

Project Deliverable D8.6

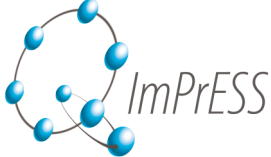
Enterprise SOA Showcase – initial version

Project name: Q-ImPrESS
Contract number: FP7-215013
Project deliverable: D8.6: Enterprise SOA showcase
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Work package: WP8
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Abstract

This document gives an overview about the initial version of the D8.6 deliverable: Enterprise SOA showcase.

Keywords: Enterprise SOA, showcase, Web Services, WAR, Order Management, Supply Chain Management, simulation, database, installation, Java

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Revision history

Version	Change date	Author(s)	Description
1.0	2009-01-18	Achim Baier / Claudius Häcker	Initial Version
1.1	2009-01-19	Wladimir Safonov / Claudius Häcker	Review
1.2	2009-01-20	Mircea Trifu	Review

Note: The revision history describes changes to the document at hand and not changes to the showcase.

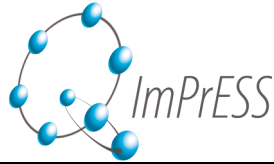
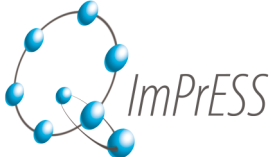


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1 Introduction

The Enterprise SOA showcase is being implemented in two iterations. The first version delivered in M12 is used early in the project to raise awareness about the Q-ImPrESS method in industrial circles. The final version will be delivered in M31 and will be adapted to highlight the domain-specific variations of the Q-ImPrESS method.


The document gives a high-level overview about the Enterprise SOA showcase, its components and auxiliary artifacts.

2 Overview

The Enterprise SOA showcase consists of several small software systems implementing basic processes in the area of Supply Chain Management and Order Management. Its focus lies on the interaction between those software systems without providing full implementation of the various processes. Also components for simulating the usage of particular software systems are provided. Most of the systems consist of a database, a web front-end and web services for remote access.

The individual software systems are:

Core Systems	
Note: Systems only partially implemented (as needed by the considered processes); required behavior is mainly simulated	
CRM	<i>Customer Relationship Management System</i> Stores customer related information like address, customer type and category.
PDM	<i>Product Data Management System</i> PDM is used to manage product categorization, available product attributes per category and specific products (with specific attributes) per category. Pricing and availability of products is not included.
Pricing Engine	<i>Pricing Engine</i> Stores information about which products are offered in which countries at which price. The pricing engine also calculates the total price and possible discounts (volume, customer-specific...) for concrete orders.
Inventory	<i>Inventory System</i> Stores information about the availability of products.
Simulation Systems	
Order Simulator	<i>Order Simulator</i> Randomly generates orders (probability, number of items etc. are adjustable). Retrieves customer related info from CRM, product related information from PDM and order prices via the Pricing Engine. It stores the generated orders in a database.
Shipment Simulator	<i>Shipment Simulator</i> Periodically processes open orders (pushed from Order Simulator) and checks if the products are available using the Inventory System. If products are available generates shipment (complete or partial).
Simulation Manager	<i>Simulation Manager</i> Allows to start, stop and monitor the simulators. To generate orders and shipments for a specific period of time, a start date and an acceleration factor (simulation should run n-times faster than the real time) could be specified.

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Miscellaneous	
Demo	<i>Demo application</i> Web application for retrieving information from CRM, PDM, Pricing through Web Services (after entering product number, invoicing country, customer category and amount).

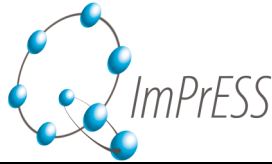
Technologies/frameworks used for the implementation are:

Runtime	
	JDK 1.6.0_10-rc, Apache Tomcat 6.0.18, PostgreSQL 8.3.3, ICEfaces SP1 1.7.2_11, Hibernate 3.2, Spring 2.5.5
Development	
	Eclipse Platform 3.4.1, Apache Ant 1.7.1, junit 4.4, dbUnit 2.2.3, Cobertura 1.9, Checkstyle, Subversion

3 Components / Artifacts

Currently the following artifacts for the Enterprise SOA showcase are available:

Installation packages	Each application is distributed as a self-contained zip installation package with all information and binary data required for installation. This includes .war-files, database setup scripts and master data (e.g. sample customers and products) as well as installation instructions. The packages for the CRM, PDM, Pricing, Inventory, Order Simulator, Shipment Simulator, Simulation Manager, Demo applications are public available on the project web site. Note: All required external libraries are available as Open Source.
VM	Ready-to-use virtual machine (VMware): <ul style="list-style-type: none"> - Linux (Ubuntu) - Java (1.6) - Message Broker (ActiveMQ) - Open Source Application Server (Tomcat) - Open Source database (PostgreSQL) - Deployed war-files of the above applications The VM is public available on the project web site. Note: All used software on the VM is Open Source.
Source	Sources for the Enterprise SOA showcase. Currently the sources are only available internally and for Q-ImPrESS partners. The sources will become publically available as Open Source after first versions of WP6 deliverables (method integration and documentation) are available
Screencast	Screencast for the Enterprise SOA showcase. The screencast is public available on the project web site.



