FInest – **F**uture **In**ternet **e**nabled optimi**s**ation of **t**ransport and logistics networks

D8.4

Prototypical Implementation of Logistics Contract Manager

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Abstract

This document describes the Proof of Concept (POC) Implementation of the E-Contracting Module (ECM), which is a core module from the FInest platform. The role of this module is to support the online and real-time establishment and management of T&L contracts and operation in marketplaces. This document is a technical documentation of the existing POC implementation so of the current situation but not of the full features intended for the final version.

The document contains a fact sheet which includes the list of key features, technical details about the technologies used, details about how to access the POC prototype, as well as, steps for the deployment of a new version of the ECM.

Additionally the document contains descriptions of the main screens of the proof of concept prototype which shall serve as a simple manual giving an idea about the capabilities of the prototype

Document History

Version	Date	Comments
V0.1	05-03-2013	First draft
V0.2	14-03-2013	Second draft
V0.3	15-03-2013	Document sent for review
V0.4	19-03-2013	Update of screenshots
V1.0	26-03-2013	Released

Table of Contents

Acronyms

Acronym	Explanation
ECM	E-Contracting Module
GE	Generic Enablers
IDE	Integrated Development Environment
NCL	North-sea Container Line
POC	Proof of Concept
LUSDL	Linked Unified Service Description Language

1 Introduction

This document describes the Proof of Concept (POC) Implementation of the E-Contracting Module (ECM), which is a core module from the FInest platform. The role of this module in this platform is to support the online and real-time establishment and management of T&L contracts.

This document is a technical documentation of the existing POC implementation so of the current situation. There are still features of the ECM module that were not implemented in this version of the POC. For this version of the prototype, we focused on the features of the ECM that build upon the GEs from the FI-WARE. These functionalities are the very basic operations of the ECM that are essential for the development of sophisticated features of the ECM, such as contract analytics.

The main screens of the ECM prototype will be described in this document. These screens are also associated with the demonstration scenario detailed in Section 5.2 of Deliverable D3.4. The ECM module support the two streams of action described in this scenario. First, it supports the identification and selection of services to be used during the planning phase of a transport and logistics service. The section 3.1 and 3.2 of this deliverable D8.4 introduce the screens of the ECM prototype associated with the actions in this first stream. Second, the ECM POC supports handling booking cancelations by identifying possible demands that match the provided service, as it is illustrated in the last screen (S08) of Section 3.2 in this document.
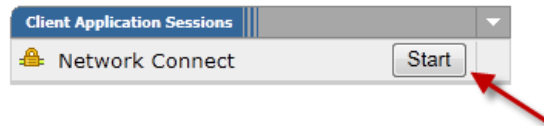
This document is organized as follows.
- In section 2 the fact sheet is given which shortly describes the key features, the technologies used for implementation, information required for the access of the POC prototype, as well as, steps for the deployment of a new version of the ECM.
- In section 3 each of the screens of the POC prototype is briefly described. Using those descriptions it should be easily possible to use the prototype and get an idea of its concepts and functionalities.
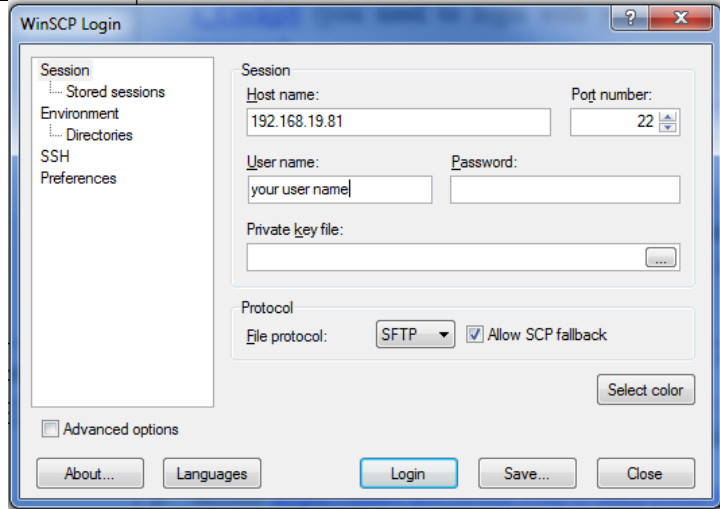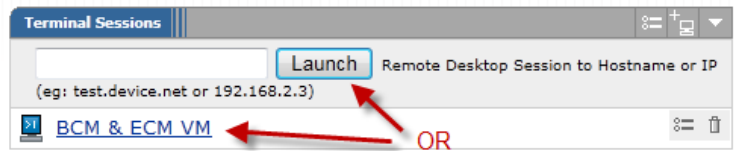
2 Fact Sheet

