



INFSO-ICT-224557

BeAware

Boosting Energy Awareness  
with Adaptive Real-time Environments

<b>Instrument:</b>	CA	STREP 	IP	NOE
--------------------	----	---	----	-----

**ICT - Information and Communication Technologies Theme**

**M7.1 Dissemination Report**


Due date of deliverable (as in Annex 1): April 30<sup>th</sup> 2010

Actual submission date: 2010-05-31

Start date of project: May 1<sup>st</sup> 2008

Duration: 36 months

Organisation name of lead contractor for this deliverable: Interactive Institute

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)		
Dissemination Level		
<b>PU</b>	Public	
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	



European Commission  
Information Society and Media

<b>Programme Name:</b>	ICT
<b>Project Number:</b>	224557
<b>Project Title:</b>	Boosting Energy Awareness with Adaptive Real-time Environments
<b>Partners:</b>	COORDINATOR: TKK (FI) CONTRACTORS: Helsinki University of Technology, TKK BaseN Corporation, BaseN Interactive Institute II AB, II Engineering Ingegneria Informatica, ENG University of Padova, UNIPD Enel.si, ENELSI IES Solutions, IES Vattenfall Research and Development AB, VRD
<b>Document Number:</b>	DR2
<b>Work-Package:</b>	WP7
<b>Deadline Date:</b>	2010-04-30
<b>Date of Delivery:</b>	2010-05-31
<b>Title of Document:</b>	Dissemination Report
<b>Author(s):</b>	Carin Torstensson
<b>Responsible Partner:</b>	Interactive Institute
<b>Reviewer:</b>	Dissemination Team
<b>History:</b>	
<b>Availability:</b>	Public

# Table of Contents

- 1 Introduction ..... 5**
- 1.1 Dissemination team ..... 5
- 1.2 Confidentiality policy, issuing and decision making ..... 5
- 1.3 Key general message ..... 5
- 2 Scientific and educational dissemination ..... 6**
- 2.1 Key activities, goals and responsibilities ..... 6
  - 2.1.1 Research dissemination ..... 6
  - 2.1.2 BeAware Included in Student Courses ..... 7
  - 2.1.3 BeAware Summer School ..... 7
  - 2.1.4 Liaisons ..... 9
- 3 Public dissemination ..... 10**
- 3.1 Target audiences ..... 10
- 3.2 Channels ..... 10
  - 3.2.1 BeAware project website: maintenance and updates ..... 10
  - 3.2.2 Development of BeCommunity ..... 11
- 4 Commercial and industrial dissemination ..... 12**
- 4.1 Target audiences and key messages ..... 12
- 4.2 Communication material ..... 12
- 4.3 Showcase and demo ..... 13
- 4.4 Industry Exhibitions and Conferences ..... 13
- 4.5 Press ..... 14

## Executive Summary

The second Dissemination Report defines - in accordance with the definitions and regulations of Annex I (224557) - a regulatory mechanism for external communication for BeAware. The dissemination in BeAware is multidisciplinary and it expands in three directions:

- Notification of project's results in international scientific communities and forums,
- Public dissemination that aims to inform and engage consumers and public bodies on strategies and tools for energy conservation, and
- Commercial and industrial dissemination to enhance the commercial potential of the BeAware approach and system.

This report provides a detailed description of shared dissemination policies and targeted actions that have been realized during the second year. Moreover it specifies a set of performance indicators in each dissemination category as a means to measure and manage progress. The Dissemination Report shall be seen as reference material to the project participants. As such, it is a living document that will be refined and updated throughout the entire project. The second Dissemination Report specifies the efforts done during the period M13-M24.

# 1 Introduction

The goal of the dissemination efforts of BeAware is to achieve widest possible distribution of the project's products, work and findings. The objective is to raise awareness about the BeAware research and technologies through the targeted dissemination actions. Moreover, the dissemination efforts should create value within the participating partner organisations. The efforts shall develop in on three levels:

- scientific and educational dissemination [sci/edu]
- public dissemination [publ] and,
- commercial and industrial dissemination [com/ind].

