

Project Profile

IT supporting execution of innovative projects

Realising a cyber space for product innovation and innovative software development

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The main goal of the ITEI project is to improve the innovation capabilities of European software-intensive product builders by the realisation of a cyber space for product innovation and innovative software development. This cyber space will allow the industry to manage company-specific innovation strategies better during software-intensive product-development endeavours.

The ITEI project will lead the way to improved and accelerated innovation in software-intensive products by focusing explicitly on innovation at the product level; and by recognising that software is a powerful tool for differentiation and innovation in product development.

Main drivers for this project are:

- **Software is ascending the value chain of products** – The world is evolving more and more from a knowledge-based economy to an economy based on creativity and innovation. Software technology has become a major driver for innovation and this software is increasingly being used as an instrument for innovation in products. Historically, the focus in software engineering has always been mostly on increasing productivity rather than stimulating creativity and innovation.
 - ITEI envisions an approach by which each organisation can incorporate innovation strategies in its software product-development processes, considering parameters such as type of innovation, partnership models, product complexity, available expertise and degree of maturity.

- **Lack of integration between process, project, performance management and product innovation** – An abundant body of knowledge in the domains of process, project and performance management can be used to manage innovation projects, but many challenges still exist as these three domains have mostly evolved independently. Dealing with the three domains independently is no longer sufficient, and a new approach is needed. In addition to these three 'traditional' domains, new processes and models such as collaborative design, community development, Open Innovation, open business models and co-production are being introduced into organisations. They offer a large potential that still remains mostly untapped today.
 - ITEI offers better understanding of the benefits offered by Open Innovation and Web 2.0 technologies for software-intensive product development.

- **The need for tailoring the innovation strategy.** Each innovation initiative asks for a specific approach. Often out of the box solutions do not exist and in many cases the approach boils down to combining several elements from the huge (existing) state of the art in process, project, product, performance and innovation management. Due to this abundance, and the observation that out of the box innovation solutions still do not exist, companies are confronted with the challenge of choosing and tailoring the available tools, techniques and methods toward their specific context. It is not well understood how to adapt

ITEI (ITEA 2 ~ 07003)

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■ Partners

Answare
Auraportal
Carsa
DS2
ED
ESI
Indie Group
Inno_W
Innovalia
Integranova
Keraben
Mentis
Metso Automation
Movial CT
NSN
Robotiker
Sirris
Sisteplant
Spikes
Steria
Trimek
TSG
UJI
University of Oulu
UPV
VTT Technical Research Centre of Finland

■ Countries involved

Belgium
Finland
Spain

■ Project start

May 2008

■ Project end

October 2010

■ Contact

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the often generalist approaches within each domain to a specific context of a software intensive product builder.

- ITEI envisions an approach where an innovative decision framework can be offered to a company to help it with this challenge.

EFFECTIVE INNOVATION STRATEGIES

ITEI will not merely extend the state of the art in software product development, but rather will investigate solutions to assist companies in aspects of decision making – such as deciding what to select from the state of the art or how to combine and integrate methods, tools and techniques – and tailoring to their specific context.

The project is executed as empirical research, where ideas and tools proposed from the theoretical studies are validated through application cases at software-intensive product builders in various sectors.

To reach its goals, the ITEI project has to realise a number of steps:

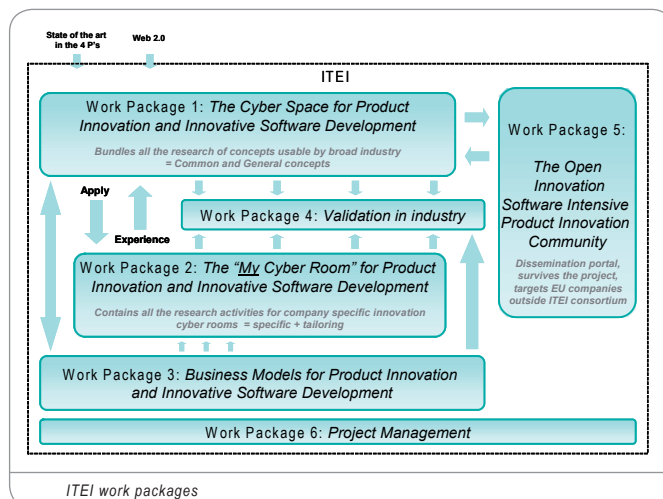
1. Research to identify the underlying fundamentals for the cyber space for product innovation and innovative software development. In a first step, the problem will be researched from a general point of view – not restricted to a single company but applicable in a broader context.
2. For each company, instantiate this cyber room to a series of rooms – called 'My Cyber Rooms' – tailored to the specific context of the industrial partners;
3. Understand the benefits of Open Innovation and Web 2.0 technologies to software engineering;

4. Validate the project research results during pilot projects; and
5. Deploy a European Open Innovation portal for product innovation and innovative software development that survives the project duration of ITEI.

CYBER SPACE VALIDATION

The main results of the ITEI project will be:

- Conceptualisation, realisation and industrial validation of the cyber space for product innovation and innovative software development, a software environment through which connected applications – existing workflows, groupware, business intelligence, Innovation Games, project-management tools, etc. – will be able to exchange and synchronise management models and performance data. This includes:
 - SinnoBoK: the Software Innovation Body of Knowledge,
 - An innovative decision framework and dashboards to provide support for choosing and tailoring innovation approaches, and
 - Various derived pilot cyber rooms – the 'My Cyber Rooms' – tailored to the context of the software-intensive product builders in the consortium;
- New business models for software intensive product development, enabled by applying Open Innovation and Web 2.0 technologies to software engineering; and
- An Open Innovation portal for product innovation and innovative software development that lives beyond the project duration of ITEI. This community will also be used for dissemination towards the broader industry.



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- ITEA 2 – Information Technology for European Advancement – is Europe's premier co-operative R&D programme driving pre-competitive research on embedded and distributed software-intensive systems and services. As a EUREKA strategic Cluster, we support co-ordinated national funding submissions and provide the link between those who provide finance, technology and software engineering. Our aim is to mobilise a total of 20,000 person-years over the full eight-year period of our programme from 2006 to 2013.

- ITEA 2-labelled projects are industry-driven initiatives building vital middleware and preparing standards to lay the foundations for the next generation of products, systems, appliances and services. Our programme results in real product innovation that boosts European competitiveness in a wide range of industries. Specifically, we play a key role in crucial application domains where software dominates, such as aerospace, automotive, consumer electronics, healthcare/medical systems and telecommunications.

- ITEA 2 projects involve complementary R&D from at least two companies in two countries. We issue annual Calls for Projects, evaluate projects and help bring research partners together. Our projects are open to partners from large industrial companies and small and medium-sized enterprises (SMEs) as well as public research institutes and universities.