Fact	Description
Key Features	Create: • Transport service offers • Transport service Demand • Contracts Search/list: • Transport service offers • Transport service demands • Own Transport service contracts • Own Transport service demands • Own offers
Implemen-tation Technologies	*Frontend* • SAP UI5 (proprietary) • jQuery 1.6.2 • rdfQuery 1.0 *Middleware* • Spring 3.1 • Java EE 6 (esp. Servlet API 2.5) *Backend* • FI-WARE Service Repository GE 1.0 *Others* • Application Server: Apache Tomcat 7
Access	Prototype is deployed on central server hosted by KOC and directly available on the internet. For accessing the prototype you need to "log on" as a registered user. For simplification shortcut links have been created for each user to simplify access to the prototype. **Example Users:** • Arne Rost (Shipper) http://81.8.42.198:8080/sap.finest.ecm.frontend/?uid=Arne&ur=Shipper • Eric Farstad (Forwarder T&F) http://81.8.42.198:8080/sap.finest.ecm.frontend/?uid=Eric • Oyvind Olsen (Carrier NCL) http://81.8.42.198:8080/sap.finest.ecm.frontend/?uid=Oyvind • Karl Fagels (Carrier Tranvog) http://81.8.42.198:8080/sap.finest.ecm.frontend/?uid=Karl

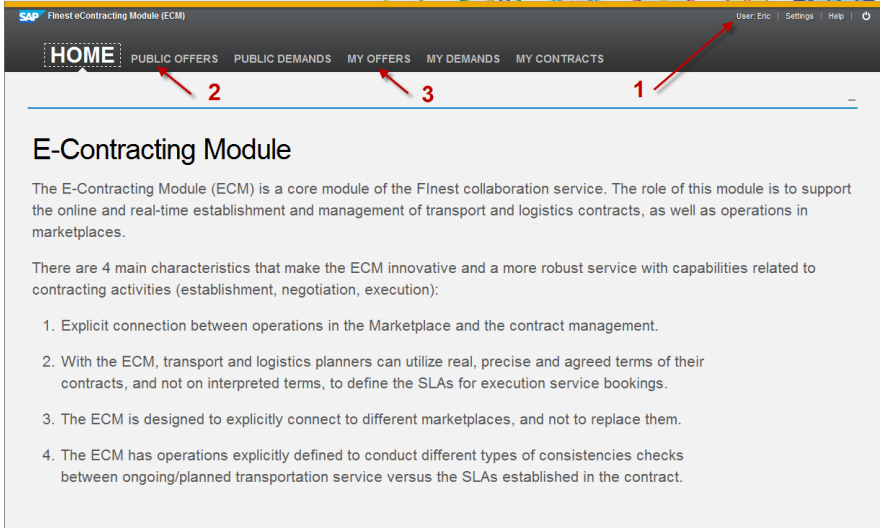| Fact	Description
	The different roles affect the areas in the application which can be accessed. Each user can see the areas: - Home - Public Offers - My Demands - My Contracts In addition, only carriers and forwarders have access to the following areas: - Public Demands - My Offers Each user can of course only see and edit his or her created data in the areas with the prefix *"My"*. Contracts – which are not implemented so far – can only be accessed by the involved parties but nobody else.
Requirements	**1. Use of modern and standard compliant browser:** • Mozilla Firefox - Version 19+ (recommended) • Google Chrome - Version 18+ **2. Access to FI-WARE Repository running in the FI-WARE Testbed** To have access to the data necessary to use the ECM Prototype you need to have access to the FI-WARE service repository where all the data is stored. FI-WARE uses a white list to allow access to it and if the tables in the "My Offers" area are empty for you, then that means that your IP address is not maintained in that white list. To get access execute the following steps: a) find out your pubic IP address by going to the website: http://www.wieistmeineip.de/ or http://www.whatsmyip.org/ b) Log in with your username and password at the FI-WARE Web page https://forge.fi-ware.eu/ and request access at https://forge.fi-ware.eu/plugins/mediawiki/wiki/testbed/index.php/Testbed_V1_Operations_Cockpit. If you do not have an username and password for the FI-WARE Web Page, you should request it at https://forge.fi-ware.eu/account/register.php and wait for the answer with the confirmation of your username and password. c) If b) does not work you can also write an email to e.cloud10@tid.es and ask for access (do not forget to give your IP address from a).

