Dissemination and Exploitation Report
RECOCAPE Project
Version 7.0
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Executive Summary

This Dissemination and Exploitation report is developed as a part of RECOCAPE project Work Package 6 “WP6: Dissemination and Exploitation”. The report objective is to summarize the various activities performed in order to disseminate and exploit acquired knowledge and obtained results during the implementation of the RECOCAPE project. The RECOCAPE project’s Kick-off meeting was held on May 13th, 2012 in Cairo, Egypt. The meeting was attended by SECC, UNIBO and Tecnalia. In addition, representatives from Tecnalia and VTT participated in the meeting via video conference.

The document is organized in three sections covering the three main tasks planned under work package 6; namely, Dissemination, Exploitation Cluster Project, and EuroMed SPI 2012. Each section summarizes the activities carried out for each task and subtask.
Dissemination

Task 6.1: Dissemination is in charge of disseminating the information, technical results and scientific work progress. This is done using variety of communication means organized in two main subtasks; namely Media and Printouts and Awareness Events. Each subtask is achieved through number of activities as detailed in the Summary section at the end of this document. This section, Dissemination, details the outcome of each activity.

1. Media and Printouts

1.1. RECOCAPE Website

RECOCAPE website; http://www.secc.org.eg/RECOCAPE/index.html was launched in December 2011. The website provides detailed description and timely updates about the RECOCAPE project (objectives, partners, and work packages). Events, media, and news about RECOCAPE project activities are regularly posted and updated on the website. In order to increase visibility and exposure, all RECOCAPE news and links are posted and regularly updated on the main website of the Software Engineering Competence Center (SECC) at http://www.secc.org.eg/.
Figure 1 – Snapshot of the RECOCAPE Website – September 2013
Welcome to RECOCAPE

Figure 2 – Snapshot of the RECOCAPE Website – June 2013
1.2. News Articles

News articles about the RECOCAPE project were published in more than 20 local reputable newspapers and magazines. The news articles introduced the RECOCAPE project objectives, partners, and target technologies. All published news articles are available on RECOCAPE website http://www.secc.org.eg/RECOCAPE/Media.html
1.3. Networking Events

1.3.1. Third Regional ERA-WIDE Meeting

Haitham Hamza, SECC R&D Department Manager, participated in the 4-day third regional ERA-WIDE meeting held in Brussels from 9th to 12th July, 2012 at the premises of the European Commission.

The ERA-WIDE aims at building/extend the collaboration between EU research institutions and research institutions based in European Neighbourhood Policy (ENP) countries. The objective of this action is to reinforce the cooperation capacities of research centres located in the ENP countries, which are not
associated to FP7 as well as the reinforcement of research, development and innovation capacities of the (ENP) countries in order to increase their competitiveness among the region.

The third ERS-WIDE meeting aimed at:

1. Developing some common knowledge on human resources management and "how to increase job opportunities for young scientists and gender equality in the Mediterranean countries (measures to avoid 'brain drain' phenomena: better career opportunities, better work conditions, access to research infrastructures)"

2. Pursuing the discussions and feasibility of a methodology to evaluate the impact of the ERA-WIDE projects.

3. Participating to the International Cooperation Activities (INCO programme) Info Day so as to be informed about the last call to be launched under FP7 and the next Programme Horizon 2020 (2014-2020).

4. Discovering EC premises and meet the EC scientific, legal and financial officers in charge of the projects so as to raise and solve difficulties related to project management.

5. Facilitating an exchange platform between ERA-WIDE projects coordinators and partners as well as INCO-NET/BILAT.

6. Learning about the funding programmes on higher education and mobility of DG Education, Audiovisual and Culture (EAC) so as to take into account this aspect in the strategies to be developed within the projects.

7. Taking advantage of this visit in the European Commission to organize individual meetings with other EC officer in charge of your topics of interest.
2. Awareness Events

2.1. Awareness Event 1 – May 15th, 2012

2.1.1. Event Summary

Date: Tuesday, May 15th, 2012

Venue: ITIDA Bldg. Main hall, Smart Village, Cairo, Egypt

Tactics: Email, Telemarketing, Event

Total Number of confirmations: 128 contacts

Total Number of attendees: 50 contacts from 45 Companies

General satisfaction rate: 91%

Number of presentations: 5

2.1.2. Event Overview

Software Engineering Competence Center (SECC) held its first event of REinforcingCOoperationCAPacity of Egypt (RECOCAPE) in embedded ubiquitous computing on May 15th, 2012 at the smart village in cooperation with its allies from Spain and Italy. The event aimed at shedding light on the challenges faced by Egyptian ICT companies and the opportunities in adopting emerging software technologies including Service-Oriented Architecture (SOA), Semantic Web, Model-Driven Development (MDD), Software Reuse and Software Refactoring.
The event was attended by 50 IT professionals from forty five companies. During the event, SECC experts and foreign guests from TECNALIA of Spain and UNIBO of Italy presented on five technologies including emerging applications for Service-Oriented Architecture (SOA); Semantic Web technologies; applicability of Model Driven Development to software factories; discovering features interactions in software product lines and an Agile approach to software process improvement.