A set of documents will be prepared both in traditional (paper, poster, brochures, DVDs) and in innovative digital form (i.e. animated videos) available on the web site or on e-brochures and e-flyers. Persuasive and attractive documents in a selection of languages will be produced to address the various market segments. A promotional video has been produced. The specifics of this work are detailed in the sections for each dissemination type.

## 1.1 Dissemination team

BeAware have a Dissemination Team consisting of one representative from each partner. The goal of the team is to coordinate dissemination actions in BeAware according to the plan and resource allocation specified in Annex 1. Moreover, the team decides upon and manage the shared communicative messages of BeAware, plan attendance at relevant events and expos and ensure that partners execute the dissemination actions stated in the Dissemination Plan. The team shall also update the Dissemination Plan according to suggestions stated in the Dissemination Reports (M12, M24). The team shall, in addition to its regular monthly meetings, every six months have a special checkpoint meeting to (1) verify the accomplishment of goals and expected results (2) modify strategies and tools according to the feedback from the consortium partners.

## 1.2 Confidentiality policy, issuing and decision making

Major external communication is always issued within and approved by the Dissemination Team. This is important to ensure correctness of information and to secure that confidential information from the projects and its partners are not publically displayed.

## 1.3 Key general message

A key general message has been developed in the Dissemination Team. This message is communicated via all media provided by BeAware. The key general message shall be updated regularly and re-evaluated to match project goals and the media landscape.

## 2 Scientific and educational dissemination

The scientific dissemination is oriented to support and direct the production of scientific papers, posters and oral presentations for relevant international and European conferences, workshop and symposia. The general strategy of scientific dissemination is to bring this scientific issue not only to the scientific communities that already study energy-related problems, but also to other disciplines such as social psychology, computer science, human-technology interaction to promote multi-disciplinarily and integration of different perspectives.

### 2.1 Key activities, goals and responsibilities

#### 2.1.1 Research dissemination

The scientific dissemination is key and a continuous and focussed process on the production of scientific papers, posters and oral presentations for relevant international and European research conferences, workshop and symposia. During the second year of the project we have produced valuable scientific results.

**Task:** Task 7.3

#### **Performed activities during the past 12 months:**

Following publications were submitted for publications or proceedings during this period:

- Gamberini L., Jacucci G., Spagnolli A., Björkskog C., Kerrigan D., Chalambalakis A., Zamboni L., Valentina G., Corradi N., Zappaterra P., Bosetti G. Technologies to improve energy conservation in households: The users' perspective, proceedings of the First European Conference on Energy Efficiency and Behavior" in Maastricht on October 18-20 2009
- Björkskog, Christoffer; Jacucci, Giulio, Lorentin Bruno; Gamberini, Luciano, Mobile Implementation of a Web 3D Carousel with Touch Input, Proceedings of the 11th International Conference on Human-Computer Interaction with Mobile Devices and Services
- Jacucci G., Spagnolli A., Gamberini L., Chalambalakis A., Björkskog C., Bertoncini M., Torstensson C., Monti P. (2009). Designing Effective feedback of Electricity Consumption for Mobile User Interfaces. *PsychNology Journal*, 7(3), 265-289.
- Liikkanen, L. (2009) Extreme-user approach and the design energy feedback systems. To appear in Proc. of Energy Efficiency in Domestic Appliances and Lighting EEDAL 2009, Berlin, Germany.

Following presentations were given during this period:

- Interactive Institute presented BeAware at the national research arena, arranged by Elforsk and Swedish Energy Agency, August 26-27 in Sweden. The conference gathered 50 delegates from institutes, universities and energy companies to listen to the latest research results within energy usage today and in the future.