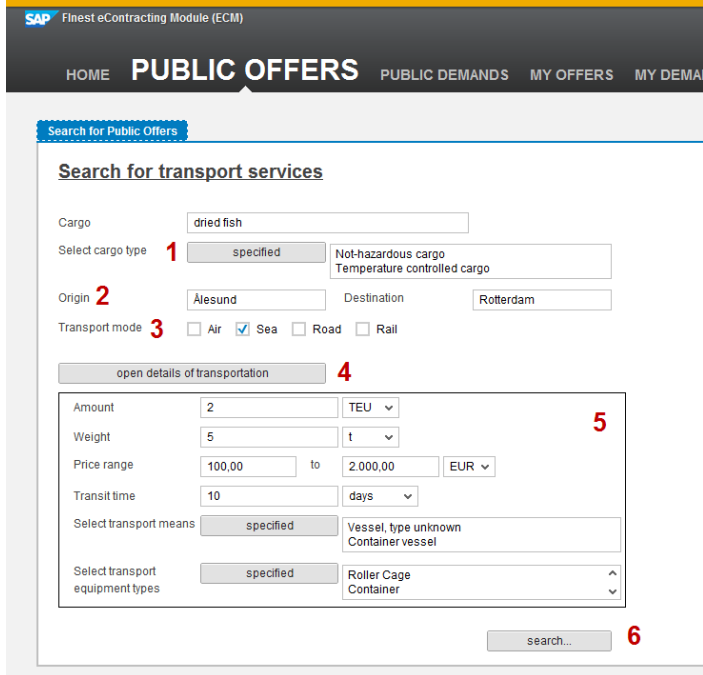| Fact	Description
	It is important to notice that FI-WARE requires only for static IPs to be registered. This affects most of the users trying to access the ECM, because typical Internet users have their computers identified by dynamic address. This limitation imposed by FI-WARE should prevent the proper execution of the ECM prototype unless the exact steps for gaining access from FI-WARE were followed. To check if you got access open the following link: http://appsnserv.lab.fi-ware.eu:8080/FiwareRepository/v1/finest/034/. If you can see some XML it works, if you receive an HTTP error (most likely a 404) or if you receive a blank page, the access has not been allowed.
Deployment	The following steps are required for deploying a new version of the ECM: 1. Pack the application as an web archive file (.WAR). 2. Access https://sahne.kocsistem.com.tr/dana/home/index.cgi with Microsoft Internet Explorer (if you don't own an user account ask Özgür Sönmezer (ozgur.sonmezer@kocsistem.com.tr) and also ask for a network profile to use putty and WinSCP). 3. Start the VPN by clicking the following button. For the first time using the link, you may need to install a VPN software. If the button is pressed for the first time, the Internet Explorers install a VPN client (activation of AcitveX necessary). After the installation the client will be started in order to register the computer in the KOC network and enable the user to access the hosting machines. The installation will only take place once and afterwards the VPN client will be started automatically every time the button is pressed. 4. To upload your WAR file you can use WinSCP. You only need to configure the connection:

Fact	Description
	After login you can upload files from your local machine to the KOC infrastructure. Remember that you still need to be connected to it via VPN. 5. After upload you need to copy the WAR file from your users home directory (/home/<your_username>/) to the *webapps* folder of Tomcat. Thus, go back to step 2 and start the terminal session by clicking the following link/button: 6. A terminal console opens where you need to execute the following command: **sudo cp <your file name>.war /var/lib/tomcat7/webapps/** 7. Wait for Tomcat to deploy the file. Afterwards you can access the file using the url: **http://81.8.42.198:8080/<your file name>/**

