
	<p><i>COLL-CT-2004-500276</i></p> <p>KNOW-CONSTRUCT</p> <p><i>Internet Platform for Knowledge-based Customer Needs Management and Collaboration among SMEs in Construction Industry</i></p>	
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Project Presentation

Deliverable D6.1

Due date of deliverable: 15. October 2005

Actual submission date: 14. October 2005

Start date of the project: 01. March 2005 Duration: 30 months

Organisation name of lead contractor for this deliverable: LABEIN

Revision [draft, 1, 2, ...] Version 1.0

<p>COLLECTIVE RESEARCH PROGRAMME</p>	<p>Project co-funded by the European Community under the "Horizontal Research Activities Involving SMEs - Collective Research" Programme (2002-2006)</p>
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Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Change log

Version	Date	Change
1.0	12.09.05	First version

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Authors:

Mikel Sorli - LABEIN

Inigo Mendikoa - LABEIN

Ljubisa Urosevic - ATB

Dragan Stokic - ATB

Andreas Kuczyinski - ATB

Antonio Lucas Soares - INESC Porto

Maria Helena Corvacho - IC

Jorge Moreira da Costa - IC

Dieter Demuth - BAN

Roberto González de Zarate - ASEFAVE

Jean-Francois Hornain - CAPEB

José de Matos - APCMC

Distribution:

Partners

CEC


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Abbreviations

CI	Construction Industry
CIK	Construction Industry Knowledge
CNM	Customer Needs Management
e.g.	“exempli gratia” – for example
etc.	etcetera
ICT	Information Communication Technology
KCS	Knowledge Community Support
SME	Small & Medium Enterprises

Project Presentation

Contract number <i>COLL-CT-2004-500276</i>	Project acronym <i>KNOW-CONSTRUCT</i>	Project logo 
Project name <i>“Internet Platform for Knowledge-based Customer Needs Management and Collaboration among SMEs in Construction Industry”</i>		

PRIORITY /PRIORITY COMPONENT

The proposal addresses the following 6th FP Strategic Objective:










- Objective 3.4.3.1, particularly the topic: Creation of "knowledge communities" in production technologies

The project will address the following scientific problems:

- New methods & tools to support establishment of SME knowledge community.
- Knowledge representation and ontology for the construction sector, with particular emphasis on ontology maintenance issues.
- Innovative ICT solutions for "web based dialogue" applicable in SME community including interactive decision-aid system affordable for SMEs.

These problems are directly relevant for the scientific objectives of the 6th FP and specifically Objective 3.4.3.1 described above, as they directly contribute to industry's transition towards more knowledge based and customised production and systems encompassing not only hardware and software but also (even predominantly) the people and the way they learn and share the knowledge. Creation of the knowledge communities of SMEs in construction industry via the proposed approach in which professional associations play a central role, will support inter-enterprise operability (instead of adversarial relationships), dynamic organisations and necessary standardisation.

LIST OF PARTICIPANTS

Participant name	Logo	Country
LABEIN		E
INESC PORTO		P
IC		P
ATB		D
ASEFAVE		E
APCMC		P
CAPEB		F
BAN		D
ELKA		E
PROCOMSA		E
BCM		P
CRUMAR		P
SBZ		D
WURBS		D

KNOW-CONSTRUCT project takes place with the financial support of the **European Community** under the “**Collective Research Programme**“.

PROJECT COSTS

TOTAL COST (€)	COMMISSION FUNDING (€)
1.887.205	1.139.688

PROJECT DURATION

FROM	TO
01/03/2005	31/08/2007

PROJECT MAIN GOAL(S)

The project aims to develop a common internet-based platform for SMEs from the construction sector to provide an effective combination of two general functionalities: (a) **Customer Needs Management (CNM) System**: an innovative decision making support system regarding the products characteristics, applications and other consultancy services for SMEs' customers applying the "web enabled dialogue", and (b) **Knowledge Communities Support (KCS) System**: a system for SMEs to support an advanced form of co-operation through the creation of Knowledge Communities of SMEs in CI. The system should support the integration, management and reuse of the area specific knowledge via a common knowledge base.