- “Mobile Implementation of a Web 3D Carousel with Touch Input” presented by Christoffer Björkskog, AALTO at Mobile HCI: 11th International Conference on Human-Computer Interaction with Mobile Devices and Services, September 15 - 18, 2009, Bonn, Germany.
- “Technologies to improve energy conservation in households: The users’ perspective” presented by Giulio Jacucci and Luciano Gamberini at the First European Conference Energy Efficiency and Behaviour, October 18-20, 2009, Maastricht, Holland.
- Luciano Gamberini and Anna Spagnolli were invited to participate to the Delivering Energy Savings through Smart Metering workshop, a one and a half-day workshop to review and provide input into ESMA recommendations to the European Commission, develop a shared research agenda and to establish an energy savings network focused on smart metering and behaviour change. This workshop was held in Oxford (UK) next 26-27 October 2009.
- Workshop held during Persuasive 2010: “Energy Awareness and Conservation through Pervasive Applications”, organized by Giulio Jacucci, 18 international participants, 17th of May, 2010, Helsinki, Finland.

### *2.1.2 BeAware Included in Student Courses*

During the first year BeAware was the subject of two different student courses. One course was together with students from AALTO University.

In the second course, at Mälardalen’s University in Sweden, 30 students from the Magister Program in Information Design used BeAware as a case study. The result from the course was 10 different graphical design suggestions for a leaflet which described the projects outline.

During the second year of the project 50 students from the Bachelor Program in Innovation, developed innovative business models and business cases based on the BeAware project. The results from this student course will be included in our work with the exploitation of BeAware.

### *2.1.3 BeAware Summer School*

The summer school will be structured as an educational event for graduates, undergraduates, and practitioners; sustainability will be not only thought and discussed but also enliven through demonstrations and through the practices adopted in the summer schools. According to the budget, the school will invite scholars and experts in energy sustainable behaviours. It will focus on

- a) presenting the last findings in the scientific investigation in users’ energy consumption;
- b) showing persuasive and educational strategies to increase awareness in sustainability issues;
- c) allowing for learn-by-doing opportunities such as workshops and demonstrations.

The school itself will try to embody sustainability in the direct and indirect energy consumption involved in organizing it, and by making these efforts transparent and visible to the attendants.

**Task:** Task 7.3

### **Performed activities during the past 12 months:**

As part of academic and educational activities of BeSchool (summer school) BeAware organised at the IEEE Pervasive conference an international workshop with a prominent organizing committee of scientists from Europe and Asia.

This workshop follows a number of previous workshops on sustainability as a general theme at Ubicomp and Pervasive conferences. This was the first workshop focused on energy awareness and conservation that brought together research excellence from Far East (Japan with the co-organisation of University of Waseda) and Nordic Europe.

Workshop topics and objectives:

- Pervasive sensing of energy consumption. How to analyze detailed electrical devices data but also connecting it to people's actions? How to model the domain to inform the design of software and analysis of data?
- Energy efficient infrastructures for sensing energy and users. The energy efficient design of such application is key to ensure the feasibility of conservation projects. The problem is how to sense, communicate, and compute in this area in an energy efficient way?
- Pervasive interfaces including natural/ambient and mobile applications. What interface technologies and platform best deliver energy awareness applications?
- Informed design of applications. Understanding people awareness cognitive models and social practices. How to design engaging applications that do not disrupt but support everyday activities?

Organizers: Prof. Giulio Jacucci, Helsinki Institute for Information Technology HIIT, Finland, Prof. Tatsuo Nakajima, Waseda University, Japan, Prof. Marko Turpeinen, KTH, Sweden Prof. Luciano Gamberini, University of Padova, Italy, Prof. Anna Spagnoli, University of Padova, Italy

### **Workshop Format**

The workshop hosted 18 participants. Most of participants presented papers. Participants prepared 10 minute presentation covering their work and read over the attached submissions before the workshop.

