Enabling the business-based
Internet of Things and Services

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# D12.5.1 Exploitation strategy and plans 1

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# Index:

# 1. Executive Summary

This deliverable provides a first overview of the exploitation plans and strategies for the ebbits project.

The main objectives of the exploitation in ebbits are:

- Identification and description of the innovative components of the ebbits results.
- To assess the exploitation potential of these "products".
- To produce a realistic exploitation plan, solidly anchored in the partners' own strategies.

The ebbits exploitation strategy is to progressively increase exploitation efforts as project results are obtained in order to assure a wide awareness of the ebbits project and favourable conditions to facilitate exploitation after the end of project. The exploitation strategy is intimately connected to the dissemination strategy of the project.

Many dissemination activities happen in the clustering activities where ebbits is involved: IERC (IOT European Research Cluster), FInES (Future Internet Enterprise Systems), Monitoring and Control cluster on Smart Buildings/Smart Spaces and CERP-IoT (Cluster of European RFID Projects) as well as the Future Internet Assembly (FIA).

Exploitation activities are supported by press releases and marketing activities such as the website, presentation material, project newsletter, papers and event participation such as demonstration events, trade shows and industrial forums.

The main exploitation technologies are:

1. The ebbits service platform
2. The ebbits web service components
3. The ebbits consultancy services
4. The ebbits business models

The ebbits service platform provides a ubiquitous communication infrastructure for which IN-JET and CNET are planning to become service providers in Scandinavia with a focus on energy control and monitoring as well as healthcare monitoring. Further exploitation of the ebbits platform across Europe is planned by FIT, ISMB, CNET, SAP TNM and COMAU.

, FIT, SAP, CNET, COMAU, TNM and IS are planning to exploit the ebbits web service components in order to help industry partners develop innovative products in the areas of point-of sale, smart home and energy efficiency solutions. COMAU and TNM plan to integrate the ebbits platform in their products in the automotive manufacturing and pig management domain.

In the area of consultancy services FIT plans to create a compentence centre for enterprise systems and energy efficiency with a strong focus on consulting. ISMB, TNM, TUK, IS and CNET are planning to incorporate the knowledge created in ebbits in their consultancy portfolio.

TUK plans on helping companies innovate the area of IoT by developing an appropriate business model tailored to their profile. TUK will also include the experience from the business model development into their academic programmes on various levels.

This deliverable will be updated in M48.

# 2. Introduction

The ebbits project aims to develop architecture, technologies and processes, which allow businesses to semantically integrate the Internet of Things into mainstream enterprise systems and support interoperable real-world, on-line end-to-end business applications. It will provide semantic resolution to the Internet of Things and hence present a new bridge between backend enterprise applications, people, services and the physical world, using information generated by tags, sensors, and other devices and performing actions on the real-world.

The ebbits platform will support interoperable business applications with context-aware processing of data separated in time and space, information and real-world events (addressing tags, sensor and actuators as services), people and workflows (operator and maintenance crews), optimisation using high level business rules (energy and cost performance criteria), end-to-end business processes (traceability, life-cycle management), or comprehensive consumer demands (product authentication, trustworthy information, and knowledge sharing).

The ebbits platform will feature a Service oriented Architecture (SoA) based on open protocols and middleware, effectively transforming every subsystem or device into a web service with semantic resolution. The ebbits platform thus enables the convergence of the Internet of People (IoP), the Internet of Things (IoT) and the Internet of Services (IoS) into the "Internet of People, Things and Services (IoPTS)" for business purposes.

The ebbits platform will be demonstrated in end-to-end business applications that feature connectivity to and on-line monitoring of a product in its entire lifecycle, i.e. from the early manufacturing stage to its end-of-life. The project will develop, implement and demonstrate two ebbits IoPTS applications. The first application demonstrates real-time optimisation metrics, including energy savings, in manufacturing processes. The other demonstrates online traceability with enhanced information on food.

## 2.1 Purpose, context and scope of this deliverable

This document will support the on-going exploitation of the project. The aim is to set out an agreed approach to exploitation throughout the project to ensure that exploitation objectives are met in a form agreeable to the Consortium and beneficial for the business interests of individual participants.

The main objectives of the exploitation in ebbits are:

- Identification and description of the innovative components of the ebbits results.
- To assess the exploitation potential of these "products".
- To produce a realistic exploitation plan, solidly anchored in the partners' own strategies.

A Project Exploitation Plan will be developed describing joint and individual partner's exploitation strategies including:

- Specific industrial partners exploitation strategies and commercial promotion actions.
- Specific academic partners exploitation strategies and academic promotion actions.

The market analysis will be developed by the industrial partners. It will offer new and updated information on user needs in order to provide the scientific partners with useful feedback on the marketability of ebbits products and provide a comprehensive background for each partner's individual exploitation and business plan.

This deliverable is dedicated to ensure that the outcomes and results of the ebbits project will be exploited after the project's lifetime; each project partner has a unique interest in exploiting the project results. For this purpose, the present deliverable presents the project's business strategies and exploitation plan with the aim to facilitate a successful exploitation of the ebbits framework, its components and the knowledge gained during the project.

Since the project is now reaching the end of the first half of the project period, focus will also be on the opportunities to apply the ebbits components in business environments and promote early exploitation.

This deliverable will be updated in M48.