Tullio Salmon Cinotti, Professor of the University of Bologna, Italy delivered a talk entitled “Semantic web technologies and their application to interoperable smart environment applications”. The talk introduced semantic web, ontologies, and the market potentials for related technologies. Tullio presented what is meant by interoperable smart environment and their envisioned application domains.
Haitham S. Hamza, from SECC, Egypt presented Software Reuse and Software Refactoring “Behind the Scene: Discovering Features Interactions in Software Product Lines”. The talk introduced software reuse and product lines highlighting the complexity in real Software Product Lines (SPL) implementations. Haitham presented the current implementation for Product Line engineering (PLE) as well as new implementation approach for feature interaction discovery/analysis.
Joseba Laka, from Tecnalia, Spain presented two talks entitled: “Emerging Applications for SOA: The ENERSIP experience” and “Applicability of MDD to Software Factories: The FAST experience”. During his first talk about SOA, Joseba introduced the ENERSIP (ENERgy Saving Information Platform) project scope and motivation highlighting the smart grid layers, how/where SOA was adopted to build an architecture that provides a set of services to the final users in order to monitor energy consumption & generation and also control the building, as well as topics about power saving business intelligence.

For the MDD talk, Joseba presented industrialization of software product lines and the value added from using model driven approaches. The talk introduced FAST as a tool for building software factories highlighting the tool’s capabilities.

Amr Noman, from SECC, Egypt presented about Software Process Improvement “Process Increments: An Agile Approach to Software Process Improvement”. Amr introduced process increment approach for process improvement and presented experience reports, observations, and findings in terms of improvement velocity using this approach.
Figure 8 - Process Increment Presentation by Amr Noman, SECC

Event presentations can be downloaded from the RECOCAPE website at: http://www.secc.org.eg/RECOCAPE/Events.html.
2.1.3. Event Feedback

Most of the event attendees stated that the event showed a wider scope of applying these technologies far beyond what is currently being applied even at the large companies in the Egyptian market.
A large portion of the attendees found SW Reuse followed by Semantic Web and MDD technologies the most applicable to their environment.
The event was well appreciated by most of the attendees who stayed until the end of the Q&A session and expressed their interest to attend future RECOCAPE Events.

Figure 12 - Event Evaluation Results - Attending Future Event
2.2. Awareness Event 2 – November 14th, 2012

2.2.1. Event Summary

**Date:** Tuesday, November 14th, 2012

**Venue:** ITIDA Bldg. Main hall, Smart Village, Cairo, Egypt

**Tactics:** Email, Telemarketing, Event

**Total Number of registrations:** 197 contacts

**Total Number of attendees:** 57 contacts from 47 Companies

**General satisfaction rate:** 9%

**Number of presentations:** 6

2.2.2. Event Overview

Software Engineering Competence Center (SECC) held its second event of REinforcingCOoperationCAPacity of Egypt (RECOCAPE) in “Emerging Software Technologies: Trends & Challenges” on November 14th, 2012 at the smart village in cooperation with its allies from Spain and Italy. The event aimed at exploring challenges and opportunities in adopting emerging software technologies. The event was held at ITIDA Premises B121, Smart Village.
The event was attended by 57 IT professionals from 47 companies. During the event, SECC experts and foreign guests from TECNALIA of Spain and UNIBO of Italy presented on five technologies including Semantic Web & Embedded Systems; Security Aspects in Smart Environments; Agile Process Improvement in Practice; SOA & Cloud in Practice, as well as presenting about FP7 Funding Opportunities in ICT Industry.

Mr. Stefan Schuster of Tecnalia, Spain is presented about SOA and MDD. The SOA talk "SOA and Cloud in practice: Examples and Case Studies" introduced SOA and cloud as well as case studies and examples about SOA and cloud. The MDD talk "Software Model Driven Development: a Reality Check" introduced MDA and principles application case studies & quantifiable benefits MDA tools.
Alfredo D’Elia and Fabio Vergari of University of Bologna, Italy presented about "Semantic Web and Embedded Systems: Technologies and Innovation Opportunities and Challenges". The talk focused on challenges facing interoperability and introduced about smart spaces and how to provide information interoperability, evolvability and extendibility, W3C standard compliance, and context awareness.
Antti Evest of VTT, Finland is presented about “Security Aspects in Smart Environment” where he talked about examples of smart spaces like smart homes and smart cities and security challenges relate to the main philosophy of smart spaces.