3 Scenario Walk-Through
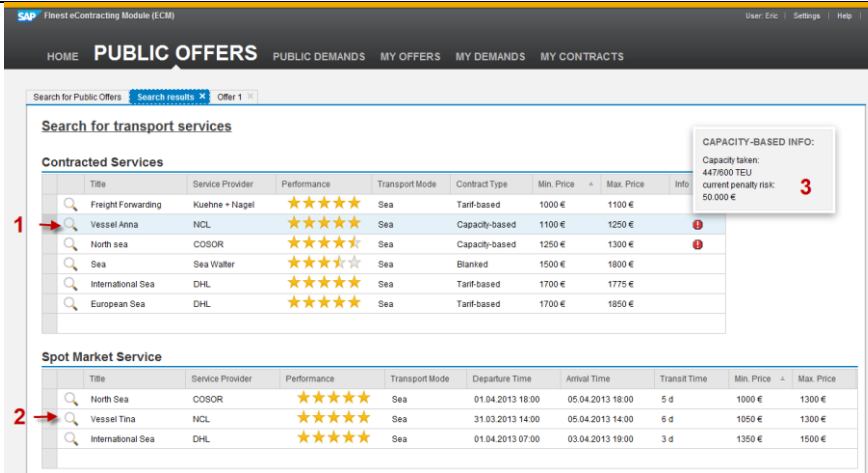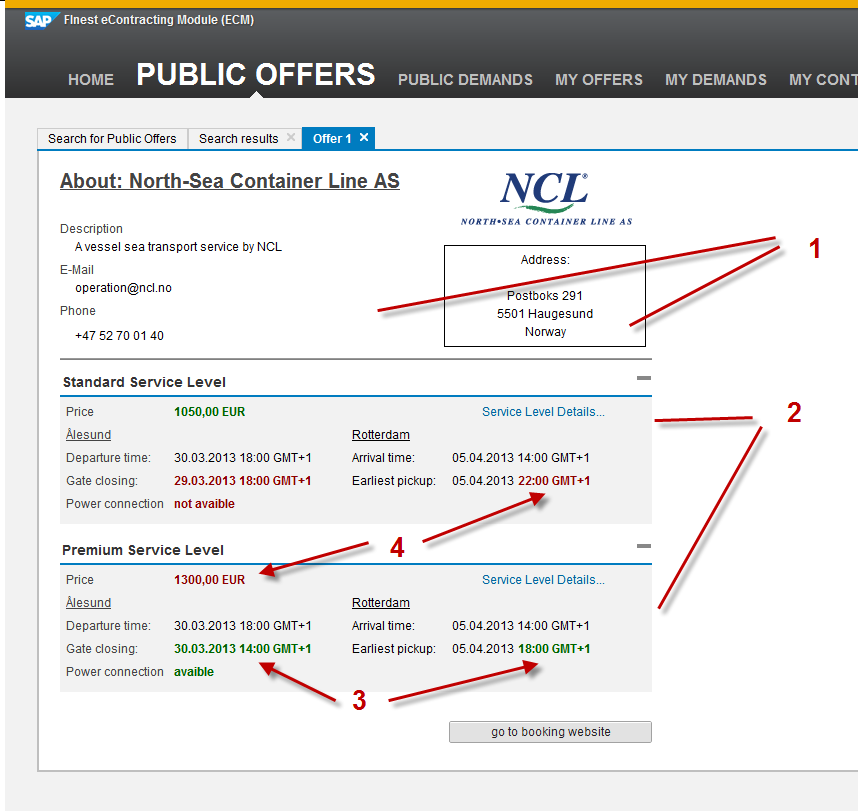
3.1 Home Screen

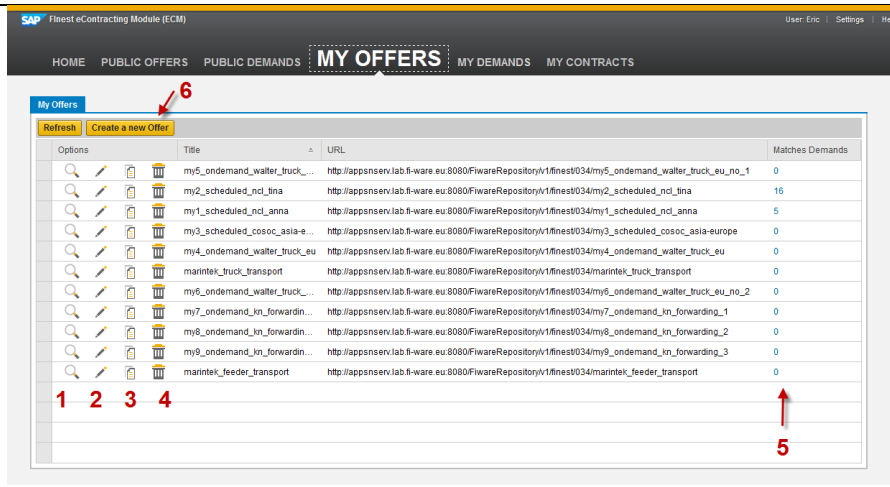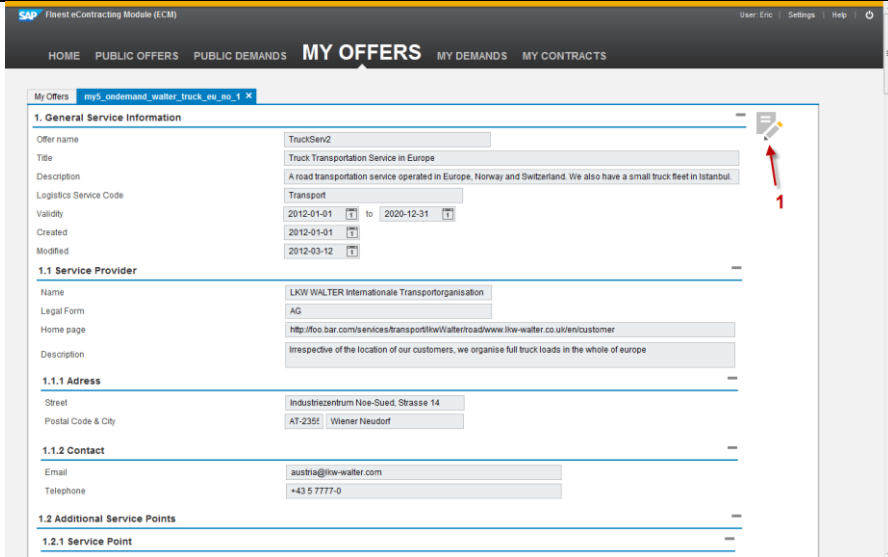| Element	Description
Page number	S01
Page name	Home Screen
Screenshot	
General Description & Screen Purpose	This page is the landing page after a user directly accesses the URL of the ECM proof-of-concept. The page gives general introduction to the user. The page also contains an overview about all users that are able to login. From this page all areas of the ECM can be directly accessed by clicking on one of the area names at the top of the screen.
Description of Red Labeled Elements	**Label 1:** In this area the user name is displayed and it is (in the future) a single point of access for user settings and help features. **Label 2:** Access to Screen S02 **Label 3:** Access to Screen S06

3.2 Screens Associated with Marketplace Offers

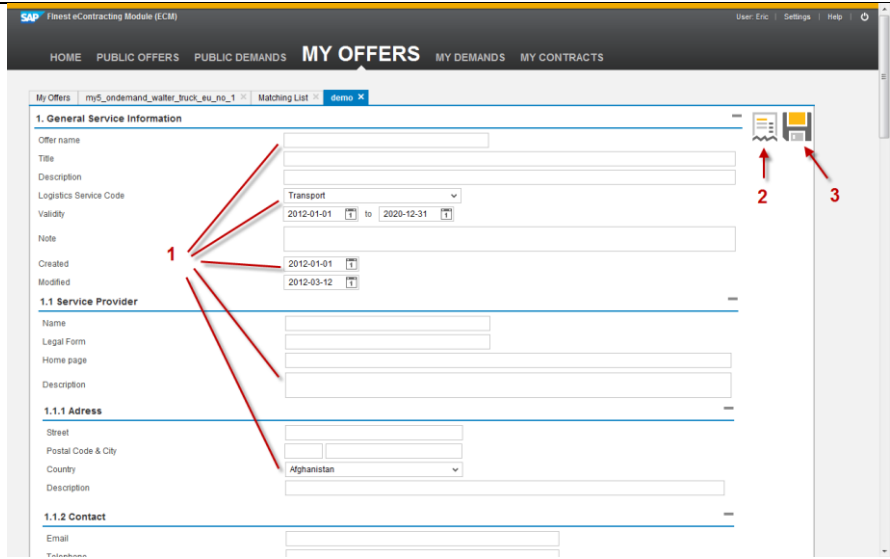| Element	Description
Page number	S02
Page name	Search for Public Offers
Screenshot	
General Description & Screen Purpose	When clicking on the area "Public Offers" this screen is displayed. Here it is possible to inform the basic criteria to search for service offers. Examples of criteria are: the origin and destination, the type of cargo to be transported and the mode of transportation. Advanced filtering criteria can also be used by clicking on a button (4). Then further requirements for the transportation service can be used for the search. For instance the weight and amount to be transport, the transit time and the type of transport equipment.
Description of Red Labeled Elements	**Label 1:** This button enables to specify the cargo type(s) to be transported. The text box next to the button displays the current selection. **Label 2:** Here origin and destination can be specified for the search. **Label 3:** Here transport means can be specified which will be taken into account for the search. **Label 4:** By clicking this button the search details (label 5) are displayed. **Label 5:** Here more details about the transport requirements can be given. Specifying transport means and equipment works

	similar to specifying the cargo type (see label 1)
Label 6:	Search button.