Audience notes and questions emerged in possible themes for afternoon discussion on post-its. Break out groups worked independently to organize their material to the following categories (subject to change based on discussion)

Contributions included submissions from PHD students and researchers in academia and industry (ETH Zurich, SAP, Microsoft Research, University of Cyprus, The Open University, Fachhochschule Bielefeld, Waseda University Japan, Fraunhofer Institute for Applied Information Technology FIT, Department of Design, School of Art and Design, Aalto University, Delft University of Technology)

- Building Web-based Infrastructures for Smart Meters

- Home Heating Using GPS-Based Arrival Prediction
- The Pulse of Tidy Street: Measuring and Publicly Displaying Domestic Electricity Consumption
- The Design Space of Personal Energy Efficiency Assistants
- Motivating Sustainable Behavior with EcoIsland and Its Incentive Design
- Monitoring and Reflecting Energy Consumption
- HEI! HELSINKI ENERGY INFORMER
- Community engagement in product and service design for smart energy behaviour

Most participants are coached for a longer journal submission for a special issue in PsychNology.

#### **2.1.4 Liaisons**

BeyWatch/AIM/ BeAware: These projects are targeting environmental sustainability, energy efficiency and new power distribution/production business models. They aim to design, develop and evaluate an innovative, energy-aware and user-centric solution, able to provide intelligent energy monitoring/control and power demand balancing at home/building & neighbour level. As such BeyWatch/AIM/ BeAware are very relevant to our proposed actions and there is common ground for collaboration. Within the lifetime of the project we will investigate complementary approaches especially with respect to value-added services depending on customer behaviour. Together, these projects will lay down a common collaboration plan once they are started, which will include common dissemination events such as invitation to participate in workshops, cross-project presentations and effort to complement on the technical side wherever it is possible. BeAware will also collaborate by participating in workshops etc with other EU-projects.

**Task:** Task 7.3

#### **Success indicators:**

Co-operation with other projects – the first 18 months, more than two and for the full duration more than 5.

#### **Performed activities during the past 12 months:**

- Presenting BeAware in the Conference ICT for Sustainable Homes, arranged by the EU-project BeyWatch, in Nice.
- Writing an abstract for a networking session to the ICT2010 Event in Brussels together with the EU-projects BeyWatch, eDiana, NOBEL and SmartHouse/SmartGrids.
- Workshop together with EU-project InTube in conjunction with the Greembed workshop in Stockholm.
- Meetings where we discussed our projects together with InTube and AIM at the conference ICT4E 2010.

- Writing an abstract for a networking session at the ICT2010 event in Brussels, September 2010, together with the following EU projects: Beywatch, eDiana, NOBEL and SmartHouse/SmartGrids

## 3 Public dissemination

The main objective of the public dissemination is to leverage the achieved research results in order to generate value within the participating organizations - to increase their competitiveness - and, ultimately to foster sustainable economic growth in the European Union. Moreover, a significant objective for the project is to foster general awareness of the energy issue internationally.

### 3.1 Target audiences

The public dissemination is broad and targets the public, researchers, and decision makers in the area of energy.

### 3.2 Channels

The **BeAware project website** is available<sup>1</sup> on the Internet. The goal of this website is to provide information on the BeAware project, its goals and findings as well as providing information on the consortium members.

The BeAware web site will be not only an informative space that will inform about the project results, but will also try to involve consumers and public institutions in the construction of a virtual community through links to the BeAware community. T7.2 will facilitate the growth of a community that supports energy consumption awareness. A wikiinfrastructure will also support the communication flow and file sharing within the project.

Contribution to industry exhibitions and conferences is done regularly in the project. The goal of this dissemination is to show the BeAware technologies at public national and international events and initiatives in the area of energy. This activity will be coordinated with the commercial and industrial dissemination that is headed by Engineering partner (Task 7.4). Public media channels will be targeted and there will be regular press releases on the project when there are significant progress, milestones and findings.

#### 3.2.1 *BeAware project website: maintenance and updates*

The maintenance and refinement of this site is uninterrupted during the entire project.