Figure 16 – Smart Space Security Presentation by Antti Evest of VTT, Finland

Amr Noman, from SECC, Egypt presented about Software Process Improvement “Lean Software Configuration Management Using ‘Process Increments’’. Amr introduced and overview about ‘Process Increments’ method, and configuration management as ‘Process Increments’, as well as case studies observations and findings.
Haitham S. Hamza, from SECC, Egypt presented “FP7 Funding Opportunities for the ICT Industry”. The talk introduced and overview of the FP7 structure and calls, Horizon 2020, and emphasized SECC Role and how the Egyptian ICT community can get engaged.
Figure 18 - FP7 Funding Opportunities for the ICT Industry by Haitham Hamza, SECC
Event presentations can be downloaded from the RECOCAPE website at:
http://www.secc.org.eg/RECOCAPE/Events.html#2nd

Figure 19- Information about Event 2 Published on the RECOCAPE Website
2.2.3. Event Feedback

Most of the event attendees attended RECOCAPE event 1 that was held on May, 2012

![Returning companies](image)

**Figure 20 – Event Evaluation Results – Return Companies**

A large number of the attendees found **MDD** followed by **Agile** and **Semantic web** the most particular subject areas.
Figure 21 - Event Evaluation Results - Most Practical Areas as Perceived by the Audience
3. Publications

4. Others

4.1. RECOCAPE Kick-off Meeting

The RECOCAPE project’s Kick-off meeting was held on May 13th, 2012 in Cairo, Egypt. The meeting was attended by SECC, UNIBO and Tecnalia. In addition, representatives from Tecnalia and VTT participated in the meeting via video conference.

![RECOCAPE Official Kick-off Meeting](image)

Figure 22 - RECOCAPE Official Kick-off Meeting (from left to right): Tullio Salmon (Bologna, Italy), Joseba Laka (Tecnalia, Spain), Hossam Osman (SECC, Egypt), Haitham Hamza (SECC, Egypt)

4.2. RECOCAPE Knowledge Transfer Tutorials

As a part of RECOCAPE project and for the purpose of transferring acquired knowledge to the community, Research and Development Team at SECC takes the responsibility of regularly developing tutorials and presentations in the four state of the art topics; SOA, Semantic Web, MDD, and Ubiquitous Computing. Listed here are the titles of the tutorials developed so far.

1. A Quick Guide to SOA
2. Getting Familiar with Semantic Web, Definition, Technologies / Standards / Concepts, and Future Challenges

3. SPARQL Getting Started, Definition, Concepts, and Syntax

4. Getting Started To Model Driven Development – MDD, Definition, benefits and difficulties

5. Metamodeling, Modeling, and Model Transformation, The way to build your DSL

6. Getting Started To Ubiquitous Computing, Definition, design, and implementation guidelines

4.3. Training Modules Development and Delivery

As a part of Work Package 2 – “WP2: Training Modules Development and Delivery” four training tracks are to be developed by the European participants, TECNALIA, VTT, and UNIBO and delivered to SECC aiming at reinforcing the cooperation capacity in embedded ubiquitous computing. The tracks should cover four different technologies namely, Service Oriented Architecture (SOA), Semantic Web, Model Driven Development (MDD), and Ubiquitous Computing.

4.3.1. SOA/ESB Training

September and October, 2012 witnessed the delivery of two SOA tracks; basic and advanced. The two tracks were developed by TECNALIA and delivered to SECC senior engineers at SECC premises.

Stefan Schuster, R&D Strategy Manager, from TECNALIA, Spain delivered the basic track entitled “Adopting Service Oriented Architectures Made Simple”. The track aimed at introducing SOA fundamental concepts, infrastructure, and tools as well as cloud computing topics. The five days course was held at SECC premises from September 23rd till September 27th and was attended by eight senior engineers from SECC, Egypt as well as Haitham Hamza, SECC R&D department manager.
Alberto Berreteaga, Project Leader, from TECNALIA, Spain delivered the advanced track entitled “Service Oriented Architecture/Enterprise Service Bus (SOA/ESB): Advanced Training Development”. The track covered advanced SOA topics including SOA and cloud security, tools and practice for service design, implementation, and test, as well as practical adoption for cloud and ESB. Haitham Hamza, R&D department manager together with six senior engineers from SECC, Egypt attended the five days advanced SOA training that was held at SECC premises from September 29th till October 4th.
4.3.2. Semantic Web Training

November, 2012 witnessed the delivery of two Semantic Web tracks; basic and advanced. The two tracks were developed by University of Bologna and delivered to SECC senior engineers at SECC premises.

Alfredo D’Elia, from UNIBO, Italy delivered both tracks; basic and advanced. The basic track entitled “A Short Introduction to Semantic Web” aimed at introducing Semantic Web concepts and technologies. The five days course was held at SECC premises from November 4th till November 8th and was attended by senior engineers from SECC, Egypt as well as Haitham Hamza, SECC R&D department manager.

The advanced track entitled “Advanced Semantic Web – Introduction to semantic smart spaces and SMART-M3 architecture” aimed at introducing SMART-M3 architecture and application design approaches as well as ontology modeling. The three days course was held at SECC premises from November 11th till November 13th and was attended by senior engineers from
SECC, Egypt as well as Haitham Hamza, SECC R&D department manager.

![Figure 25 - A Group Photo for SECC team with Alfredo D'Elia (UNIBO, Italy) first from left during the delivery of the Semantic Web Course](image)

**4.3.3. Model Driven Development Training**

Model driven development training was conducted on December, 2012. The five days course was divided into two levels; basic and advanced.