## 2.2 Background

This deliverable is part of task T12.3 Exploitation which is concerned with the coordination of exploitation of project results. It sets up the framework for implementation and execution of the project's exploitation strategy and plans by:

- Defining and agreeing a comprehensive exploitation strategy with measurable goals
    - including a benchmarking analysis between the ebbits model and other IoT platforms (included in D 12.4).
- Providing an analysis to evaluate the potential market segments (included in D 12.4).
- Specifying industrial partners exploitation strategies and commercial promotion actions.
- Specifying academic partners exploitation strategies and academic promotion actions.

# 3. Exploitation Strategy

## 3.1 Proposed approach

The ebbits exploitation strategy is to progressively increase exploitation efforts as project results are obtained in order to assure a wide awareness of the ebbits project and favourable conditions to facilitate exploitation after the end of project. The exploitation strategy is intimately connected to the dissemination strategy of the project. Dissemination in ebbits intends to optimise the dissemination of project knowledge and results to companies and organisations, which share an interest in the scientific results and the applications, or are potential service providers of ebbits. Also the ebbits project is involved in the FInES and IERC clusters and in the cluster on Smart Buildings/Smart Spaces to create synergies between related projects.

## 3.2 Objectives and methods

As already mentioned in the introduction the main objectives of exploitation in ebbits are:

- Identification and description of the innovative components of the ebbits results.
- To assess the exploitation potential of these "products".
- To produce a realistic exploitation plan, solidly anchored in the partners' own strategies.

The Project Exploitation Plan describes both joint and individual partners' exploitation strategies. It is strongly linked to D12.4 Market and competitor analysis, which will provide information about the potential products, competitors and the technology benchmarks. D12.4 will define the ebbits market position and identify the potential market segments as well as the specific academic and commercial strategies to be implemented. The Exploitation Plan outlined in this deliverable will include:

- A benchmarking analysis between the ebbits model and other IoT platforms.
- A specific analysis to evaluate the potential market segments.
- Specific industrial partners exploitation strategies and commercial promotion actions.
- Specific academic partners exploitation strategies and academic promotion actions.

The market analysis will be developed by the industrial partners and relevant results will be reported in D12.4. It will offer new and updated information on user needs in order to provide the scientific partners with useful feedback on the marketability of ebbits products and provide a comprehensive background for each partner's individual exploitation and business plan.

As the exploitation strategy is closely connected to the dissemination strategy, we provide an update of the strategic objectives and the three major groups of target audiences for dissemination in ebbits:

1. The research and scientific community in ICT.
2. The industrial community including large industrial corporations, SME's, consulting companies in manufacturing and logistics, supply chain management companies.
3. The agricultural communities including farmers, food processing companies, retailers, authorities, consumer organisations and individual consumers.

The table below includes the early stages of dissemination (project year 1 and 2) and the later stages (project year 3 and 4) together with the methods used to achieve the objectives in the light of the project chronology:

| Time | Objective | Methods |
|---|---|---|
| Year 1 | Create awareness about the ebbits project<br>Dissemination in strategic boards of participants<br>Prepare powerful scientific standing in professional clusters | • Publication of support material, flyer and the website<br>• Attendance in seminars and congresses<br>• Press releases and liaison with business stakeholders |
| Year 2<br>The project now | Continue to build awareness of the ebbits results in academic and scientific circles, both within ICT and business communities.<br>Verify opportunities to apply the ebbits components in business environments and involve other stakeholders | • Aligning events with similar EU or national projects<br>• Organise European conference on IoPTS (Internet of People, Things and Services)<br>• Preparation of pre-commercial brochures<br>• Visit business communities<br>• Website enrichment<br>• Peer reviewed papers in international journals<br>• Conference and workshop papers |
| beyond | Prepare to integrate ebbits in other enterprise environments based on the evaluation of the field trials and from SAP's customer base. Promote the early exploitation of an ebbits platform and individual components | • Preparation of a commercial brochure<br>• Newsletter to potential users<br>• Take-up of semantic search components<br>• Take-up of the service oriented architecture concepts<br>• Demonstration the ebbits platform |

Table 1: Dissemination objectives and methods

## 3.3 Dissemination activities used for exploitation

The consortium has outlined a number of dissemination channels and activities to meet the dissemination objectives. The activities at the more mature stages of the project meet exploitation goals. The planned activities cover activities like the integration of ebbits components in other enterprise environments and early exploitation.

Press and marketing

Press releases on partner level are issued ad-hoc in relevant languages.

The first project newsletter was produced at the end of the first project year from partner input and distributed to relevant audiences by the individual partners. Another newsletter was sent out in August 2012. A flyer has also been prepared to disseminate the objectives, the expected results and impact of the project.

Demonstrations and trade shows

Experience and best practice will be disseminated in the form of demonstrations to the business community and academic practitioners through membership networks and at various other events such as trade fairs or industry-related conferences.

ebbits will organise a number of seminars aimed at academic professionals, industrial technology experts and the European industry at large. Besides the large number of events and networks in the ICT field, special focus will be placed on also disseminating to industrial forums such as the automotive, energy, automation and agricultural industries.

# 4. Exploitation Plan

Exploitation activities are completely embedded in the different work packages of the project reflecting the intimate and fast transfer of knowledge from the project research results to public dissemination and commercial exploitation.

