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BEEM-UP

Building Energy Efficiency for Massive market UPtake

Integrated Project

EeB-ENERGY-2010.8.1-2

Demonstration of Energy Efficiency through Retrofitting of Buildings

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Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Summary

The deliverable “D7.1 - Project web site” is a public document delivered in the context of “WP7 - Dissemination, training and showcases”. It briefly describes the BEEM-UP project website [1].

The BEEM-UP website [1] is the main communication tool, where all the dissemination materials will be published in a timely manner. Therefore the website is an interactive environment that gives access to all the aspects related to the methodologies followed and the status of the demonstration activities carried out in three sites: Paris, Alingsas and Delft.

It also provides an overview of the objectives, the partnership and the activities proposed within BEEM-UP together with a regular e-mail bulletin about the latest news and features of the project. The project results will be also an important aspect to be showed, and there is also a restricted area used as collaborative working space.

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Abbreviations

BEEM-UP	Building Energy Efficiency for Massive market UPtake
CSS	Cascading Style Sheets
E2B	Energy Efficient Buildings
ECTP	European Construction Technology Platform
HTML	Hyper Text Markup Language
ICT	Information and Communication Technology
PHP	Hypertext Pre-processor

Introduction

This document describes the BEEM-UP public website [1] from its main objectives and features to its detailed structure, giving even a brief description and justification of the main technologies chosen for its development.

Additionally a secured collaboration platform aiming at collecting in a single online and secured place all BEEM-UP related information and documents will be presented.

Chapter 1 BEEM-UP Public Website

1.1 Objectives and structure

As previously introduced, the BEEM-UP public website [1] aims at disseminating the projects objectives, progress and major achievements during its four years of project duration, in such a way that any actor involved in the field of ICT, energy efficiency, building and construction can benefit from its up to date content.

The latter objectives are covered by the main sections of the website and are summarized in Table 1 below;

Main sections	
Title	Information included
Home	Project summary and goals, link to join the BEEM-UP LinkedIn group and link to access the Restricted Area
Demonstrator	Description of each of the three demonstrators, pictures, ongoing progress and two tables summarizing the current state and the pursued state in terms of energy efficiency (see Figure 4).
Partners	Presentation of the involved partners by placing them in a European map.
Publications	Section for gathering all the publications resulting from BEEM-UP project: public deliverables, scientific publications, newsletter and dissemination material.
Links	Links to other European initiatives with objectives similar to BEEM-UP projects and to official EU websites (e.g. ECTP, E2B).
Contact	Application form to request any further information about BEEM-UP project or to submit any comment (suggestions, problems, etc...)
Other sections	
Title	Information included
Restricted Area	The restricted area is considered as an additional platform to share public and private information in a secure way; therefore it will be described in detailed in Chapter 2.

Table 1 - BEEM-UP public website structure

1.1.1 Website management

Website management is in charge of the project coordination but partners that are directly involved in the pilots have to update and improve their sections. They are responsible to add and remove information that provides a good understanding of the current status and the developed work.

1.1.2 Home section

This section includes an overall summary of the project goals, the barriers to overcome and the key points to achieve these objectives. Moreover there can be distinguished three sub-sections as depicted in Figure 1:

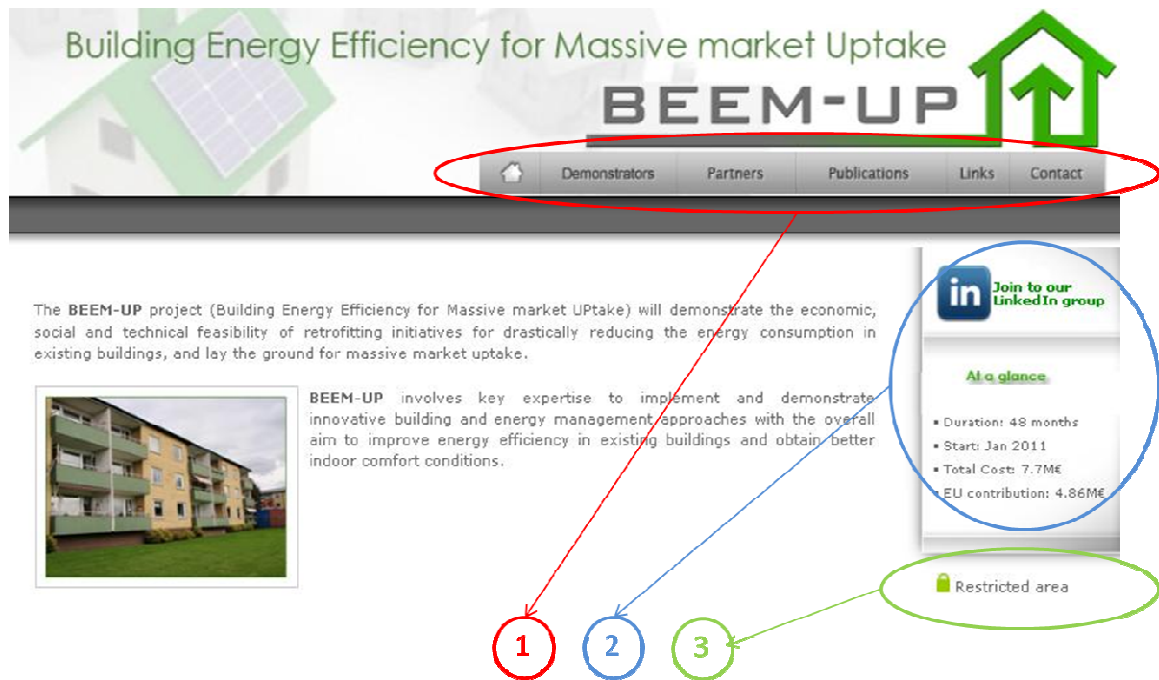


Figure 1 - BEEM-UP public website: Home page screenshot

1. Sections menu bar: this menu bar is available in all sections to allow navigating them.
2. Link towards BEEM-UP Linked-in group: There is a Linked-in group created for BEEM-UP project that any interesting part can join to know about project advances and share their experiences (see Figure 2).



Figure 2 - BEEM-UP Linked-in group screenshot

3. Link towards the Restricted area: Only users that have previously registered in the collaborative platform have access to this area by logging in (see Figure 3):



Figure 3 - User login for the Restricted Area

1.1.3 Demonstrators section

Three demonstrators have been deployed in three different European cities: Paris, Alingsas and Delft. Each of them has its own section where first there is a little description about the history of the building to be retrofitted. Then there are some pictures of the building (exteriors, location in a map, apartments distribution, etc.). See Figure 4.



The building is located in the centre of Paris, 800 m from Montparnasse train station, at the corner of Rue du Cotentin and Rue Falguière. It is composed of 87 dwellings (4,352 m² gross living area) built around 1950. In 1993, the building underwent renovation (outer insulation, double glazed windows, boilers), but it needs a major upgrade to become a pilot for bringing their housing park to the low energy standard for renovated buildings (less than 104kWh/m² for HVAC, hot water and lighting). The surrounding buildings have similar heights.



Figure 4 - BEEM-UP public website: Demonstrator in Paris screenshot (I)

There are also two comparatives tables for each demonstrator where the features regarding energy efficiency before and after the retrofitting activities are gathered (see Figure 5 and Figure 6).

Original situation

Envelope	Walls street side: concrete + 2cm sandwich insulation Walls back side : concrete + 2 cm sandwich insulation + 8 cm ETICS Basement: concrete Roof: concrete + 5cm insulation
Windows	PVC double glazing, 20 years old
Heating	2 collective gas boiler
Hot water	Individual electric boilers have been installed in 1993. Originally hot water was provided by a collective boiler located on the roof.
Ventilation system	Natural ventilation grids in the kitchen, bathroom and toilets (apparently no ventilation problems)
ICT – energy management (incl. smart meters)	None
Lighting	Regular incandescent light bulbs
Renewable Energy Source	None
Sanitary hot water	None

Figure 5 - BEEM-UP public website: Demonstrator in Paris screenshot (II)

Final Situation

Envelope	Walls street side: + 20cm ETICS EPS λ032 Walls back side : New 20cm EPS ETICS λ032 Basement: + 10 cm insulation EPS λ032 below ceiling Roof: New 10cm insulation PUR λ024 on ceiling
Windows	New PVC double glazing, U= 1,5 W/m².K
Heating	New condensing boilers for heating and warm water
Hot water	Focus on tenant behaviour and awareness-raising during and after retrofit is expected to lead to further reductions in energy consumption.
Ventilation system	New controlled mechanical ventilation
ICT – energy management (incl. smart meters)	Cost optimal control solutions (from individual solutions like chronostat, radiator zone control, meter data for individual billing, to full home automation). Exact optimum will be defined during integration with total system and specific simulation.
Lighting	All public spaces will be fitted with low-energy light systems. All tenants encouraged to switch to low-energy lighting.
Renewable Energy Source	Heat recuperation from waste water
Sanitary hot water	Focus on tenant behaviour and awareness-raising during and after retrofit is expected to lead to further reductions in energy consumption.

