that transport service providers offer must be visible and easy to connect to others to form door-to-door chains.

- Interactions between stakeholders must be easily established at a cost affordable to all.

- Organisations already able to communicate electronically using UN/CEFACT or UBL standards should not need to make any changes.

The DiSCwise project is building upon the results from the DG TREN funded project Freightwise to deal with these issues at an overall and logical level.

At the technical level, the DiSCwise project has two ways of facilitating interaction between stakeholders:

- For those not having any essential ICT capabilities, DiSCwise will provide two very low cost applications, the User Application and the Provider Application. These applications may be accessed using a web server, either on a computer or on any portable device that may access the Internet.

- For those who already have installed ICT capabilities, DiSCwise will provide connectors that will enable communication using the Freightwise information packages described above.

*All this is achieved by **sharing web-based visibility tools** with your suppliers and transport & logistics operators. These tools are based on integrating, not replacing existing IT-applications*

Service

DiSCwise offers you a method to electronic source, plan and execute your logistics fulfilment activities.

Approach

The service is based on three principles

1. **Availability of products and logistics services**: The Freightwise project defined a standard for describing transport services, the TSD – Transport Service Description. When a transport service provider uses this format to describe transport services, they may easily be found by search engines and when two services share a transhipment point (destination in one is origin of another) these may be combined (if they handle the same types of cargo). If the user needs to negotiate a long term contract to obtain better conditions, this is quite feasible, and these terms and conditions will then automatically be associated with the relevant TEP when using the service.

2. **Optimized sourcing and logistics planning**: Based on the availability of products and logistics services, you will be advised as to which fulfilment alternative you can use. The user may then select the alternative that best suites the purpose.

3. **Execution of your preferred fulfilment**: This fulfilment alternative can be executed and monitored, such that you are ensured of reliable delivery or will be enabled to detect devations and take corrective measures.

Demonstrators

DiSCwise will operate 3 demonstrators that may be connected: One in Poland covering the Baltic, one in Flanders covering central Europe and one in Portugal covering the Iberian Peninsula.

DiSCwise will demonstrate intermodal transport management within the regions covered by the respective demonstrators and between these regions.

Use of Freightwise standards

The project benefits from the standardization of the transport models in Freightwise and extends it to unlocking existing Transport & Logistics Services and supply of products to a broad user group. Having the ability to combine the Transport Service Description's can lead to flexible transport planning. Making these services available via a web interface or low cost of integration is an important benefit for the SME's that can provide choice and a healthy competition.

Using communication standards and an integration framework, the boundaries between transport users and transport providers are taken away. Whereas the logistic information standards holds the necessary information to actually agree on the provided products & services, the integration framework makes it possible to connect users to wide a range of the providers with limited integration effort.