

Editorial



Dear Colleagues,

This is the last newsletter from the FREIGHTWISE project and it is a privilege for me to reflect on the project and what may be in the future.

Six years ago, when we conceived FREIGHTWISE, we had the rather ambitious goal to create a universal framework for information exchange during planning, execution and fulfillment of transport tasks irrespective of which transport means were involved. Afterwards, it must be admitted that we did not, at the time, foresee the amount of work needed to realize our ideas and the almost missionary efforts required to get the FREIGHTWISE Framework (FWF) accepted internally and externally. Our business cases and the industrial partners have been instrumental in guiding this process and in bringing it to a success. We can now be very proud that the FWF provides a basis for standardization, which is a major step towards deployment. We are also pleased to have contributed to the coining of “efreight” and that the results in FREIGHTWISE provide a common basis for development in a number of other Framework-sponsored projects. We may also hope that the FWF will be a major component in the Commission’s effort to promote ITS and the establishment of a European soft infrastructure.

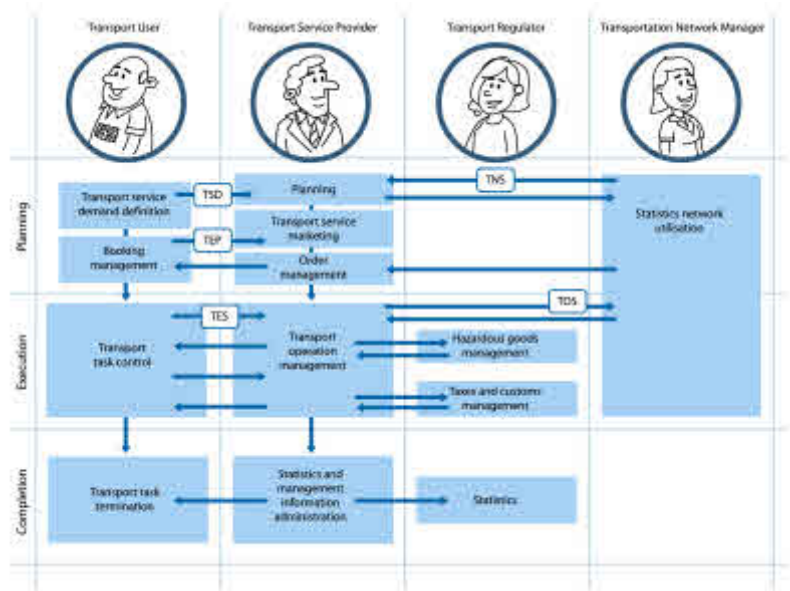
It is said that you part with a laughing and a crying eye. In my opinion we are entitled to laugh because we have done what we set out to do. In addition, our project manager, Jenny Gyngell, may be especially happy to be relieved of the responsibility of managing more than 50 partners in 13 countries. But I am sure that she, just like me, feels it a bit sad to leave this environment of exciting discussions behind. It is time to say goodbye, but I am sure that many of us will meet again. The deployment of ITS finally seems to be taking off.

Lars Källström
BMT Transport Solutions, GmbH

The FREIGHTWISE Framework

Silvio Di Re, DITS

The FREIGHTWISE Framework, (FWF) works as a blueprint to be implemented along transport chains. It identifies roles played, processes performed and information exchanged between the transport operators when implementing freight transport services. The standardisation of roles, operations, functions and messages along the transport chain, is necessary to let different transport operators cooperate in a more efficient way. The FWF is a conceptual model which will achieve a high quality of collaboration and allow standardisation across different transport modes: this will enable multimodal and intermodal transport of freight which has been considered too complex to realise, mainly due to a general lack of interoperability of business and technologies between the transport companies.



The FWF can be represented by the diagram in the figure, which shows the planning, negotiation, execution and completion of a generic transport chain (or of a single transport service). The diagram includes:

- 4 roles performed by the operators: Transport User, Transport Service Provider, Transport Regulator and Transport Network Manager.
 - 3 business phases: Planning, Execution, Completion
 - Processes/functions to perform along the transport chain (blue rectangles).
 - Information Packages, the messages exchanged by the roles: TSD, TEP etc. They are indicated with arrows and initials in the figure.
- The division in four standard roles helps to describe the interactions between the operators along a transport chain. The business phases represent the three main phases in which the transport service can be partitioned. Every phase covers a number of functions, activities and information exchanged logically and temporally linked to each other. Each function (process) is associated to one actor (role) in one transport phase, and can be subdivided into more activities. Also, the information flow is standardised by means of a set of messages called Information Packages.

The individual information elements (TSD, TEP, etc.) are standard messages that the roles exchange along the transport chain. They

are grouped in Information Packages that contain specific information to perform the functions. For example, the Transport Service Provider can detail the transport service offered by using the Information Package called "Transport Service Description" (TSD) that contains specific information on the single transport service. The TSD is a standard XML file easily searchable by the Transport User using a browser or an application.