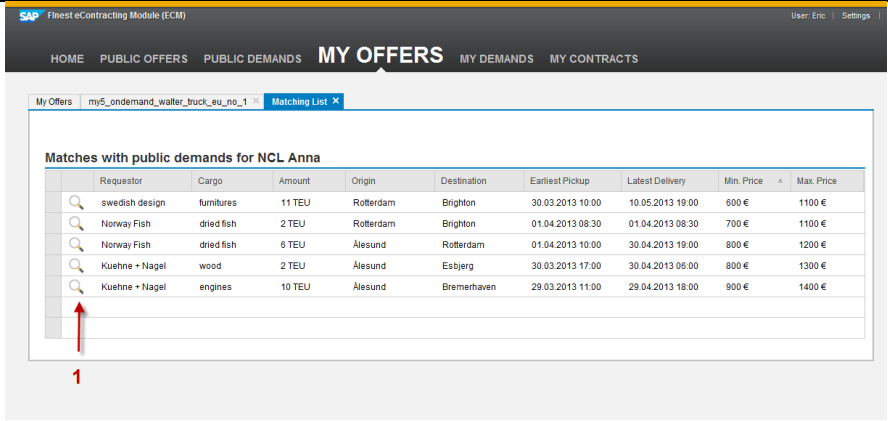| Element	Description
Page number	S03
Page name	Results for Search on Public Offers
Screenshot	
General Description & Screen Purpose	This screen displays the search results which match the requirements specified in page S02. At the top contracted services are displayed which are already covered by an already established contract. Below transport service offers from the spot market are displayed. The information displayed is slightly different. For the contracted services, the type of contract is displayed and exclamation marks show if aspects of the contract are currently critical because of the current contract status. For sport market services concrete departure and arrival times are displayed.
Description of Red Labeled Elements	**Label 1:** Vessel Anna by NCL is clickable for the demo. **Label 2:** Vessel Tina by NCL is clickable for the demo. **Label 3:** The quick view window shows issues with the current status of the contract. That might directly affect the decision about which service offer will be chosen.

Element	Description
Page number	S04
Page name	Visualization of Simplified Sport Market Offer
Screenshot	
General Description & Screen Purpose	This screen shows a simplified view on a service offer from the marketplace. Only relevant information from a customer point of view is displayed. That is basic information about the provider, his or her contact data and address. Additionally, the different available service level profiles are displayed with the differences between them and it is highlighted to support better and faster visualization of what to choose. Booking is not supported, thus only a button for accessing the external booking website from the service provider is available.
Description of Red Labeled Elements	**Label 1:** Information about the service provider. **Label 2:** Each service level is shown in a different box. **Label 3:** Information is highlighted in green if it is better compared to other service levels. **Label 4:** Information is highlighted in red if it is worse compared to other service levels.