## 4.1 Main exploitable technologies from the project

From the range of potentially exploitable technologies, three main categories have been selected for further analysis and business planning. The selected product categories are:

5. The ebbits **service platform**
6. The ebbits **web service components**
7. The ebbits **consultancy services**
8. The ebbits **business models**

In the following chapters a further description of each of the products is presented. For each product we will also identify which of the partners intend to exploit such product or service.

Detailed exploitation strategies will be developed after the user requirements have been clearly defined and the first prototypes have been validated in field trials. From the exploitation framework, potential target groups in different sectors will be identified, analysed and prioritised according to commercial attractiveness. The commercial exploitation activities will focus on early adopters among customers, in order to optimise time-to-market.

### 4.1.1 The service platform

The ebbits platform provides a ubiquitous communication infrastructure that automatically and dynamically connects sensors and devices in the physical world with humans and with mainstream backend information systems using web services.

Physically, the ebbits platform consists of subsets of production servers for data management, event management, security, application execution and communication. All servers interoperate in an open architecture on the basis of web services and are thus completely platform agnostic and scalable. A software development toolkit allows for rapid development of new ebbits applications.

The main principle for exploitation of the ebbits service platform will be for the technology providers to create and operate the platform as PAAS (Platform as a Service) or SaaS (Software as a Service). The partners will, in different constellations as explained below, undertake setting up data centres and developing the services and applications needed for their respective markets. Depending on the customer requirements, they will also undertake to deliver sensors and devices in cooperation with selected device manufacturers. The service platform will use most or all of the technologies developed in the project.

The actual behaviour and functionality of the ebbits platform needs to be customised in each application. This work must be done by the service provider as part of the application development work and according to customer requirements. This provides a major part of the commercial exploitation for the smaller consortium technology providers.

Because of the complexity and the investments needed, the ebbits platform is best exploited in joint operations or partnerships between several ebbits partners.

**Scandinavia**

In Scandinavia, IN-JET and CNET are planning to become joint service providers for the ebbits platform for SME's in the Scandinavian markets. IN-JET is already in contact with a large number of enterprises in Denmark. CNET also plans to exploit ebbits software through existing product lines and sales channels as they become available. The platform fits perfectly with their existing workflow

interoperability solutions, such as AdeTransact. The joint operation will be based on a SAP Technology Partner status and the platform will be operated as SaaS (Software as a Service).

IN-JET and CNET will operate a general service platform for product life cycle traceability. Clients are able to interface their backend SAP enterprise systems with the physical world, i.e. service organisation or manufacturing plants or both. IN-JET and CNET will offer the platform services together with consultancy and development services.

In the first instance, two markets will be targeted for exploitation; Energy control and Healthcare monitoring . IN-JET is active in Healthcare monitoring and is planning other services for that market. CNET has developed workflow interoperability solutions and smart-home technologies, which can be targeted the rising energy control and smart metering market.

***Europe-wide***

Energy control and monitoring is not a highly relevant topic for the European market. FIT, ISMB and CNET have developed workflow interoperability solutions and smart-home technologies, which will be targeting the rising energy efficiency and control market.

Beyond planned and likely contributions to the existing product portfolio, ebbits creates opportunities for entirely new products. For this, SAP will use the SAP Research Future Factory to demonstrate research results to potential customers.

This is a joint effort between SAP Research, SAP customers, and partners to foster R&D for the manufacturing industry. The Future Factory Initiative is active in the following three areas:

- The Future Factory Lab located at SAP Research CEC Dresden facilitates research and development in a Living Lab environment, providing an infrastructure for test, validation, and demonstration.
- A real-world testbed shows leading edge software and latest hardware developments with different scenarios, products, and prototypes in a distributed manufacturing environment. The testbed spans multiple manufacturers and demonstrates the viability of prototypes.
- A Center of Excellence provides the organizational setting to promote communication between manufacturing experts within and outside of SAP.

With close to 700 visitors in 2009 and a projected 1000 visitors in 2010 this platform is ideal to facilitate later exploitation and generate concrete customer demands for new products. CNET, COMAU and TNM will provide applications and subsystems for SAP's Future Factory Lab testbed in areas such as factory automation, energy control and food industries.

IN-JET, CNET and TNM will build an ebbits platform for providing IoT services to agricultural clients across Europe. The platform will be designed and developed in a joint effort and CNET and IN-JET will provide the platform infrastructure from their joint service centre, whereas TNM will develop the applications and provide front-end devices, subsystems and interfaces to public data repositories for food traceability, etc. TNM will also be responsible for marketing and commercialisation of the service.

TNM is also involved in a standardization process with respect to data exchange between process equipment on the farm itself. It involves both the communication protocol and the definition of data elements. The standardization process is an undertaking by the most significant vendors of farm equipment in Europe and is lead by the Danish Agriculture and Food Council. The implementation of the ebbits platform will empower the process as we get input from other business areas.

CNET and COMAU will investigate the possibility to jointly create an ebbits platform, which will be offered as Platform-as-a-Service (PaaS) for factory automation and product traceability. The platform will be offered to reduce commissioning cost for machinery and also product costs therebymaking COMAU's products well prepared for international competition.