Adrian Noguero, from Tecnalia, Spain delivered both tracks; basic and advanced. The basic track aimed at introducing model driven engineering theoretical concepts as well as hands on practice on modeling techniques using standard languages. The advanced course covered advanced tools for meta-modeling, modeling, and model transformations.

The five days course was held at SECC premises from December 4th till December 8th and was attended by senior engineers from SECC, Egypt as well as Haitham Hamza, SECC R&D department manager.
Figure 26 - A Group Photo for SECC team with Adrian Noguero (Tecnalia, Spain) first from left during the delivery of the MDD Course

4.3.4. Ubiquitous Computing Training

Eila Ovaska, Antti Evasti, and Susanna Pantsar-Syvaniemi from VTT, Finland delivered remotely the basic and advanced ubiquitous computing course on February, 2013. The tracks aimed at introducing challenges and requirements for ubiquitous computing systems as well as enabling technologies for designing and implementing these systems. The course introduced demos and case studies of European projects that deployed the introduced technologies.

The five days online course was held at SECC premises from February 17th till February 21st. The online course was conducted using GoToMeeting software and was attended by senior engineers from SECC, Egypt.
Figure 27 – Online Course attended by SECC engineers and conducted by Susanna Pantsar-Syvaniemi, Finland

Figure 28 – SECC engineers attending Ubi online course
4.4. RECOCAPE Project Meeting

The RECOCAPE project's meeting was held on November 14th, 2012 in Cairo, Egypt. The meeting was attended by SECC, UNIBO and Tecnalia. In addition, representatives from Tecnalia and VTT participated in the meeting via video conference.

4.5. EU Opportunities for Young Researchers Talk

In the context of the EU-Egypt Year of Science & Innovation 2012, in coordination with the Ministry of Scientific Research and in the presence of Dr. Nadia Zakhary, Minister of Scientific Research, the Head of Delegation of the European Union to Egypt, Ambassador James Moran, Haitham Hamza from SECC, gave brief presentations of RECOCAPE project objectives and underlying technologies. The Ceremony was held at the Ambassador's residence on 25 November 2012.

4.6. FP7 and Horizon2020 Awareness

For the aim of raising the Egyptian ICT community awareness about the European programs, two sessions were conducted by Haitham Hamza from SECC on October and November 2012. The first session targeted SECC managers and senior R&D engineers introducing Horizon2020. The second session was held during the second event on November and introduced the FP7 funding opportunities to Egyptian ICT community. Both sessions were held at SECC premises.
Figure 29 - Haitham Hamza (SECC, Egypt) introducing Horizon2020 to SECC team on October, 2012

Figure 30 - Haitham Hamza (SECC, Egypt) introducing FP7 funding opportunities during second event on November, 2012
4.7. MIRA Poster Session

On January, 2013, MIRA, the Mediterranean Innovation and Research Coordination Action (FP7 - INCO-NET Project), prepared a Poster Session of Projects in support of international research and innovation cooperation under the framework of its Final Conference. SECC was invited to submit an abstract and a poster of RECOCAPE project, to be part of this poster session that was held on 24th and 25th January in Marrakesh (Morocco). The participating poster introduced RECOCAPE project, its objectives, achievements, and expected impact.

Figure 31 - RECOCAPE Poster introduced by SECC to participate in MIRA poster session, (Marrakesh, Morocco) - January, 2013
4.8. Joint Experiments Setting Up

As a part of Work Package 4 – “WP4: Joint Experiments Setting Up” two joint experiments are to be implemented SECC and the European participants, TECNALIA, VTT, and UNIBO. The two experimental proof-of-concept projects aim at enforcing SECC capacity in the underlying technologies.

4.8.1. Joint Experiment 1- Energy Aware Smart Home

January and February 2013 witnessed the development of the first pilot project “Energy Aware Smart Home”. The project aimed at deploying an extendible and configurable smart home system able to apply energy harvesting policies and providing instruments and mechanisms to edit and apply user preferences related to installed devices. The implementation used low cost Zigbee sensors attached to the devices that are to be controlled semantically based on user context and preferences. The project objectives were achieved by combining Smart-M3 interoperability platform and Service Oriented Architecture approach. The project was implemented by SECC engineers receiving consultation from UNIBO, Italy for Smart-M3 platform and from Tecnalia, Spain for Service Oriented Architecture.

The implemented system offers three modes of operations; administration mode, maintenance company’s mode, and home user mode. In administration mode, the system admin creates and configures a smart home. This incorporates adding home info, locating devices in the smart home rooms, and adding contacts that will be used in case of emergency. A maintenance company can register for fixing certain types of faults. The main mode is the user mode where, a user can register and add preferences for device operation. User preferences will be applied when a user is identified using RFID. In case the user is not identified, default settings will be applied. A power saving mode is applied whenever no presence is detected. User can also monitor and control his smart space remotely via a web interface that displays all system info as well as faults or alarms together with candidate maintenance companies to fix.