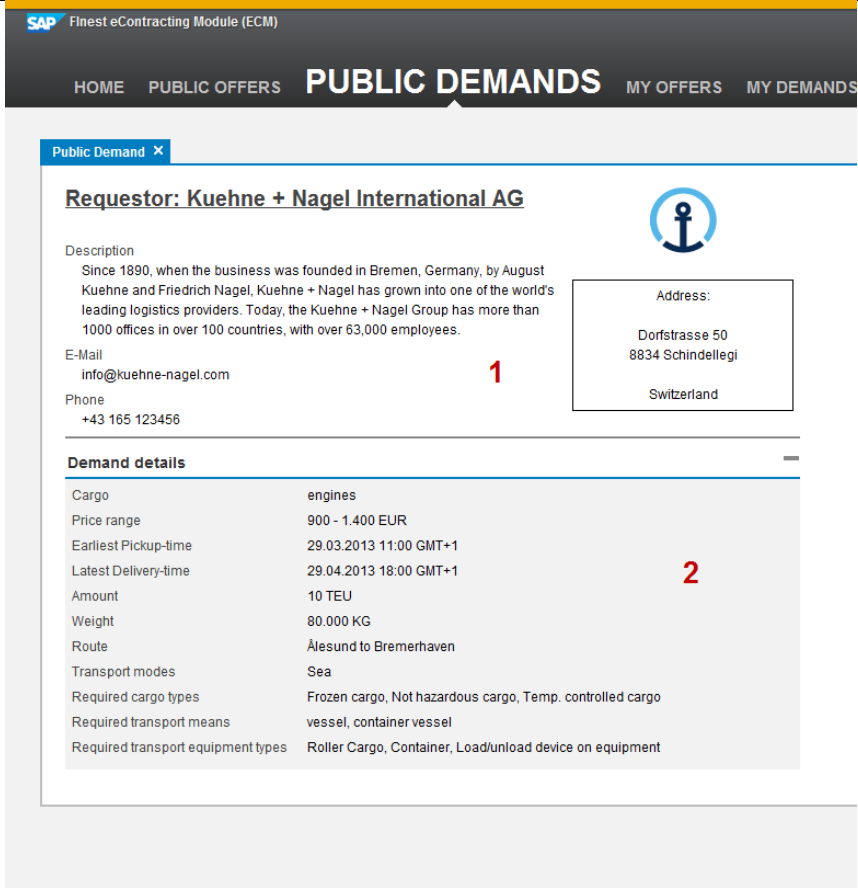| Element	Description
Page number	S05
Page name	Visualization of List of "My Offers"
Screenshot	
General Description & Screen Purpose	This screen shows a list of all service offers created by the user and his company. The user can view, edit, copy or delete an offer directly from this screen. Additionally, new offers can be created from this screen. Finally, the last column shows the number of public demands which do match the offer.
Description of Red Labeled Elements	**Label 1:** Magnifier icons to display an offer **Label 2:** Pencil icons to edit an offer **Label 3:** Copy icons to use an offer (including all data) as template for a new offer **Label 4:** Garbage container icons to delete an offer **Label 5:** Number of public demands which are matching the offer. The number is a link which opens screen S08. **Label 6:** Button to create a new offer without a template.

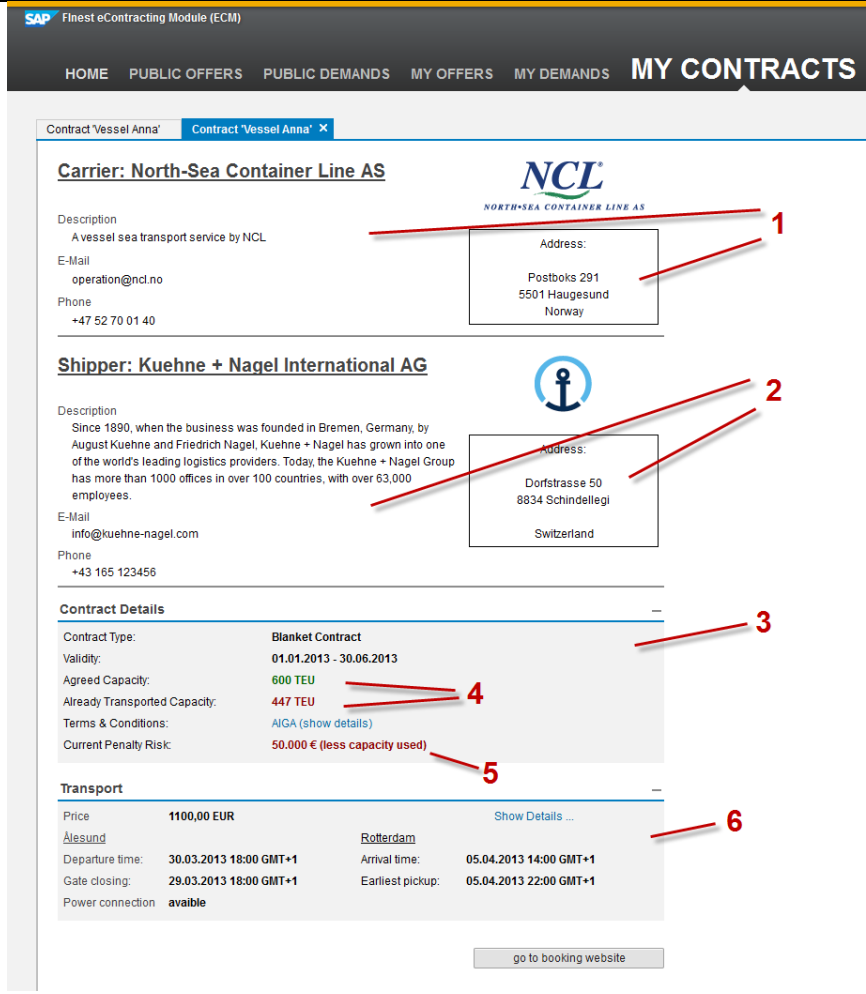| Element	Description
Page number	S06
Page name	Detailed View on Owned Offer
Screenshot	
General Description & Screen Purpose	This screen shows all the details of a transport service offer (not only the simplified view like on screen S04) which is relevant for the owner of the service. The screen can be accessed via the magnifier icons (label 1) on screen S05. The service is broken down into several sections with several sub-sections. By clicking on the edit icon (label 1) the user can edit the data. Of course a user can only edit service offers created by himself/herself or his/her company.
Description of Red Labeled Elements	**Label 1:** Button to switch to the edit mode.