4 Screenshots

This section contains screenshots of the above-mentioned components.

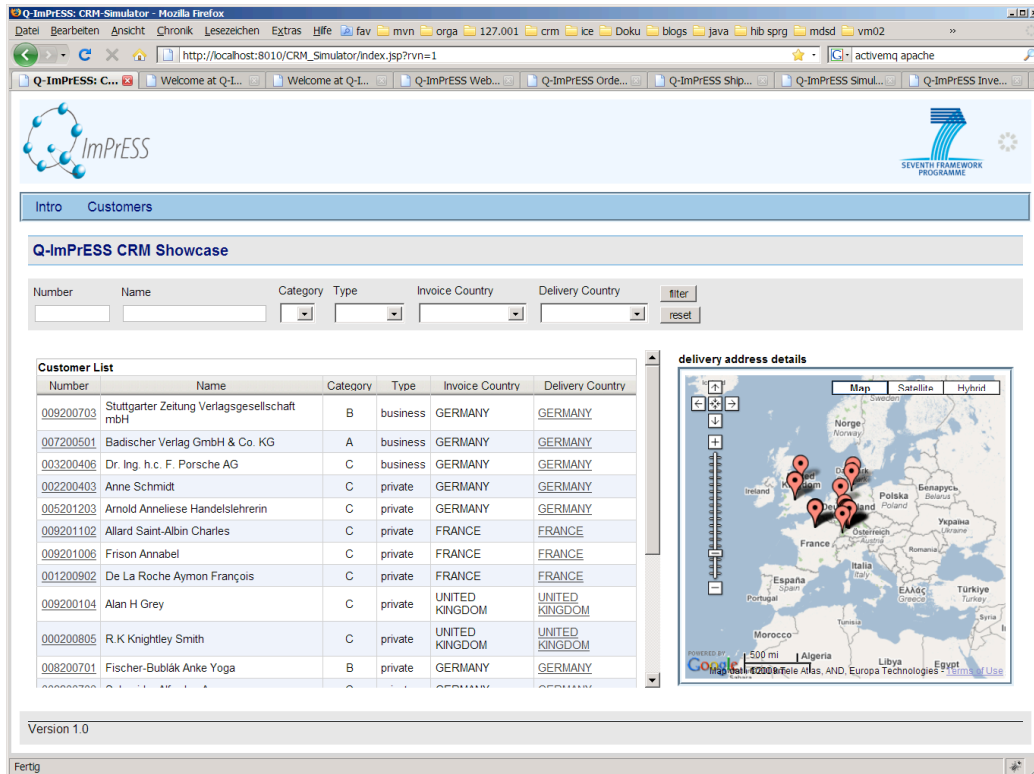


Figure 1: CRM web frontend