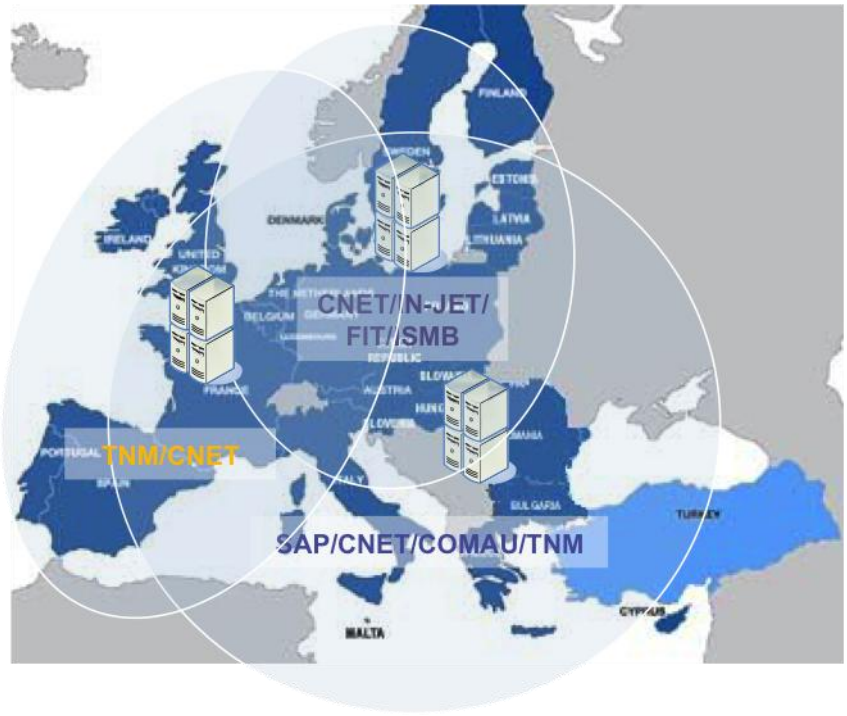


Figure 1: Summary of European joint exploitation opportunities.

### 4.1.2 The web service components

The ebbits platform is an infrastructure where different components, applications and services can be plugged in and developed in order to adapt them to the special needs and requirements of a given domain. The project itself demonstrates that the same platform can be used in two very different environments, such as manufacturing and agriculture, just by adapting the domain ontology and adding the particular services.

The main technological "components" of the ebbits platform are:

- Service oriented Architecture turning devices and subsystems in the physical world into interoperable web services.
- Model Driven Application development environment
- Semantic device and service discovery and self-management
- Service orchestration of services integrated with business process management systems
- Distribution of intelligence between central enterprise systems and edge network
- Object- or location-centric applications can be distributed or centrally managed
- Rule based event processing, separation and filtering
- Integration with mainstream business/process management platforms

Each of these components, augmented with a vast amount of associated knowhow, will be the object of extensive exploitation for most partners, since they can be made available as built into existing products or services, offered as a toolbox library or provided as a full Software Development Toolkit (SDK). The exploitation is further augmented with large amounts of consulting services to help customers develop their own applications.

Because of the specific demands on ebbits web service components, and thus the magnitude of the different components and services to be developed, these project outcomes are best exploited by individual partners, with the possible assistance by one or more of the other partners as suppliers or consultants.

***FIT***

Fraunhofer FIT works closely with research institutions and industries and aims to develop and transfer state of the art research results into industries. FIT as an applied research institute is not focussing directly on the end-user market but more on helping industry partners to develop innovative products for their customers.

FIT is addressing SME's in the smart home area to help them provide energy efficiency solutions for home owners by providing seamless access and control of home appliances. ebbits components and services will be used to expand the offerings for new services, such as food and drug traceability, which can enhance and complete their range of home services.

***SAP***

SAP is the world-leading provider of enterprise and manufacturing software solutions and heavily invests in the vision of integrated manufacturing and logistics operations management. The following products are of relevance for ebbits exploitation:

- SAP ERP (Enterprise Resource Planning) with extensive functionality for production planning, execution, quality management, and maintenance management,
- SAP Business Objects as a suite of tools for business intelligence tools and user interfaces
- SAP SCM (Supply Chain Management) as SAP's global tool for asset and logistics management
- SAP ME (Manufacturing Execution) as SAP's manufacturing execution system for discrete, primarily automotive and high-tech industries.
- SAP MII (Manufacturing Integration and Intelligence) as the integration hub for shop floor systems and real-time analytics platform.

SAP will also act as supplier of commercial SAP solutions for partners wanting to incorporate ebbits services and components in a SAP environment.

***CNET***

The component-oriented development approach of the project will allow exploitation the project incrementally. CNET is addressing the smart home area to provide energy efficiency solutions for home owners by providing seamless access and control of home appliances, where the ebbits platform is the basis for delivering new types of smart apps. The ebbits platform and services will also be used to expand the offerings for new products and services, such as food and drug traceability, which can enhance and complete the range of services.

***COMAU***

As a producer of production line machinery COMAU intends to exploit the ebbits components in existing manufacturing plant equipment. This will open up all-new world-wide marketing opportunities: Standardisation breaks up existing homogeneous structures and is therefore a key factor of technological advancement. It allows the recombination of system parts from different manufacturers and will provide a breakthrough approach for a sustainable manufacturing industry, allowing a higher degree of flexibility in plants without decreasing productivity, at an affordable overall cost.