**Task:** Task 7.2

**Success indicators:**

---

<sup>1</sup> [www.energyawareness.eu](http://www.energyawareness.eu)

Communication web site indicators – report more than 1000 accesses during the first 18 months, and 5000 for the full duration.

**Performed activities during the first 18 months:**

- Updating the project web site with new information, downloadable communication material, animated video
- From August 1<sup>st</sup> 2008 until April 30<sup>th</sup> 2010 it has been approximately 12 000 unique visitors on the BeAware web site.

### *3.2.2 Development of BeCommunity*

"The BeAware community" was originally thought of as an online community for collaborators, experts and possible users. The idea was to gain understanding of issues, problems and positive aspects of the project itself and energy conservation in general and ultimately get feedback to be used to optimize the services developed within BeAware.

However, the community has not been much visited so far, due to some obvious reasons. First and foremost, during the runtime of the project, there has been some major changes in the nature of online- communities. At the time being, when the community was originally designed, online communities usually weren't connected to standardized community profiling (such as Facebook, Twitter and Open ID). Now, such standards are pervasive in the way online communities work: by having one or a few IDs or online profiles, it is far more likely that the members will actively take part of the community, especially since the users will be reminded and take part of information from the groups and communities that he or she is part of. Today, the obvious way to go would be creating a Facebook-page that actively would be marked among its users with new topics, questions and competitions.

The BeAware project has also been reluctant to actively open the content of the project to an audience of experts and possible end users before having created something that is robust enough for public testing. With a non-working prototype, discussions tend to be focused on obvious details rather than valuable feedback. Also, early prototypes might bring negative attention to the project, since a positive first impression is important. However, testing of early prototypes are important and there has been tests throughout the project, but these sessions has been moderated with developers, and not put to display in the existing BeAware community.

Currently, a new strategy for the BeAware community is being developed. The idea is to make it working seamlessly with the existing large communities, and to find momentum in interesting content."

**Task:** Task 7.2

**Performed activities during the past 12 months:**

- We have waited with the lounge of the already designed and coded project community web site BeCommunity.
- We started a group at the already well known community LinkedIn.

- Evaluation of our work so far and discussions on how to best implement a good project community are in progress.

**Success indicators first 18 months:**

More than 20 active members.

## 4 Commercial and industrial dissemination

Commercial and industrial dissemination are aimed at B2B as well as B2C markets. In the B2B market BeAware targets players of the commercial energy market (electricity and grid companies) as well as producers of electricity-powered appliances. Targeting in B2C will, naturally, be the end consumer that is interested in saving energy in the home.

Specific dissemination material such as flyers and posters will be produced with the aim of drawing attention to the economic advantages in the medium and long term that the BeAware solutions will bring when adopted by energy providers or by producers of electricity powered appliances. The related public dissemination on general energy awareness that will draw attention to the issues will achieve two related goals: make consumers more conscious and as a consequence increase their demand for intelligent, aware appliances and services thus stimulating our B2B target players to adopt BeAware solutions.

### 4.1 Target audiences and key messages

Commercial and industrial dissemination will be aimed at B2B as well as B2C markets. This is because the results of the BeAware project may target both markets. In fact, products or services spinning off from the project may range from small appliances to be sold at consumer electronics stores to complex integrated services for energy providers. Since the B2C and B2B markets differ in terms of channels and concepts for the dissemination to be effective, commercial and industrial dissemination activities will be split and tailored to these two different realities. B2B dissemination targets will include players of the energy industry and producers of electricity powered appliances, while B2C dissemination will target end users.

### 4.2 Communication material

The communication material for the industrial dissemination is flyers, posters, presentations, demos, prototypes, and publications. The messengers will be chosen according to the channel and target. The material will be general for the whole BeAware project so that it can be used at both the industrial and public dissemination events.

**Task:** Task 7.4.

**Performed activities during the past 12 months:**

- Production of new flyer, presentations and posters. These are available to download from BeAware's website.

