

Project Results

On-line community offers systematic approach to software innovation

Coherent framework to improve innovation for software-intensive product development

Software is a major driver for product innovation. The ITEI project has developed a systematic and coherent overall approach to software-intensive product innovation with a series of new tools offering better quality and shorter lead times. Results were demonstrated in a range of industrial environments. The body of software knowledge developed is available in the first book on the topic called "The Art of Software Innovation – 8 practice areas to inspire your business", published by Springer¹, and through Sinnobok.org – an on-line community established to disseminate the ideas more widely.

ITEI saw a strong need to integrate the many different processes involved in software innovation into a new framework to guide company innovation processes. The project involved a wide range of industries with backing from a large number of companies and countries to help establish the new framework. The 26 partners covered the whole IT supply chain from basic research to end users.

DEVELOPING A FRAMEWORK

Software innovation is multifaceted and the approaches used by companies can

be very different. The ITEI project took the assumption that there is no such thing as a universal software engineering process or innovation process. Some things work well for a certain company, others do not. The ITEI research resulted in the definition of eight fundamental practice areas for innovation with software. Each practice area contains a number of activities that can help companies to master that practice area. These findings were validated in an industrial context, successfully illustrating the applicability of these practice areas in practice. The framework of these eight practice areas were developed with an industrial target audience in mind. The ITEI consortium invites companies to challenge themselves by offering the framework to become more innovation-driven, rather than engineering-driven and to better understand the new business opportunities offered by open innovation and Web 2.0 technologies.

SERIES OF PRACTICE AREAS

ITEI identified a software innovation canvas featuring 46 activities to manage innovation. These 46 activities are grouped into 8 practice areas. As an example of the practice areas, the art of openness deals with how companies can look at openness, from defining an openness



¹ <http://www.springer.com/computer/swe/book/978-3-642-21048-8>

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Partners

Answare
 Auraportal Carsa
 DS2
 ED
 ESI
 Incode
 Indie Group
 Innovalia
 InnovSupport
 Keraben
 Mentis
 Metso Automation
 Movial CT
 NSN
 Robotiker
 SIRRIS
 Sisteplant
 Softkinetic
 Spikes
 Steria
 Trimtek
 TSG
 UJI
 University of Oulu
 UPV
 VTT Technical Research Centre of Finland

Countries involved

Belgium
 Finland
 Spain

Project start

May 2008

Project end

April 2011

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Project websites :

www.itei-itea2.org
www.sinnobok.org

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strategy to implementing the optimal level of product, process or organization openness supported by appropriate business model.

The overall framework and descriptions of the activities and practice areas have been collected in a book *The art of software innovation*¹. This explains the approach and shows how it has been applied in 21 industrial cases developed by the project partners.

SEVEN NEW TOOLS

In addition to the overall integrated approach, ITEI partners developed seven new tools to support the approach, some of which are already being commercialised. These tools either support different aspects of innovation, such as advancing idea management, or take a more comprehensive approach to cover all the innovation processes: company strategy, managing all the people involved in innovation and commercialisation.

Concrete examples of the ITEA 2 project's success include:

- The AuraPortal web-based innovation process management system – a software platform offering fully integrated enterprise-essential applications;

- The Inno-W Innovation Hub system which provides a single navigation point for data related to innovation management; and
- The Indie Group CogniStreamer collaborative tool which supports network-centric innovation based on Web 2.0 social software tools and technology.

OPEN INNOVATION PORTAL

An on-line portal has been established for product innovation and innovative software development going beyond the ITEI project. This website (www.sinnobok.org) offers a body of knowledge called SINnoBoK – the software innovation body of knowledge – which will be used for dissemination towards the broader industry.

It is important for European companies to adopt these insights to have a real impact. ITEI partners are already transferring their knowledge to other companies through training, presentations and webinars. Moreover, while the focus was on software, the partners are now thinking how to extend this approach to other industrial sectors including services. Moreover, the tools developed are already being used in other sectors.

Major project outcomes

DISSEMINATION

- The book "The Art of Software Innovation"
- Sinnobok.org online community
- 44 publications and lectures
- 8 seminars and several workshops in Finland, Belgium and Spain
- 13 appearance in media : TV, radio, magazines, Youtube
- 3 news letters

EXPLOITATION

- The AuraPortal web-based innovation process management system – a software platform offering fully integrated enterprise-essential applications
- The Inno-W Innovation Hub system which provides a single navigation point for data related to innovation management
- The Indie Group CogniStreamer collaborative tool which supports network-centric innovation based on Web 2.0 social software tools and technology

STANDARDISATION

- The software innovation canvas including 46 activities for software innovation provides a good starting point for standardisation. The framework needs to be further developed and validated with the large group of industrial partners.

SPIN-OFFS

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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.



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