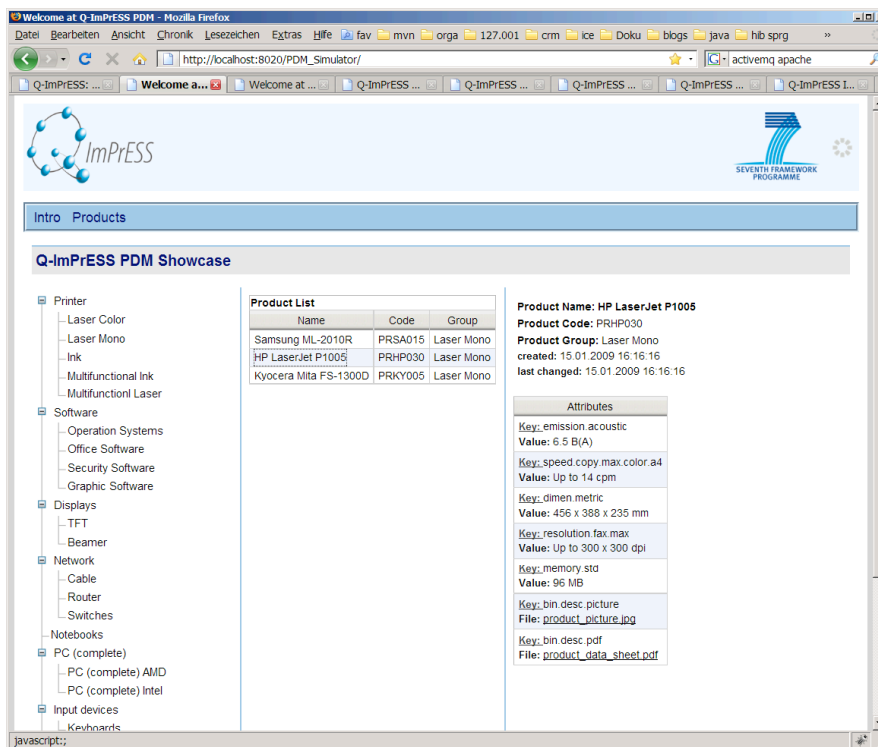


Figure 2: PDM web frontend

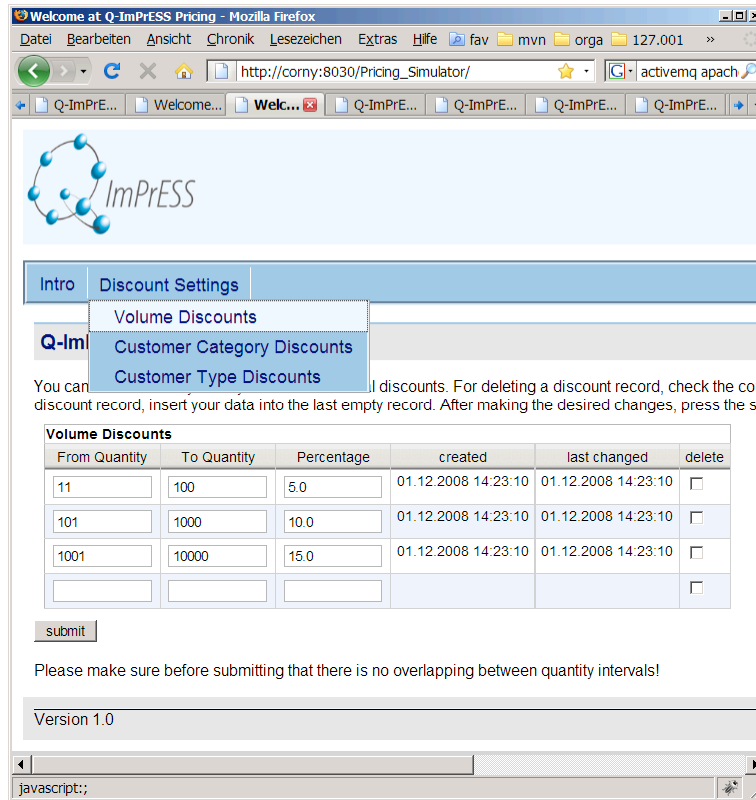
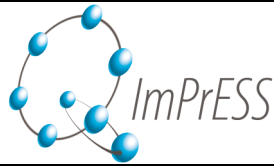


