

FINANCE, LOGISTIC AND PRODUCTION INTEGRATION DOMAIN BY WEB-BASED INTERACTION NETWORK

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ABSTRACT

FLUID-WIN project is financed by European commission within the 6th framework program, priority Information Society Technologies. FLUID-WIN project will implement an innovative, interdisciplinary and dynamic business model, which will enable the old manufacturing European companies to keep their ability of quick response, achieving competitive prices by integrating FEE countries. The field study of the project can be divided into three main domains – manufacturing, logistic and finance. The main objective of the project is to create an innovative FLUID-WIN model, which will include all four main players: prime contractors, strategic suppliers, cross border logistic service providers and financial service providers. The aim of this contribution is to present the idea and brief description of the project.

KEY WORDS

B2B, competitiveness, model, e-procurement.

1. Introduction

In order to stay competitive, many European companies started to purchase from the far east. This endangers the health of the European economy in two dimensions: The European enterprises might loose a significant market share and they might decide to transfer the major part of their value creation to the far east, also. The new situation of the EU-25 opens new chances: Eight of the ten new member states can be considered “former east European” (FEE). They offer products at lower prices, and have advantages in terms of skills, lower geographic distance and comparable culture and background. Today, there are sophisticated approaches to optimize the supply chain execution and the transport between companies. However, they are not integrated, thus increasing cost and decreasing options to exploit all flexibility. This was not critical as long as suppliers and customers have been geographically close, but it becomes most important for FEE companies that target to address the West-European markets. Analogous, there is merely no integration between the order management and the financial

exchange between companies. FLUID-WIN will take this task and will provide easy-to-adopt solutions for quick integration of new FEE suppliers into existing networks.

2. Main goals

FLUID-WIN will implement an innovative, interdisciplinary and dynamic business model. This model will enable the old European manufacturing companies to keep their ability of quick response, achieving competitive prices by integrating FEE suppliers. This model has to be supported through easy-to-adopt e-commerce applications. Though efficient models for the supply chain execution are available nowadays as B2B operation, the great challenge is the integration of the logistics and financial services without installing thousands of peer-to-peer relationships. FLUID-WIN has a specific focus on the integration of production control systems (especially taking into account supply chains) at different levels (MRP/ ERP/ APS/ SCM) with logistic control systems (WMS, transport management, ...) and the IT landscape of financial service providers. FLUID-WIN will enable clusters of manufacturing companies and service providers like financial and logistic service providers to operate as a single business entity in the development of applications and solutions adapted to local business needs. The objective is to develop means for a B2(B2B) service, based on Application Service Provider (ASP) technology, providing the possibility to adapt a service into a complete existing network instead of installing relations to the network members.

3. Technical Approach

The development will therefore include three major elements:

1. The design of a *FLUID-WIN B2(B2B) interdisciplinary model*. The model will support the definition of relationships among service providers (logistic and finance) and manufacturing networks, enabling the creation of a new multi-business web-

based application where service providers offer their services not to a company but to an entire network.

2. The design and development of a *suite of web based tools* (FLUID-WIN Platform, fig. 1) specifically designed to be provided on ASP basis, implementing the FLUID-WIN B2(B2B) interdisciplinary model.
3. The design and development of a specific *interoperability framework* targeted to enable the electronic data interchange among all players based on the FLUID-WIN B2(B2B) interdisciplinary model.

The consortium follows a technology-pull approach. This is based on the experience, that the introduction of new software in smaller enterprises very often fails, because the software is over-dimensioned and resources necessary to run this software correctly are not in balance with the available (and acceptable) administration overhead. One of the major strengths of smaller enterprises is just the fact, that they have few overhead and rich (non-distributed) work content. Therefore, the project is structured into three major sections:

1. A design phase, which detects, measures and prioritizes the potential support and impact in terms of business processes and software
2. The development phase that will establish the new B2(B2B) Model, the required methods, the modeller and the ASP process modules,
3. The evaluation phase, which directly feeds back to the development, and sets up the activities to be further done for a successful FLUID-WIN business after the project.

4. Expected Achievements

First there is the development of a pioneering methodology (B2(B2B) Model) to reengineer the communication integration among multidisciplinary fields (performed at the examples of manufacturing, logistics and finance) and further related supporting tools, focusing on developing a Web-based platform (FLUID-WIN Platform).

The model dramatically improves and simplifies the collaboration of manufacturing networks with service providers. Simultaneously, the project will have massive impact on the business cooperation in the new Europe-25, focusing on four groups.

1. Old Europe manufacturers, which will be supported in cost containment by migrating a certain percentage of the on-design parts to FEE suppliers.
2. FEE suppliers, which will be strongly facilitated in conducting business with the “old” Europe manufacturers.
3. Logistic and financial service providers from all Europe, which will be enabled to provide new value added services.
4. Local suppliers of “old” Europe manufacturers (frequently SMEs), which will be facilitated in doing business abroad, supported by easy to adopt low cost integration tools and by innovative financial and logistic services.

Summarizing the FLUID-WIN project will increase competitiveness of European Enterprises by exploring multidisciplinary fields, which combine ICT with other science and technology fields and integrate computers and networks into the everyday business environment.

5. Consortium of partners

The FLUID-WIN project is being handled by international consortium. The faculty of economy of TUKE is the only academic institution in the consortium. According to this, its main role, besides participating in model creation and data collecting, is to provide the scientific extension and further dissemination of the results gained within the project. EkF TUKE is also involved in the field of finance services and their implementation into the classic B2B e-business model.

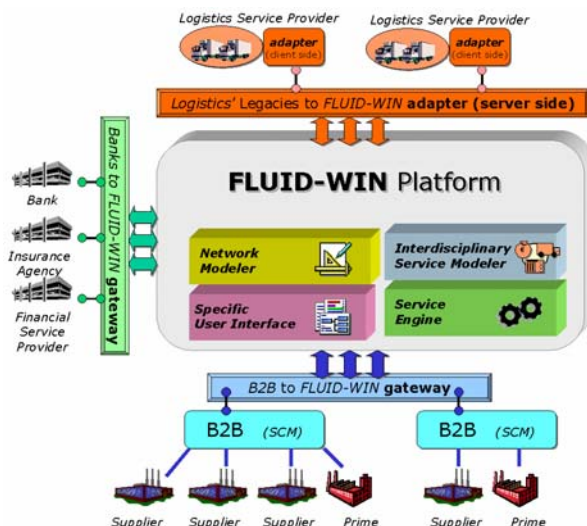


Fig. 1: FLUID-WIN Platform overview