Element	Description
Page number	S07
Page name	Creation of new Offer
Screenshot	
General Description & Screen Purpose	This scree shows how to create a completely new service offer. All details (similar to screen S06) can be added. The screen can be accessed via the magnifier icons (label 6) on screen S05. Depending on the transport service kind (scheduled or on demand) different data can be maintained, but the majority of information is optional so the service provider can decide by his or her own how far to go into the details of the service.
Description of Red Labeled Elements	**Label 1:** All fields are editable **Label 2:** Button to cancel the creation. **Label 3:** Button to save and upload the new service offer.

Element	Description
Page number	S08
Page name	Demand Matches for My Offer
Screenshot	
General Description & Screen Purpose	This screen is accessed via the links on screen S05 labeled with 5. The page shows a list of transport service demands form the public marketplace that match the transport service offer on the third row of the table presented in screen S05.
Description of Red Labeled Elements	**Label 1:** By clicking on one of the magnifier icons the corresponding demand can be viewed.

3.3 Screen Associated with Marketplace Demands

Element	Description
Page number	S09
Page name	Simplified Visualization of Public Demand
Screenshot	
General Description & Screen Purpose	This screen shows a simplified view on a service demand from the public marketplace. This demand is associated with the content of the last row from S08 screen. Only relevant information from a service provider point of view is displayed. That is basic information about the provider, his or her contact data and address. Additionally, the most important data about the demand like earliest pickup, latest delivery, weight, amount and so on.
Description of Red Labeled Elements	**Label 1:** Information about the potential customer. **Label 2:** Details area about the demand details.

3.4 Screen Associated with Contracts

Element	Description
Page number	S10
Page name	Simplified Visualization of Contracted Service
Screenshot	
General Description & Screen Purpose	Similar to S04. This screen gives additional information about the contract details, like agreed capacity and contract validity period. The most important benefits of this screen are: visualization of agreed versus current state of the contract, and the possibility to visualize penalties.

Description of Red Labeled Elements	**Label 1:** Information about the Party fulfilling the carrier role. **Label 2:** Information about the Party fulfilling the shipper role. **Label 3:** Here general details about the contract are displayed like type of contract, validity period, terms and conditions. **Label 4:** For blanket contracts the agreed capacity and the already transported capacity are displayed. The user can see that there is still a large amount of capacity unused which might affect the decision of which provider should be used to transport the goods the next time a service is required. **Label 5:** Here a list of penalty risks are displayed which apply to the current state of the contract. In the screenshot a penalty risk of 50.000 € is displayed because a major part of the agreed capacity is unused so far. This is only a risk and not a fact, and the penalty will only be enforced if the SLAs (Service Level Agreements, such as total amount of cargo to be transported) of the contract are not satisfied. **Label 6:** Here data about the actual transport service is displayed like origin, destination, departure and arrival. The data is similar to the service level data from screen S04.

4 Conclusion

This document described the Proof of Concept (POC) Implementation of the E-Contracting Module (ECM) as it is today. In Section 2 a Fact Sheet was given which shortly described the key features, the implementation technologies, a guide how to access the hosed prototype and the deployment steps. In Section 3 each of the screens of the POC prototype was briefly described which should make it easily possible to try out the prototype.