The ebbits components and knowhow will be exploited with the extensive application in new production facilities. This exploitation process will start from the advanced engineering activities, where innovative solutions are presented to potential customers in terms of proposals, outlining the advantages with respect to the traditional specifications, both in terms of performances, cost and development time.

As a direct consequence, COMAU expects to increase its market share, especially in the new developing high-potential sectors, in order to achieve a market share up to 6-7% or more in Europe, despite of car industry slow-down with an additional increased penetration in non-European markets.

***TNM***

TNM expects to incorporate the middleware into upcoming products for pig management. Incorporating the software into the management software would enable the "from farm to fork" vision which is believed tobe mandatory in the not so distant future. TNM currently provides a security related software system to the agricultural sector. ebbits components will be used to enhance and strengthen present and new products.

***IS***

IS has in its portfolio a range of products built on service-oriented architecture, techniques and tools of knowledge representation and semantic technology-based systems. The ebbits components will extend the portfolio towards the Internet of People, Things and Services, especially in semantic infrastructure and supporting tools. One of the core activities of IS is specification and development of customisable POS (point-of-sales) solutions for markets in Scandinavia, Germany, and other EU countries and IS intends to integrate the ebbits components into these systems to enhance the retail chain management software with direct service-oriented knowledge-aware diagnostics of key decision-making attributes.

### 4.1.3 The consultancy services

New and improved knowledge on the IoT technical infrastructure architecture and web service components and their methods of interaction can be turned into valuable consulting services for most partners. The expertise can be used to provide a general consultancy platform for innovative technologies and new services. The exploitation of these services can take place through innovation networks, future labs and existing business networks. The academic partners may use the results for inclusion in and upgrade of their research and educational programmes and for improving research collaborations with companies. The technology providers will offer extensive consultancy services in connection with setting up and maintaining customer applications based on ebbits platform or incorporating ebbits components.

***FIT***

FIT seeks to establish itself in Internet of Things and energy efficiency research with a very close proximity to the market. To follow this goal, Fraunhofer FIT will install a competence centre for enterprise systems and energy efficiency a strong focus on consulting. The envisioned services are:

- General consultancy regarding user centred management of workflows, people, processes, industrial assets and energy with the help of ebbits knowledge.
- Providing training courses for end users on interoperability aspects in the Internet of Things.
- Consultancy for public authorities, households, building societies and stakeholders from the industrial sector.
- Training for software developers on how to set up infrastructures of intelligent devices and corresponding end-user applications.

***ISMB***

ISMB will be able to open future applied research directions related to the adoption of the Internet of People, Things and Services paradigm in different application scenarios. Second, ISMB will exploit the competence acquired in the project to improve the effectiveness of relevant technologies transfer services and propose innovative architecture and energy-aware technology solutions to its industrial partners. Moreover, ISMB will use the competences created in ebbits for post-graduate students training and projects.

***TNM***

TNM intends to offer knowledge about the ebbits platform to others in the agricultural field on a consulting basis. Essentially, ebbits will strengthen TNM's position as provider of advanced information and communication technology solutions to the agricultural sector.

***TUK***

TUK will cooperate with IS to provide consultancy services for SMEs in ebbits related areas. This effort will involve adaption of the ebbits platform and ebbits related web services to meet needs of companies in the Slovak Republic. Together with local ICT partners (especially in power and utility industries like RWE or VSE) TUK develops further research activities based on ebbits in new application domains (e.g. smart office, smart home, smart grids etc.).

***IS***

IS plans to complement ebbits know-how with consultation services related to service-oriented and semantically enhanced business solutions for the retail sector.

***CNet***

As a part of its seminar and training services, CNet is planning a training course for the Swedish industry and public administrations on IoT. This is done in cooperation with "Dataföreningen i Sverige" (The Swedish Computing Association, www.dfs.se), and with the ebbits project as a basis for know-how and technical solutions.

### 4.1.4 Business Models

The process of designing business models is part of creating business strategies. An ebbits business model helps to understand two different domains – technical and economical, where the technical and business expert can be interconnected properly. For any new innovative company - especially an ICT company – we need to select an appropriate business model. With development of a new concept of the Internet of Things and Services, where the seamless integration of physical objects and services through the use of sensors and integrated information systems is enabled, a new understanding of the business framework is required. It is also a new challenge for higher education systems, especially in business informatics study programmes, to integrate new business modelling concepts in their curriculums.

***TUK***

TUK will utilise lessons learned on business modelling and business process modelling (especially e3-value methodology to create value models) in graduate and postgraduate programmes. The integration of ebbits outcomes into educational activities was started at two faculties of the Technical University of Kosice – Faculty of Electrical Engineering and Informatics and Faculty of Economics, especially at Department of Banking and Investment where part of the research activities of the department is focused on business process measuring, e-business, trust building and applications of information technologies in SMEs and public sector (e-Business, e-Procurement, e-Government etc.).