Figure 3: Pricing web frontend

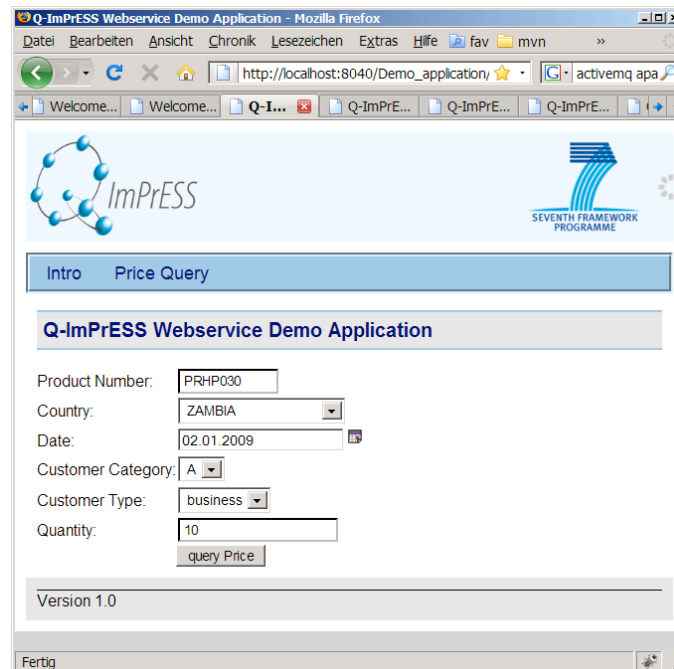


Figure 4: Web frontend for demo application

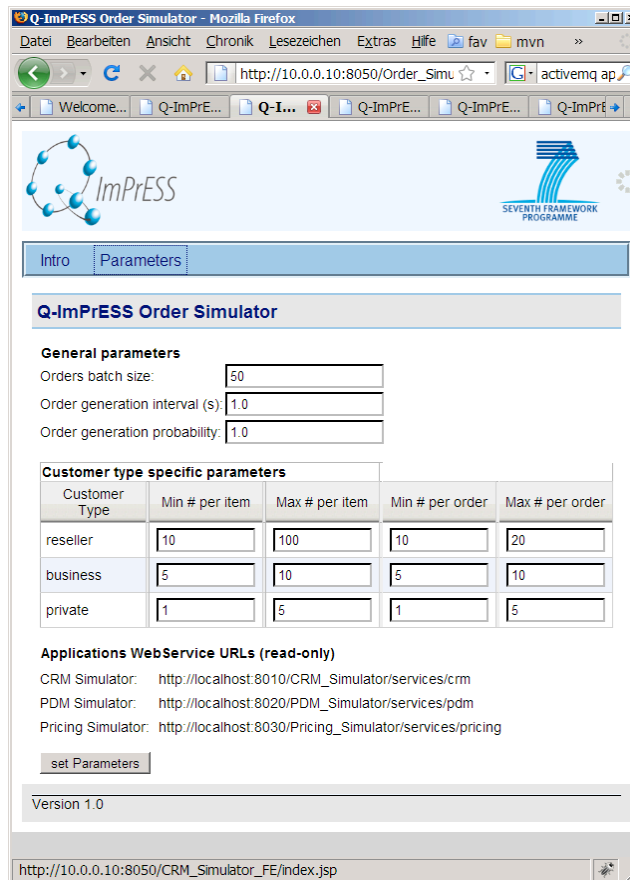
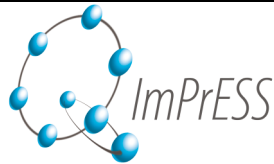


Figure 5: Order Simulator web frontend

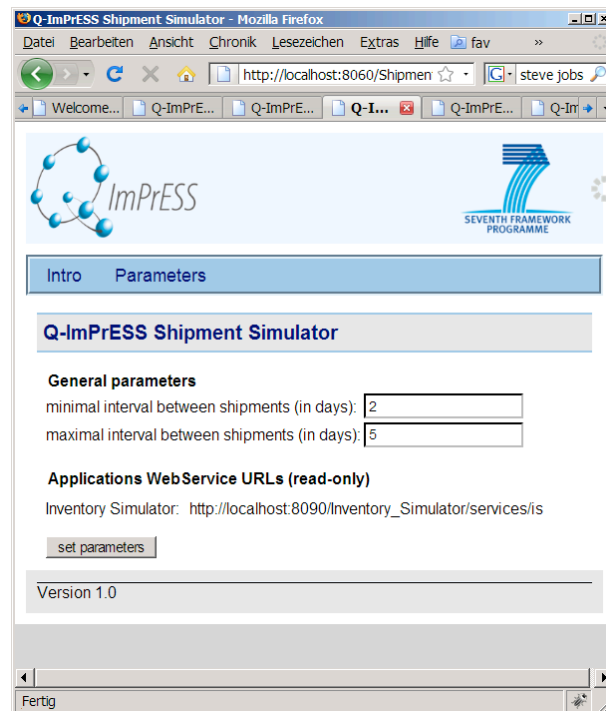


Figure 6: Shipment Simulator web frontend

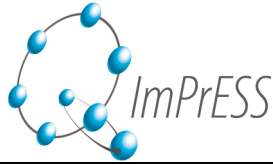


Figure 7: Simulator Manager web frontend

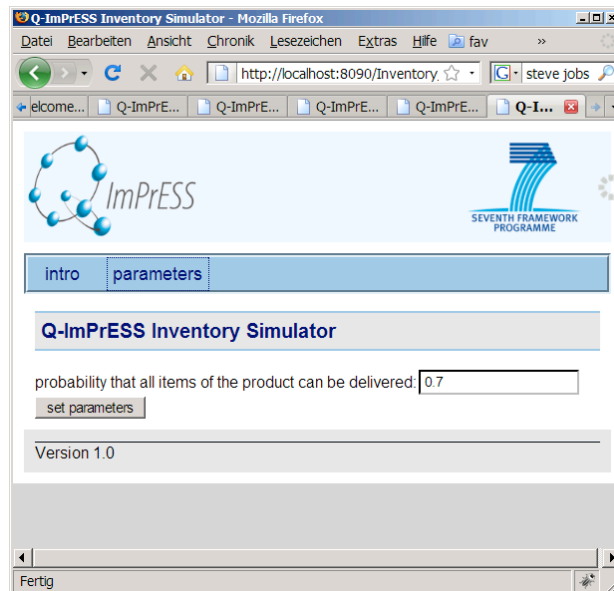


Figure 8: Inventory (simulator) web frontend