KEY ISSUES

The main challenge is to provide a cost-effective solution for the two main problems:

- (a) Construction industry (particularly SMEs) urgently needs to radically improve communication with their customers in order to provide better product support and services. The innovative forms of communications and relationships among SMEs and their customers are increasingly important in order to improve the market share and/or survival chances in the "new economy era".
- (b) To respond to ever increasing customer requirements it is more than necessary to establish a closer co-operation (particularly among SMEs) within this sector, aiming at assembling alliances of SMEs into integrated teams that will genuinely align with challenging performance targets.

The professional associations may represent an ideal environment to provide such a solution.

The innovative system will respond to the following aspects:

- (1) low cost for the involved SMEs and customers,
- (2) Internet based,
- (3) efficient customer support,
- (4) support more open aspects of collaboration between actors in the construction process,
- (5) record the key information associated with all the involved actors, assuring traceability,
- (6) assure common terminology and ontology,
- (7) security: each participant should get access only to the information required to execute its tasks,
- (8) support mobile users (knowledge available in a form of essential expertise, reachable anywhere, at any time), etc.

TECHNICAL APPROACH

To achieve this, the S&T objectives (research topics) of the KNOW-CONSTRUCT project are to comprise:

- Investigation in new forms of the **SME Knowledge Communities** in this specific industrial sector.
- Establishment of an **ontology** and (product/service) classification related to the construction industry domain(s) defined to meet the end-users (SMEs) requirements.
- Development of **methodology of common Construction Industry Knowledge (CIK) representation** applicable for large sets of SMEs in the construction industry as a basis for establishment of knowledge community.
- Identify a way to **effectively combine** two main functionalities: CNM (eCNM) and KCS (eKCS) in order to achieve a cost effective solution satisfying two basic SMEs needs.
- Development of methods (appropriate for SMEs in this sector) for knowledge acquisition, structuring and enriching; this will enable SMEs specialists to

- **provide knowledge to customers** within CNM system (replacing the need for SME specialists to directly provide consultations)
- **share and swap this knowledge** using the system within the association-based knowledge community's network.
- Development of an **open-architecture Internet based platform** covering two basic functionalities which will provide the possibility to effectively combine knowledge included in (a) individual CNM and (b) knowledge to be shared among community member SMEs, as well as an interface for the individual SME CNM Systems and the legacy systems currently used in SMEs in this sector.
- Development of a "**web based dialogue**" **application** as a **decision support tool** to be used for customer problem solving taking advantage of the platform's knowledge base, using application sharing, web cameras, and specifically supporting mobile users, and including advanced solutions **for diagnostic analysis of customer feedback and knowledge provided**, etc.

EXPECTED ACHIEVEMENTS/IMPACT

- Increase number of winning offers by at least 40% (by better understanding customers needs) and higher number of complex project won through knowledge integration within the knowledge community - expected increase of 25%.
- Reduce efforts and time for offers preparation, particularly for more complex offers, by at least 20% - 25%.
- Reduction of non-quality costs and rework costs associated with a better and more updated specification of products of 20% and reduction of non-quality costs through a better knowledge management and CNM requirements and better knowledge on legislative issues by 30%.
- Lower efforts and quicker answering to customer "presales" CNM requirements e.g. application instructions, replaceability etc. - expected decrease of 40%
- Higher productivity by better management of the relevant knowledge and best practice exchange by 10% and costs savings from better working force usage (less - common - experts for the same efficiency) - expected decrease of 20%;
- Reduction of problems due to wrong classification and communication problems among SMEs and their clients by at least 25% and quicker answering to customer after sales requirements e.g. maintenance - expected decrease of 30%;
- Reduction of costs associated with the search and selection of products and materials for specific applications of 30%.
- Improved consultancy offer by SMEs leading to reduced costs for customer visits (travelling costs) - reduction by at least 20%.

COORDINATOR CONTACT DETAILS

<p>LABEIN – Foundation LABEIN C/ Geldo - Parque Tecnológico de Bizkaia Edificio 700 48160 - Derio (Bizkaia), Spain</p>	<p>Dr. Mikel Sorli <i>Phone</i> : +34 94 607 33 05 <i>Fax</i>: +34 94 607 33 49 <i>e-mail</i>: sorli@labein.es</p>
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