- Translation of one of the brochures into Italian.

### 4.3 Showcase and demo

BeAware has the goal of developing physical and virtual showcases of BeAware technologies use, components and advantages. Virtual and Physical simulation of workplaces and house environments will show the potentiality of BeAware technologies, and more generally, show everyday opportunities to save energy. These showcases will be presented in exhibitions, meeting, energy-related events and other public contexts. They will take the form of a technological and multimedia booth with BeAware mobile technologies allowing visitors to use technologies and play with simulations.

**Task:** Task 7.4.

#### **Performed activities during the past 12 months:**

BeAware has the goal of developing physical and virtual showcases of BeAware technologies use, components and advantages.

During the first year we developed the first showcase, which included an interactive demonstration of how the system “Energy Life” works. The mobile and ambient interfaces were simulated in this version. The second year we have expanded the showcase to include the real prototype of the mobile application and simulations of the ambient interface. At two different exhibitions ICT4EE, in Brussels February 2010 and at Nordbygg, in Stockholm March 2010, the visitors could by themselves try the mobile application Energy Life and see real data from one of our test environments. During next year we will expand our BeExpo to include more interactivity and also include a real version of the ambient interface.

### 4.4 Industry Exhibitions and Conferences

Contribution to industry exhibitions and conferences will be done regularly in the project. The goal of this dissemination is to show the BeAware technologies at public international events and initiatives in the area of energy. This activity will be coordinated with the commercial and industrial dissemination that is headed by Engineering partner (Task 7.4).

#### **Success indicators:**

During the first 18 months more than 3 events, and more than 6 events full duration.

#### **Performed activities during the first 12 months:**

- Interactive Institute showed BeAware’s solution Energy Life in Ericsson’s booth at the conference Metering Europe, October 6-8 in Barcelona.
- Giulio Jacucci, coordinator of BeAware, presented the BeAware project at the conference [ICT for Sustainable Homes](#), November 16-17, in Nice.
- BeAware was invited to exhibit their project at the high level event [ICT4EE in Brussels](#) February 23-24.
- BeAware was exhibited at Nordbygg, March 23-26, in Stockholm.

- Carin Torstensson, from Interactive Institute, presented BeAware at the conference Greembed 2010, April 12, in Stockholm.

## 4.5 Press

Public media channels will be targeted and there will be regular press releases on the project when there are significant progress, milestones and findings.

### **Success indicators first 18 months:**

National daily press, regional/local daily press, wide audience magazines and inserts – 3 each

On-line magazines and inserts – 5 each

Local TV-programmes - 3

### **Performed activities during the past 12 months:**

- Mention of EnergyLife during the Italian TV show ‘Universication’ (broadcasted by La7 channel) which interviewed HTLab director L. Gamberini’, national TV.
- Interview with people from UNIPD for national television show “Neapolis”, Rai3 channel, national TV.
- “Energy Savings” in the TV program Futuris, Euronews, 2010-02-12, international TV.
- ”Miljardkostnad att byta elmätare igen”, in Sveriges Radio, Ekot, 2010-03-02, national radio Sweden.
- “Viisitoista prosenttia pienempi lasku” in Helsingin Sanomat, 2010-03-14, national press Finland.
- ”Elpriset ska sänkas med smarta elnät” in Metro Teknik, 2010-03-03, national press, Sweden.
- ”Information om elförbrukning otillräcklig”, in Elektronik i Norden, 2010-03-02, trade magazine for electronics, Sweden.
- “El-informationen måste vara begriplig” in [www.klimatsmart.se](http://www.klimatsmart.se), 2010-03-02, national internet press, Sweden.
- ”BeAware Mobile Platform for Home Energy Management”, in [www.psfk.com](http://www.psfk.com), 2010-03-19, international internet site, New York. PSFK is a New York City based trends research and innovation company that publishes a daily news site, provides trends research and innovation consultancy, manages a network of freelance experts and hosts idea-generating events.