Finally, the use of the FREIGHTWISE Framework simplifies the phases of planning, executing and following up freight transport services between the users (e.g. consignor, consignee...) and the providers, without interfering with their internal processes and systems. More specifically, the use of the FWF:

- Allows Transport Service Providers to advertise their services to Transport Users in an agreed format (ensuring a certain visibility of services).
- Allows the Transport Users to search among transport services (also, combining more than one into transport chains) and to negotiate their details with the Transport Service Providers.
- Provides transport companies with a reference model to follow when planning, executing and completing a transport service or a combination of multiple transport services.
- Enables Transport Service Providers to manage the physical transport of the goods, exchanging information on the status of the shipment with the Transport Users and the status of transport infrastructure with Information Service Providers.
- Allows Transport Users or Transport Service Providers to exchange regulatory information with Transport Controllers.

How businesses can implement the FWF

Chris Rowland, MDS Transmodal Ltd

The FREIGHTWISE Framework (FWF) can provide significant commercial benefits by simplifying business process interoperability. Some of the benefits that businesses using the FWF can enjoy are more efficient and effective procurement, cost reductions through single data entry and enhanced transport chain visibility and enhanced management information to improve decision-making.

Three distinct strategies were developed during the FREIGHTWISE project that business can follow, depending on their size and the number of freight transport movements they manage. All three strategies are designed to be *highly cost effective* and are specifically designed to avoid affecting the integrity of existing systems or requiring significant investments in new information systems and hardware.

Implementation Strategy 1: Use Existing FWF Connector

For businesses that use established proprietary ERP and supply chain management software and are likely to have a high volume of freight movements, software applications

have been developed within the FREIGHTWISE project to provide an interface between these systems and the systems of any other organization using the FWF. These pieces of software are called "connectors" and they allow existing in-house systems to exchange information with other systems, using the FWF as a common "language", and provide near automatic interoperability between businesses using the FWF.



Implementation Strategy 2: Develop New FWF Connector

For businesses that have their own information systems for which no connector has been developed and are likely to have a high volume of freight movements, a bespoke software interface can be developed using the FWF Architecture. This Architecture can be downloaded from the FREIGHTWISE website and then the connector can be developed without the costs involved in designing the application from first principles.

Implementation Strategy 3: Web Forms

For businesses that do not want to develop a connector or do not have an in-house management system, FWF Web Forms can be used to exchange data with other organizations using the FWF. This strategy is most likely to be appropriate for businesses that have a relatively small volume of freight movements, as they require data input by the business for each freight transport movement.

The FWF e-Guide

Silvio Di Re, DITS



The FREIGHTWISE project and its conceptual and technical solutions (e.g. the FREIGHTWISE Framework, the Information Packages....) can be exploited and analysed under a number of perspectives. In fact,

FREIGHTWISE not only covers the needs and requirements of decision makers, but it also answers questions from technical experts as well as from staff involved in more operating activities. Those different perspectives are addressed by three user-oriented documents produced by the project, targeting a variety of audiences: Business Guidelines addressing costs; Configuration Guidelines for conceptual and practical implementation; and the Interfacing Handbook for the technological solutions. The combination of those documents will allow logistics companies to successfully implement the FWF under each perspective and in its entirety.

The project is making this information more accessible, easy to use and focused on the user needs by providing paper documents as well as a support tool usable off- and on-line for interactive learning - the FWF e-Guide, an e-learning tool.

Such a tool displays content in an interactive way: it will be tailored for the specific user and the specific needs. Also, in order to cover and integrate information from more perspectives, content will be displayed to the user, which is taken from one or more project documents. E.g. the question "how can I implement the FWF in existing transport chains?" would be answered by showing both technological and operating information (taken partly from the Configuration Guidelines and partly from the Interfacing Handbook).

Furthermore, the e-tool will be a good repository of information, files and documents (such as also the Policy Guidelines and training courses based on FREIGHTWISE) produced within the project. Being constantly updated, the FWF e-Guide will avoid obsolescence and will ensure the life of our ideas beyond the end of the project.

Business Case SouthEast

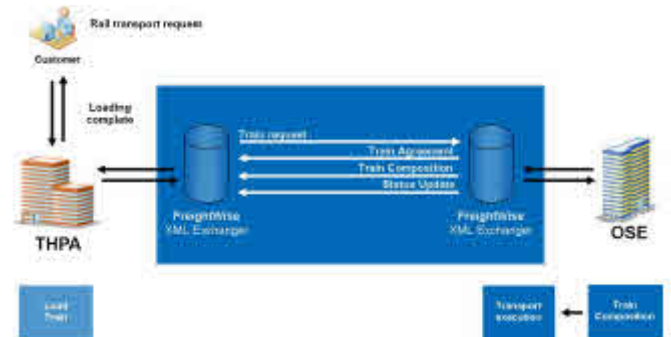
Christina Paschalidou and George Tsoukos, Tredit

The overall objective of Business Case SouthEast is to improve cargo status monitoring, handle empty wagons and track rolling stock for PROODOS S.A. (logistics provider), OSE (National Railway Operator) and THPA (Thessaloniki Port Authority) in a transport chain in Greece. In particular, the implementation of the Freightwise Framework in this case towards:

- development and promotion of solutions that improve the ability to absorb increased freight transport demand through the harmonization of information exchange and processes, and the integration of advanced and appropriate technologies (GIS, XML, web-services);
- interoperability with existing IT solutions;
- facilitation of empty wagons management for the rail operator and the forwarding by rail of transit containers reaching the port of Thessaloniki.