Figure 6 - BEEM-UP public website: Demonstrator in Paris screenshot (III)

Finally there is a subsection where the progress of the on-going activities is monthly detailed (see Figure 7).

ON GOIN

→ [March/2012](#)

March starts with two presentation evenings in a new example dwelling. Eneco has installed the solar boiler & panel there, and shows its feed-back system, although it is not connected yet. The first evening draws some 30 interested tenants that are also treated to two short films about the actual working of a solar heating system. The second evening brings 20 guests.

The tenants ask many good questions that relate to Woonbron's offer and to the technical details of the installation. Regarding the latter there are questions on over-heating of the system, actual savings, actual location of the new boiler in the houses and many people ask questions on PV-systems as well. All are answered by Eneco.

Questions to Woonbron relate to financial aspects such as rent subsidies on the rent-increase (yes it is possible), the inclusion of the rent increase in the yearly rent increase (yes it will) and so on. The most difficult question however is posed by the tenants that own their own installation and somehow want to be part of the project.

(to foreign readers: these are tenants that have installed central heating systems in their own dwelling, which is home-improvement, so usually accepted by housing associations).

Woonbron does not want to offer the solar system and add it to a private installation. Maintenance and functionality of the total system with shared ownership would pose too much headaches. Therefore Woonbron develops an alternative offer where it buys the existing installation from the tenant and improves it. After that the tenant rents the system for the same price that has been offered to the others. This method guarantees that all tenants are treated in the same way and keep the possibility of owning their own system, or step over and join/ use the Beem Up offer.

In the meantime the Board of Woonbron visits the project as well as two groups of employees. The message how the Energy Label A is reached with the added floor insulation, the new roofs, the new windows and the new installation is received with applause. End of March the first orders from tenants start coming in and are being transferred within Woonbron's internal circuit. The tenant group starts talking about a spring party, OTB starts with its analysis of the questionnaires, Woonbron investigates how the area can become greener and better lightened and Eneco starts up its workline.

- [February/2012](#)
- [January/2012](#)
- [December/2011](#)
- [November/2011](#)
- [October/2011](#)
- [September/2011](#)
- [July/2011](#)

Figure 7 - BEEM-UP public website: Demonstrator in Paris screenshot (IV)

1.1.4 Partners section

This section contains the logos of each of the different partners participating in the project that at the same time are linked to their corresponding websites (see Figure 8).