The following are programmes of graduate studies (master programmes) where results from ebbits can be integrated:

| Code | Subject | Semester Hours | Programme |
|---|---|---|---|
| 2406511 | Investment Proposal Evaluation | 4 | Finance, Banking and Investment |
| 35000028 | Electronic Business | 4 | Finance, Banking and Investment |
| 35000088 | Electronic Services in Public Administration | 3 | Public Administration and Regional Development |
| 35000073 | Electronic Business | 4 | Business Informatics |
| 2610963 | Investment Planning and Decision Making | 4 | Business Informatics |

Table 2: Programmes of graduate studies

For further details see also http://maisportal.tuke.sk/portal/studijneProgramy.mais

It is also possible to integrate business modelling concepts in programmes of post-graduate studies and the life-long education (accredited courses), especially in the course of "Entrepreneurial Competences".

## 4.2 Measureable targets for exploitation activities

The following sections outline measureable goals for dissemination in order to reach the objectives of exploitation and in order to define a targeted approach to selected strategy elements.

### 4.2.1 Annual targets for marketing activities:

The project has agreed annual targets for every project period as appear from Table 3. The targets are related to project years.

| Type of activity | Y 1 | Y 2 | Y 3 | Y 4 | Partners involved |
|---|---|---|---|---|---|
| Newsletter | 1 | 2 | 2 | 2 | IN-JET/All |
| Press release | 1 | 2 | 2 | 4 | All |
| Flyer | 1 | | | 1 | IN-JET |
| Commercial brochure | | | 1 | | IN-JET |
| Website enrichment | 1 | 1 | 1 | 1 | IN-JET |
| Prototype demonstrator | 1 | 1 | 1 | 1 | All |

Table 2: Annual targets for marketing activities. The targets for year 1 have been reached.

### 4.2.2 Annual targets for events organised by partners

The following table lists the number of conferences, trade fairs, workshops etc. which the partners will organise per project year. The activities will support the dissemination of the project results, facilitating new collaborations between ebbits partners and external stakeholders

| Type of activity | Y 1 | Y 2 | Y 3 | Y 4 | Organised by |
|---|---|---|---|---|---|
| Seminars/workshops aimed at academic professionals, Industrial technology experts and the European industry at large: | | | | | Different partners |
| Exhibit at either the trade fair CeBIT or the Mobile World Congress | | 1 | 1 | 1 | WP5 |
| Organisation of Workshops at either the UbiComp, Sensys or Fusion Conference | | 1 | 1 | 1 | WP5 |
| Automatica - Industrial trade fair<br>Exhibition of posters and leaflet to perform project marketing and to show project outcomes | | | 1 | | WP10 (COMAU) |
| SPS-IPC-Drives - Industrial trade fair<br>Exhibition of posters and leaflet to perform project marketing and to show project outcomes. | | | | 1 | WP10 (COMAU) |

Table 3: Annual targets for dissemination events

# 5. Activities up to M24

This section describes joint exploitation activities which will and have been undertaken by ebbits partners up to August 2012. It supplements the Dissemination activities which are available in the deliverables D12.2.1. and D12.2.2 as well as D12.8.1 Cluster Collaboration Report and D12.8.2 Cluster Collaboration Report

## 5.1 Exploitation means

To raise awareness about ebbits and exploit its results to the selected target group as well as to the interest of a wider audience, a wide range of exploitation means are used.

### 5.1.1 Website

The aim of the ebbits website is to widen the scope of target audiences, e.g. targeting consulting companies in manufacturing and logistics, supply chain management companies and consumer organisations and individual consumers, while at the same time providing a greater degree of focus on each of the target groups singled out for early exploitation and in accordance with the customer bases of the industrial partners. To achieve this the website is continuously updated and enriched with papers, events where ebbits will be present, deliverables and news items. Scientific papers are listed to make it easier to locate results and where copyright restrictions allow it, it is possible to download papers.

### 5.1.2 Presentation material

To support partners in presenting ebbits at exhibitions and tradeshows, the following presentation material has been produced:

- A project flyer featuring a general introduction to the ebbits project and objectives.
- A general poster which focuses on the ebbits platform in general. Two other posters are in the process of being made; one which describes the traceability scenario and one the automotive scenario.
- A brochure will be produced at a later stage in the project (year 3 or 4) highlighting the results of the project. The brochure is thought to support partners directly in the exploitation of the ebbits platform and services

### 5.1.3 Project newsletter

Newsletters are continuously produced and distributed to support joint as well as individual exploitation by being distributed to partners' contacts. So far two newsletters have been distributed with updates on the ebbits project and its two cases: Manufacturing and Traceability. They feature news on prototypes, demonstrations and field trials as well as list relevant events organised by ebbits or of interest to ebbits and a list of released deliverables. The two newsletters were issued in September 2011 and in August 2012.

The newsletters can be downloaded from the website.

### 5.1.4 Clustering activities

The ebbits partners are heavily involved in clustering activities which are described in detail in D12.8.1 and D12.8.2. Besides generating interest in the project, we expect that exploitation potentials can be discussed with companies attending the cluster activities and will lead to exploitation in academic areas as well as in the industry.

The ebbits project is involved in the following clusters: IERC (IOT European Research Cluster), FInES (Future Internet Enterprise Systems), Monitoring and Control cluster on Smart Buildings/Smart Spaces and CERP-IoT (Cluster of European RFID Projects) as well as the Future Internet Assembly (FIA).