The first scenario examined the case of a rail transport from the port of Thessaloniki to the rail network of OSE, where the exchange of information between THPA and OSE

concerning the train request, the train agreement and composition and the status update was achieved through the FREIGHTWISE application that converts relevant messages to FREIGHTWISE information packages (TEP, TIS, TES).



The second selected scenario examined a rail transport operated by PROODOS S.A. via the rail network of OSE. In that case, the information about the cargo to be transported, the train composition, the status updates during the transport execution and the availability of wagons at the end of the chain, is exchanged between PROODOS and OSE via the new mechanism exchanging messages to relevant FREIGHTWISE information packages (TEP, TIS, TES, TOS). A GIS web interface has been also developed in order to provide an easy view of the status messages (TOS).



In the above cases, the FREIGHTWISE application enables the creation, viewing and editing of FREIGHTWISE messages, and the upload of XML files that can be accessed by involved actors with the use of appropriate web services allowing integration with the existing management systems.

Business Case F Elbe

Eivind Madsen, Logit Systems

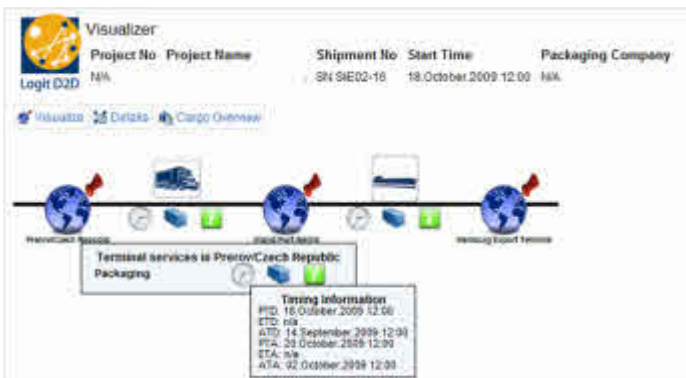
A pilot project with Siemens and seven service providers utilizing the FREIGHTWISE Framework concept to improve information flow and optimize transport execution in a multimodal transport chain.

Between September and November 2009 a pilot project was executed involving Siemens and seven of their transport service providers. The project cargo case selected by Siemens involved transport of goods from Canada, Italy, Germany and the Czech Republic to overseas in connection with a transformer installation overseas.



The problem that Siemens intended to solve was to make the flow of information in the execution of a multimodal transport case more efficient based on the information packages Transport Execution Plan (TEP) and Transport Execution Status (TES) as defined in FREIGHTWISE. In the current situation there was no unified way of exchanging information. Information was distributed as emails, fax, phone, excel etc.

The demonstration platform Logit D2D User Application and Provider Application was utilized.



Siemens used the User Application to monitor transport execution based on the progress of the transport reported via the Provider Application used by the Service Providers. Siemens expressed satisfaction with the outcome of the pilot project and the value of being able to easily gather all transport progress information in one platform to be able to manage and act on any deviation from plan that could have major cost impact if not handled in time.

The Service Providers with no previous knowledge about FREIGHTWISE or the applications being used expressed

satisfaction with its simplicity and how easy it was to understand the concept. Due to the simplicity of the concept the applications developed for the purpose of demonstration have also become very easy and intuitive to use. In fact the only training needed for the service providers to be able to understand and use the system was 30 min web meeting training each. To be able to report into the system takes only 1-2 minutes per status report!

Educational Materials Developed by the FREIGHTWISE Project

Yannis Tyrinopoulos, Certh

In an attempt to spread the innovative results of FREIGHTWISE to the academic and business communities of freight transport, the partners have developed education and training materials based on the core product of the project, the FREIGHTWISE Framework (FWF). This material is addressed to MSc students and professionals in the freight business. The education material aims to inform students about the role of multi-modal freight transport, the contribution of technology in the effectiveness of freight transport, the aims and contents of FWF and how it can be applied to the freight business. The contribution of FWF to standardization and harmonization is also addressed. The training material aims to inform the business professionals about the use of FWF to develop FWF-compliant systems and its commercial benefits.

Altogether, seven lectures have been produced expressed in the form of tutorial notes and slideshows. The lectures will be used by universities in their education programmes related to multi-modal freight transport. Starting from the academic and research institutes participating in FREIGHTWISE, the education material will be spread to all over Europe exploiting the contacts and networks of the partners. The industrial partners participating in the FREIGHTWISE business cases will be the starting point for disseminating the training material. In addition, several other communication means will be employed for making the lectures widely visible, such as internet, associations, workshops and others. See www.freightwise.info for more information.

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