The project was implemented to control light intensity, temperature via air condition, multimedia playback, and refrigerator temperature. This can be done
either automatically based on user context (presence and identification) or manually by sending command via the web interface. Faults like AC and refrigerator compressor failures, refrigerator door open, and fire alarms are monitored and communicated to the user instantly through mobile application and is reflected in home monitoring web page.

Figure 32 - Controlling light (upper left), multimedia playback (upper right) via Zigbee node after receiving commands from Zigbee coordinator (lower left) based on user identification using RFID (lower right)

Figure 33 - Application offers 3 operation modes (left), user can monitor and control home devices remotely via web application (right)
4.8.2. Joint Experiment 2- Semantic Advertising Platform for Egypt (SALE)

April and May 2013 witnessed the development of the second pilot project “Semantic Advertising Platform for Egypt”. The target of this pilot is to design and implement a semantic-based smart advertising platform. The aim of this platform is to provide a set of functionalities that will be used by those who develop applications for end-users and advertising companies. This platform allows for building different advertising campaigns to match the advertiser requirements and domain of work. Additionally, it can be extended in the future to allow multi-channel Ads such as web, or mobile devices.

The system deploys semantic technologies to link users and advertising entities anonymously. Using Service Oriented Architecture (SOA), large number of devices can use the system without the need for the device to support proprietary, large footprint middleware. Using SOA will also promote building wide spectrum of services on top of the semantic platform provided as the base system infrastructure.

Project main features:

- Profile management for advertisers, publishers and end-users. This includes services such as registration, manage account (edit/delete), etc.
- Automatic context update to automatically update user context via mobile upon which ads will be delivered.
- Ads management to handle creating, editing, deleting ads. Ads info should be associated with the context to trigger Ad broadcast.
- Content storage and lookup to manage storing and fetching content and metadata.
- Security features such as:
  - Authentication to handle user login and protected data.
  - Authorization to provide the users with the ability to rate or even block Ads from certain sources as well as manage Ad broadcasting based on user authorization preferences.
- Quality of Service to provide metrics collection (metrics such as success delivery rate among others) and analysis.

**Figure 34 – SALE Web portal for advertiser, publisher and admin**
4.9. Closing Event of the EU-Egypt Year of Science and Innovation 2012

The European Union and Egypt celebrated 2012 the "EU-Egypt Year of Science and Innovation". The "Years of Science" is an initiative that started by the Egyptian Ministry of Scientific Research in 2007 within the context of a greater plan for reforms to strengthen Egypt's science and technology. It aims to promote international cooperation by dedicating a year to activities with a specific country. Three EU Member States have had successful "Years of Science" with Egypt bilaterally. These are Germany (2007), Italy (2009) and France (2010). In 2012, all European Union countries with activities on research and innovation in Egypt joined forces to bring together many scientists, industry experts, policy makers, entrepreneurs and institutions to share knowledge and address common challenges towards economic growth and social prosperity.

The conference brings together research and innovation stakeholders and policy makers to share and celebrate success stories as well as to demonstrate the state of play in research and innovation cooperation through panel discussions to discuss "Current Status & Future Perspective for EU-Egypt Cooperation in Science and Innovation" aiming at:

- Exploring alternatives to tackle major societal challenges
- Reducing inefficiencies due to fragmentation, duplication and lack of information on priorities and on-going cooperation activities
- Generating ideas and recommendations for a more coordinated Egypt-EU/Member States research and innovation cooperation approach

During the event on April 18th, Enas Ashraf, Senior R&D Engineer at SECC, participated in the poster session presenting RECOCAPE project objectives and achievements. The poster session offered a platform for discussions with scientists in different domains for future collaboration.
Figure 35 - Participants viewing RECOCAPE poster at the conference

Figure 36 - Enas Ashraf, Senior R&D Engineer presenting RECOCAPE poster at the conference
19 April, Azza Kamal, Senior R&D Engineer at SECC has attended the “Famelab National Competition”. The competition was introduced to Egypt in 2009 in support of the government’s efforts to advance science and to build a culture that understands and supports the positive role science plays in the economic and social well-being.

FameLab® Egypt was introduced for the first time in the Middle East and Africa by the British Council and the Research, Development and Innovation (RDI) Programme.

The event is enriched by running it in one of the most important historical places in Egypt; the Cairo Citadel. There were talks for the EU ambassador to Egypt, the Egyptian minister of scientific research Nadia Zachari, and the director of British council Egypt, Mark Stephens. All ensured the Egyptian role in encouraging science and technology and highlighted the promising future for Egypt based on current facts and future perception.