In the IERC cluster, the ebbits project leads on Semantic Technologies and the activities include participating and presenting ebbits at cluster meetings and contributing to papers and publications i.e. the IERC Book 2012 "The Internet of Things 2012 New Horizons" and in particular to the "Europe's IoT Strategic Research Agenda 2012".

In the FInES cluster, the ebbits project takes a leading role in terms of architecture, open infrastructure, physical addressing schemes and virtualisation design. ebbits leads two FInEs taskforces "Manufacture and Industry Relationships" and "International Relations". Activities have been concerned with re-organising the FInES Cluster after organisational changes of DG Connect (previously DG INFSO). For the taskforce "Going Global: The International Dimension of FInES Research and International Cooperation Task Force" the most promising strategy would be to concentrate on active collaboration with new upcoming economies and research activities in the BRIC countries and target successful activities concerning business innovation that have been established between Europe and US. This has been so far an excellent example of high-level international collaboration of mutual benefit.

For the Monitoring and Control cluster on Smart Buildings/Smart Spaces, activities have been concerned with discussions on common ontologies, their alignment and merging as well as discussions on semantic interoperability, common standards, policies on security and privacy, the interplay of Home Healthcare and Ambient Assisted Living as well as interplay of construction and structural monitoring.

A list of clustering events for M1-M24 is provided below:

| **Partner cluster activities until M24** | | |
|---|---|---|
| ***What, when, where*** | ***Contributing partners*** | ***Form*** |
| Cluster meeting on Smart Buildings/Smart Spaces, 2 June 2010 in Brussels, Belgium | FIT | Represented ebbits |
| FInES cluster meeting on 10 August 2010 in Brussels, Belgium | IN-JET, FIT | Presented the plan for the taskforce on Manufacture and Industry (IN-JET) |
| Rio-Info, 31 August to 2 September 2010 in Rio de Janeiro | FIT | Keynote speech on IoT and report on FInES activities |
| IERC cluster meeting 27-29 September 2010 at ICT 2010, Brussels, Belgium | CNET | Presentation titled 'ebbits Business-Based Internet of Things and Services - An Interoperability platform for a Real-world populated Internet of Things domain' |
| FInES cluster meeting on 25 January 2011 in Brussels, Belgium | IN-JET, FIT | Introduced a Wiki page for the cluster participants to register their ideas for engaging European level and national stakeholders |
| IERC cluster meeting at the EWSN Week 23-25 February 2011, Bonn, Germany | CNET | Introduced ebbits and the project aims |
| EWSN 2011 on 23-25 February 2011 in a workshop of the IERC cluster in Bonn, Germany | FIT | Poster Presentation and participation in a workshop on Activity Chains "AC 11 - Application scenarios" and "AC 14 - Exploitation" collocated with the 8th European Conference on Wireless Sensor Networks - EWSN 2011 "Application domains in ebbits: Food |

| Partner cluster activities until M24 | | |
|---|---|---|
| | | Traceability and Traceability in Car Manufacturing" |
| FInES Cluster Meeting, 1 April 2011 in Brussels, Belgium | IN-JET, FIT | Presented the results of activities in the taskforce for Manufacturing and Industry and presented (for FIT) the activities in International Relations and gave a short overview of the BEMO-COFRA project (IN-JET) |
| RFID meeting 3 May 2011 in Copenhagen, Denmark | IN-JET, SAP | Arranged a workshop to introduce RFID/ IoT in Enterprise Systems for product management. Co-arranged by ebbits and the "RACE network" and the FInES cluster.<br>Presentation on the future vision on the Internet of Things (SAP) and on the ebbits project (IN-JET) |
| IERC meeting, 17 May 2011 in Budapest, Hungary | ISMB | Participation and presentation of "Opportunistic Communication Paradigms in ebbits" |
| Future Internet Week , 16–19 May 2011 in Budapest, Hungary | ISMB | Participation |
| IST-Africa 2011, 11-13 May 2011 in Gaborone | FIT | Participation and presentation of workshop paper titled "Enterprise Systems in the Internet of Things" |
| WORLD MANUFACTURING FORUM 2011<br>16–17 May 2011, Villa Erba, Cernobbio, Como Lake, Italy | COMAU | Participation - The World Manufacturing Forum aims to be a long-term platform for debate among decision-makers upon the most relevant topics surrounding the manufacturing sectors |
| Concertation meetings, 9 June 2011 in Brussels | FIT, ISMB | Large-Scale, Cooperative WSNs: from Testbeds to Applications |
| Cluster meeting, 10 June 2011 in Brussels | FIT | M&C for Smart Buildings/Smart Spaces, ontologies and Data Models |
| Cluster meeting, 10 June 2011 in Brussels | FIT, ISMB | WSNs in Industrial Scenarios |
| 14 July 2011 in Karlsruhe, Germany | FIT | Represented ebbits at the green-IT SMART BUILDING workshop |
| Tecnologia da Informação em Pernambuco<br>12 August 2011 in Recife, Pernambuco (Brazil) | COMAU, FIT | Dr. Markus Eisenhauer (Fraunhofer FIT) – Presentation of the collaboration activities between EU-BR<br>Participation at the round table "Desafios da Ciência e Tecnologia no Brasil e em Pernambuco" |
| | | |