Figure 37 - EU ambassador talk during the event
On April 20\textsuperscript{th}, Ahmed Gamaleldin, Senior R&D Engineer at SECC has participated in “ShERACA Networking and Coordination meeting” at the Ministry of Scientific Research. ShERACA an Arabic word meaning “Partnership” and its main objectives are promoting, enhancing and supporting the partnership between EU and Egypt’s science, technology and innovation stakeholders. Mr.Tomas Matraia-EU policy officer- and a group of more than 20 researchers from different R&D entities discussed achievements, challenges and lessons learned in EraWide projects in Egypt under the FP7. During this meeting, Ahmed demonstrated a presentation about RECOCAPE project status including what has been achieved and what is next. The key message said by Mr.Tomas was that Egypt is a key partner for the EU and we need to capitalize on our results and build upon experience in the region to achieve great benefits from the H2020.

Moreover, Ahmed Gamaleldin has participated in “ShERACA Training Seminar” sponsored by the Ministry of Scientific Research RDI program on April 21\textsuperscript{st} and April 22\textsuperscript{nd}. Mr.Tomas Matraia-EU policy officer- and a two representatives from APRE (The Agency for the Promotion of the European Research) conducted a training about some of the FP7 related issues and the new opportunities in the H2020. Mr.Tomas talked about the priorities of the H2020 and the importance of having a strategy for the communication and dissemination of project results in evaluating the proposals in H2020. Mr. Giulio Cataldi - National Contact Point, Food, Agriculture and Fisheries, and Biotechnology, APRE- discussed the FP7 project management, FP7 project reporting including financial and non-financial issues. Additionally, Mr. Bruno Mourenza- Health National Contact Point, APReNASasE – discussed the FP7 project negotiation.
4.10. Networking with Universities

As a part of dissemination activities, the R&D department – SECC organized a series of meetings with universities in Egypt with the purpose of introducing RECOCAPE activities and technologies to the community.

On May, a meeting was held with Professors and Directors of the different departments in the Faculty of Management and Information Systems at the French University in Egypt. During the meeting Enas Ashraf, Senior R&D Engineer at SECC introduced the R&D department work as well as RECOCPAE activities and technologies. Cooperation and dissemination activities between SECC and UFE were discussed during the meeting.
Another meeting was held on July with Prof. Essam Shehab, Reader in Product & Service Engineering at the Cranfield University. The R&D and the business development departments attended the meeting. Besides introducing RECOCAPE project, Prof. Essam introduced his departments work and possible cooperation opportunities. Prof. Essam came to know RECOCAPE project through RECOCAPE linkedin page [http://eg.linkedin.com/pub/recocape-secc](http://eg.linkedin.com/pub/recocape-secc) that is established for the purpose of dissemination.
Figure 40 - Prof. Essam Shehab (Crafield University, UK) during the meeting with the R&D and Business Developments teams (SECC, Egypt)
Exploitation Cluster Project

1. Customer Selection

As a part of exploitation activities, the R&D department has set selection criteria for selecting the companies to participate in the Exploitation Cluster Projects. The criteria were based on customer’s business and technical scope and past experience. The selection criteria depend on three dimensions:

1. Company/attendees survey: this will be a three pages survey with questions about the company activities and technologies. Based on this survey we will be able to:
   a. Measure the readiness of the company to adopt the technology in current running projects
   b. Gaining knowledge about the company’s areas of expertise

2. Instructors/consultant opinion: this will be a rating number (out of 10) from the course instructors about the suitability and capability of the company to work in the pilot. This rating will be based on:
   a. The interaction during the course to identify the best suitable candidates for the pilot.
   b. The quality of the case study or practical activities suggested by the company attendees.
   c. The technical skills and the diversity of the technical knowledge of the company attendees

3. Course evaluation: this will be a two pages evaluation form about the course quality (including the course material and practical sessions) and the instructors’ performance. This will be of a great help to identify the impact of the course on the attendees’ knowledge level.
Companies selection criteria for the pilot projects

The Selection criteria we are considering for assessing and comparing companies to work with in the first pilot project will be depend on three dimensions:

1- Company/attendees survey: this will be a three pages survey with questions about the company activities and technologies. Based on this survey we will be able to:
   - Measure the readiness of the company to adopt MDD in current running projects
   - Gaining knowledge about the company’s areas of expertise

2- Instructors/consultant opinion: this will be a rating number (out of 10) from the course instructors about the suitability and capability of the company to work in the pilot. This rating will be based on:
   - The interaction during the course to identify the best suitable candidates for the pilot.
   - The quality of the case study or practical activities suggested by the company attendees.
   - The technical skills and the diversity of the technical knowledge of the company attendees

3- Course evaluation: this will be a two pages evaluation form about the course quality (including the course material and practical sessions) and the instructors performance. This will be of a great help to identify the impact of the course on the attendees’ knowledge level.

Figure 41 - Companies’ Selection criteria for MDD Project
Figure 42 – Survey for SOA Course

Figure 43 – Survey for Semantic Web Course
Domain Specific Modeling for Automatic Code Generation
The MDD Approach
Companies’ selection questionnaire for MDD pilot project

Dear All,

This questionnaire is part of the “Introduction Domain Specific Modeling for Automatic Code Generation - The MDD Approach” training course.

Thank you in advance for your cooperation.

Contact Information Data
Name: ____________________________
Company: _________________________
Email: __________________________

7. What is your previous experience in MDD in the last 4 to 5 years?
   [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Does the company have any MDD-related Products / Projects?
   a. [ ] Yes  b. [ ] No

9. Do any of the company members have attained any MDD training before?
   a. [ ] Yes  b. [ ] No

11. What is the development framework you are using?
    a. Microsoft  b. IBM  c. Eclipse  d. Other (Please specify): ________________

Figure 44 – Survey for MDD Course
2. Training

2.1. Introduction to SOA for SMEs

May 2013 witnessed the delivery of the “Introduction to SOA for SMEs” course. The course was conducted by Ahmed Gamal, Senior R&D Engineer at SECC, Mohamed Maher and Hashim Sharif, two SOA experts. The three days course was held at SECC premises on 13-15 May 2013 and was attended by 14 engineers from 8 different companies.

The course introduced SOA concepts and approaches for SMEs. It addressed how to build your SOA environments using open source tools and how to capitalize on other providers services. During the 3 days, the attendees have hands on experience with Mule ESB through various examples and exercises.

Figure 45 - Mohamed Maher, SOA Expert while conducting SOA course
2.2. Introduction to Semantic-Web Information Management

“Introduction to Semantic-Web Information Management” course was held during May 2013. The course was conducted by Enas Ashraf, Senior R&D Engineer at SECC and Hadeal Ismail, semantic web researcher. The three days course was held at SECC premises on 27-29 May 2013 and was attended by 14 engineers from 8 different companies.

The course introduced semantic web concepts applied to content management systems. The difference between traditional and semantic content management systems was addressed during the course through hands on experience with semantic and content management systems technologies and tools.

![Figure 46 - Hadeal Ismail during Semantic Web Course](image-url)
2.3. Domain Specific Modeling for Automatic Code Generation

“Domain Specific Modeling for Automatic Code Generation” course was held during June 2013. The three days course was conducted by Enas Ashraf, Senior R&D Engineer at SECC. The course was held at SECC premises on 10-13 June 2013. 6 engineers from 3 companies attended the course.

The course introduced basic concepts of MDD and the key benefits of using Domain Specific Modeling as well as model to text transformation for automatic code generation. Moreover, the course provided hands-on experience on the underlying technologies to adopt MDD.

Figure 47 – Enas Ashraf discussing DSM with attendees
2.4. **Introduction to Application Development for Smart Environments**

On June 2013 SECC conducted “Introduction to Application Development for Smart Environments” course. The three days course was conducted by Azza Kamal and Mahmoud Mohamed, Senior R&D Engineers at SECC. The course was held on 25-27 June 2013.

The course introduced the basic concepts of smart environments and provided practical hands-on experience in using SMART-M3 architecture to develop smart environment applications.

![Figure 48 – Mahmoud Mohamed and Azza Kamal during Smart Environment course](image-url)
3. R&D Pilots

3.1. Exploitation Cluster Project R&D Pilot1- Semantic Web

As a part of the exploitation activities and after conducting the semantic web course for information management, SECC offered its customers a new consultation service. The service aims at raising the competency of web development companies in semantic web technologies. This is achieved through a set of consultation visits with the purpose to apply semantic web technologies to websites for one or more of the customers of the web development company.

3.1.1. Service Description

- **Service Name:** Semantic Web Pilot Project
- **Service Duration:** 4 days
- **Service Delivered to:** ZAD Solution; established in 2003, is a leading company specialized in web application development. The business scope of the company includes Web and Mobile Applications, Business Intelligence (ERP & KPI Dashboard), and Content Management Systems (News, Portals, and websites) (http://zadsolutions.com/).
- **Sponsor:** Dr. Mohamed Ibrahim, Technical Director
- **Service Model:** On-Job consultation; provide consultation and hands on experience for semantic web by applying semantic technologies to website for one of the ZAD Solutions customers (NewHomes).

3.1.2. Service Scope

SECC, in close collaboration with ZAD Solutions developers, worked to implement the semantic technologies to the NewHomes website (http://www.newhomes.com.eg). The project scope included the development of a SPARQL-based search feature and rich snippets for the website.
Figure 49 - A snapshot New Homes website on which semantic technologies were applied

### 3.1.3. Results and Impact

The following table summarized the results and impact of the provided services on both ZAD solutions and NewHomes website.

<table>
<thead>
<tr>
<th></th>
<th>ZAD Solutions</th>
<th>NewHomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Results</strong></td>
<td>Raised the competency of their team in semantic web technologies.</td>
<td>Increased the probability of fulfilling customer needs by enabling semantic-based search instead of the traditional keyword-based search.</td>
</tr>
<tr>
<td></td>
<td>Augmented the service portfolio with state-of-the-art technologies to better serve their customers.</td>
<td>Enhanced customer experience by semantically enriching the website contents and increasing its relevance.</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>Strengthen market footprint</td>
<td>Increase business</td>
</tr>
</tbody>
</table>
3.1.4. Publications

Upon completing the service delivery, a case study had been developed to summarize ZAD solutions business case. The case study introduced ZAD Solutions business objectives and the solution proposed by SECC. A brief description of the solution strategy and implementation approach was included. Finally, the results and impact of the delivered service were briefly demonstrated.
Case Study

ZAD Solutions

Semantic Technologies Applied to Content Management System

August 2013

Company Profile: ZAD Solutions, established in 2003, is a leading company specialized in web application development. The business scope of the company includes Web and Mobile Applications, Business Intelligence (ERP & KPI Dashboard), and Content Management Systems (News, Portals, and websites).