| Partner cluster activities until M24 | | | |
|---|---|---|---|
| **DATE** | **Place (city, country)** | **Type of dissemination activity and audience** | **Partners involved** |
| 9 September 2011 | | Meeting with EFFRA (stakeholder engagement) | IN-JET |
| 12 October 2011 | Brussels | FInES Cluster concertation meeting | IN-JET, FIT |
| 26 October 2011 | Bratislava, Slovakia | ITAPA 2011 conference, presentation: RTD in a European Context for the benefits of Citizens. Jesper Thestrup presented the ebbits project and the potential for governance structure in food traceability and environmental matters. | IN-JET |
| 24-28 October 2011 | Poznan, Poland | Future Internet Week, Future Internet Assembly: Represented ebbits and the FInES cluster. Jesper Thestrup participated in the FIA week and in particular in the workshop on IoT and Business Models | IN-JET |
| 30 November 2011 | Brussels | Final EURASIAPAC Workshop | FIT |
| 19 -20 December 2011 | Brussels | FInES Cluster meeting. Jesper Thestrup represented the Taskforce on Manufacture and Industry and introduced cooperation with EFFRA/Manufuture and the ActionPlanT project. An activity on joint coordination of IoT roadmaps was proposed and agreed. The ebbits view on industrial life cycle management was presented. | IN-JET |
| May 2012 | Aalborg | • Organised and conducted a full day FInES workshop 'Translating Knowledge into Growth: Views from ICT Research to Support Future Business Innovation' in Aalborg during the Future Internet Week May 2012. Presented ebbits at the workshop and was a panel member on 'Identification of value objects in IoTS: How to create dynamic value constellations'<br>o Prepared a press release on the workshop for the FInES cluster to distribute to contacts and launched a press campaign in Denmark directed at SMEs in cooperation with Aalborg University<br>o Filmed the workshop and postproduced the video, adding index points, slides, information on speakers etc. | IN-JET |

| Partner cluster activities until M24 | | | | |
|---|---|---|---|---|
| | | It can be viewed at:<br><br>http://webcast.in-jet.dk/site/player/pl_v6_compact.php?a=80038&t=0&m=wms&l=da_DK | | |
| 10-11 May 2012, | Aalborg | Organised and participated in a workshop session in conjunction with the FIA meeting in 10-11 May 2012, in Aalborg, Denmark. The workshop session titled "IoT applications and business models" Made a presentation. | | IN-JET |
| 9th May 2012 | Aalborg | Participation to IERC Activity Chain 2 - Naming, addressing, search and discovery– Kick-off Meeting within FIA 2012 (Aalborg, Denmark) | | ISMB |
| June 7th and 8th 2012 | Princeton University NJ | Speech on 'Business model innovation and emerging business models in the Digital Era – Insights and Inspirations from the EHealth, Game and Manufacturig Sectors' | | FIT |
| June 18-22 2012 | Venice | Participation to IERC cluster activities, with a focus on Activity Chains 2, 11 and 14:<br><br>Joint organization with IoT@Work project of the "IoT Exploitation" Session promoted within IERC and included within the upcoming IoT Week event (June 18-22 2012 in Venice, Italy).<br>Provided presentations in the following sessions:<br>Session on Cognitive Technologies for IoT - IERC AC 14<br>Session on Implementing the IoT – IERC AC 11<br>Organized (jointly with the project IoT@Work) the IoT Exploitation session (AC11)<br>Arranged the ebbits manufacturing demonstration together with Peter Rosengren, and stood at the booth during the event | | ISMB |
| June 18-22 2012 | Venice | Demonstration of the ebbits project / prototype platform. | | CNET |
| August 2012 | Copenhagen | Added news on the FInES workshop as well as the IOT Week 2012 in Venice with news, pictures and downloads of presentations. | | IN-JET |

Table 4: List of cluster activities until M24

### 5.1.5 Dissemination events

Besides producing papers, ebbits partners participate in conferences, events and meetings as part of their dissemination and exploitation work, meeting new and potential stakeholders

A list of major dissemination events (except clustering events) until M24 is presented below.

| **Partner dissemination activities M1-M24**<br><br>**September 2010 through August 2012** | | | |
|---|---|---|---|
| **DATE** | **Place (city, country)** | **Type of dissemination activity and audience** | **Partners involved** |
| 1-2 March 2011 | Horsens, Denmark | The Economic Perspectives for Use of ICT in Pig Production. Workshop arranged by Danish Agriculture & Food Council. Ebbits was introduced by TNM. | TNM |
| 1-3 March 2011 | Nuremberg, Germany | Represented ebbits with a poster at the Embedded World Exhibition & Conference | FIT |
| 1-5 March 2011 | Hanover, Germany | Exhibited at the trade fair CeBIT 2011 in Hanover | FIT,CNET |
| 16–19 May 2011 | Budapest, Hungary | Future Internet Week Participation | ISMB |
| 16 May 2011 | Cernobbio, Italy | World Manufacturing Forum 2011 | COMAU |
| 14 July 2011 | Karlsruhe, Germany | Represented ebbits at the green-IT SMART BUILDING workshop | FIT |
| 6-10 March 2012 | Hanover, Germany | CeBIT 2012 tradeshow. ebbits will co-exhibit as part of the ActionPlanT stand: ICT for the Factories of the Future | CNET, FIT, IN-JET, IS, ISMB, SAP |

Table 4: exploitation related dissemination events until M24