Business Objectives: ZAD Solutions strives to position itself as a leading company in web application development by adopting state-of-the-art technologies in their offered solutions. After attending the Semantic Web training course offered by SECC in May as a part of the RECOCAPE project, the company decided to exploit the power of this technology in their solutions in order to unlock the business potential of their customers.

SECC, in close collaboration with ZAD Solutions developers, worked to implement the semantic technologies to the NewHomes website (http://www.newhomes.com.eg). The project scope included the development of a SPARQL-based search feature and rich snippets for the website.

Proposed Solution: The newly offered SECC Semantic Web service provides ZAD Solutions with a well-defined and easy to follow methodology and guidelines to adopt semantic technologies in their websites solutions that are based on Drupal open source content management system.

Solution Strategy:

1. Website Assessment
2. Technology Evaluation
3. Environment Setup
4. Implementation and Testing

Implementation Approach:

1. Structure Website Content
   - Support RDF
   - Perform RDF mapping
2. Improve Display of Search Results
   - Support Schema.org markup
   - Support Rich Snippets
3. Enrich Website Content and Increase its Relevance
   - Integrate Zemanta content creation tool
4. Support Query Language
   - Support SPARQL query language
   - Build RDF index

Results and Impact

ZAD Solutions: Strengthen Market Footprint as a leading web development company by:
- Raising the competency of their team in semantic web technologies.
- Augmenting the service portfolio with state-of-the-art technologies to better serve their customers.

NewHomes Website: Increase Business Opportunities by:
- Increasing the probability of fulfilling customer needs by enabling semantic-based search instead of the traditional keyword-based search.
- Enhancing customer experience by semantically enriching the website contents and increasing its relevance.

Contact Us 16248  info@secc.org.eq

Follow Us

Figure 51 - ZAD Solutions Case Study
4. Others
Status Summary

This section summarizes the status of the tasks described in RECOCAPE work package 6. A completed activity is marked as **Closed**. Ongoing refers to activities that started and still in execution. Activities that are not implemented yet are marked as **Not Yet**.
## 1. Dissemination

<table>
<thead>
<tr>
<th>ID</th>
<th>Activities</th>
<th>Closed</th>
<th>On-going</th>
<th>Not Yet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disseminate RECOCAPE results to the EIT ICT Labs community</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Update SECC brochures</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Include RECOCAPE status and success stories in newsletters issued every quarter</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Update SECC’s course catalogue</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Update SECC’s service catalogue</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Issue press release every six months</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Include in posters and flyers within exhibitions</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Email campaigns with relevant announcements</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Keynotes and presentations in reputable conferences</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Networking with ERA-WIDE coordinators and similar projects</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish and regularly update website</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Report on awareness and wider societal implications in reference to ERA-WIDE objectives</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Prepare quarterly-issued dissemination report</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 6.1.2 Awareness Events

- Organize 3 awareness events highlighting the RECOCAPE results and underlying technologies. ✓
- Organizing Egypt-SPIN even with the theme of embedded ubiquitous computing ✓

### 6.1.3 Publications

- Publishing 4 research papers that demonstrates RECOCAPE results ✓
- Preparation of 2 white papers addressing the underlying technologies ✓
- Dedicate an issue of SECC’s IJSE to the technologies of embedded ubiquitous computing ✓
## 2. Exploitation Cluster Project

<table>
<thead>
<tr>
<th>ID</th>
<th>Activities</th>
<th>Closed</th>
<th>On-going</th>
<th>Not Yet</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2.1 Customer Selection</td>
<td>Specifying selection criteria</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public announcement</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screening and selecting 4 relevant customers</td>
<td></td>
<td>√</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Each customer identifies 3-member team to receive training and participate in R&amp;D collaborative project with SECC</td>
<td></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>6.2.2 Training</td>
<td>One 28-day training round delivered to 12 trainees from 4 selected customers</td>
<td></td>
<td>√</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A maximum of 5 training days is scheduled biweekly</td>
<td></td>
<td>√</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training modules are validated and reworked as per customer feedback</td>
<td></td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>6.2.3 R&amp;D Pilots</td>
<td>4 15-day pilot projects; one for each customer</td>
<td></td>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ID</th>
<th>Activities</th>
<th>Closed</th>
<th>On-going</th>
<th>Not Yet</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3 EuroMed SPI 2012</td>
<td>Organizing a 2-day conference in Egypt by TECNALIA and SECC</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>