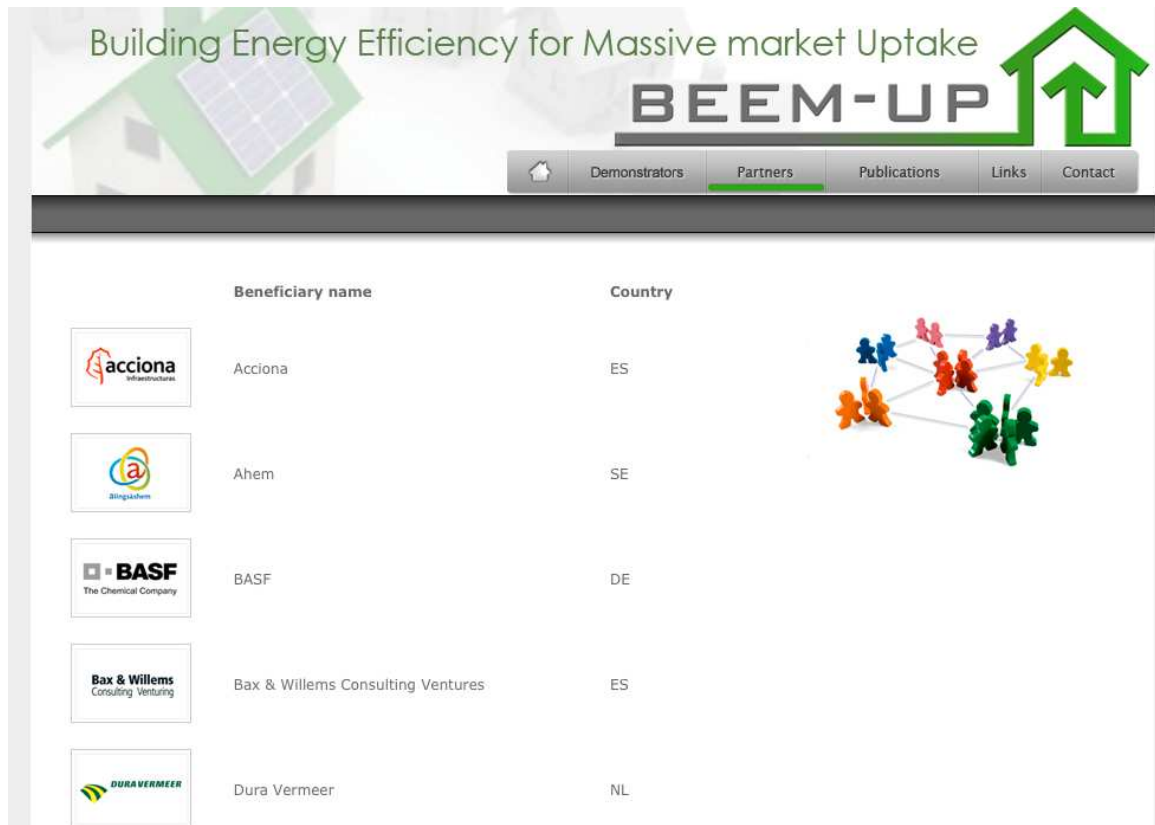


Figure 8 - BEEM-UP public website: Partners section screenshot

1.1.5 Publications section

This section is intended to contain the name and a link to the publications achieved during the project execution. Currently, there are already two publications corresponding to the dissemination material from the Swedish and French demo sites (see Figure 9).



Figure 9 - BEEM-UP public website: Publications section screenshot

1.1.6 Links section

This section gathers a set of links to other interesting on-going or/and past initiatives with similar goals as BEEM-UP project and to official EU websites (e.g. ECTP and E2B) (see Figure 10).

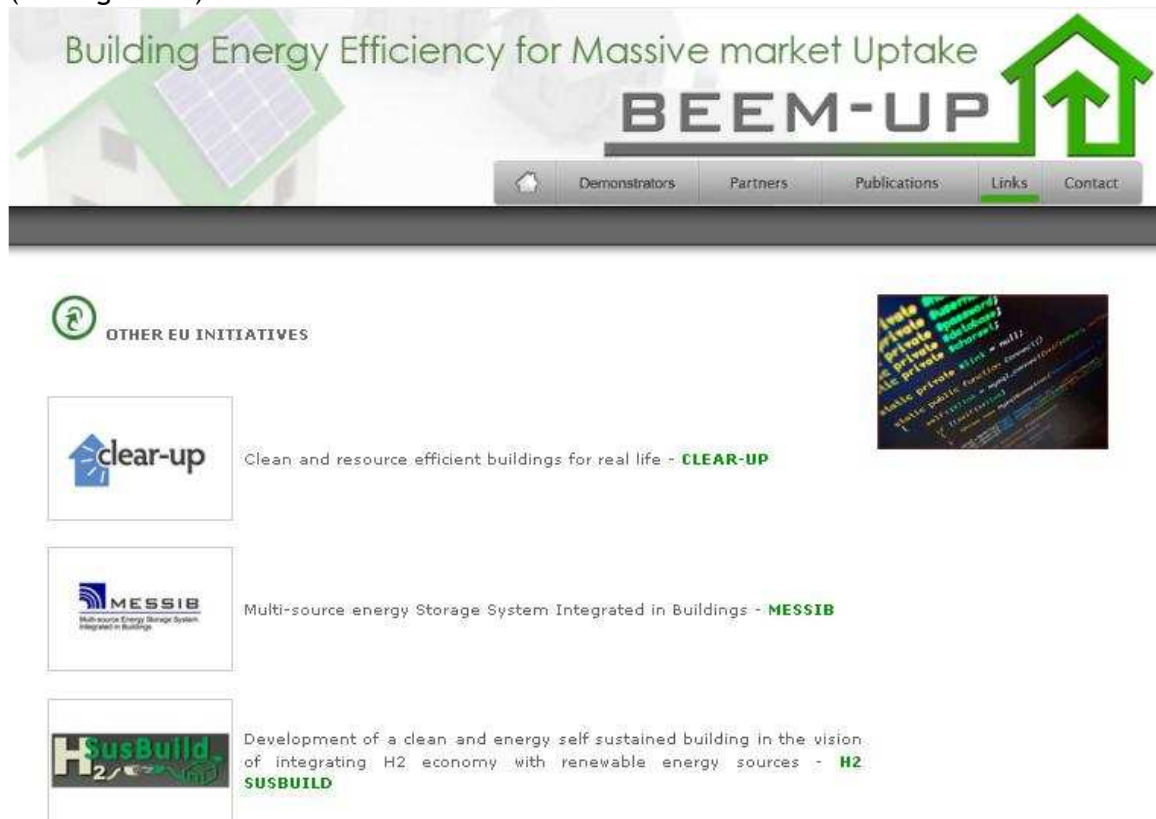
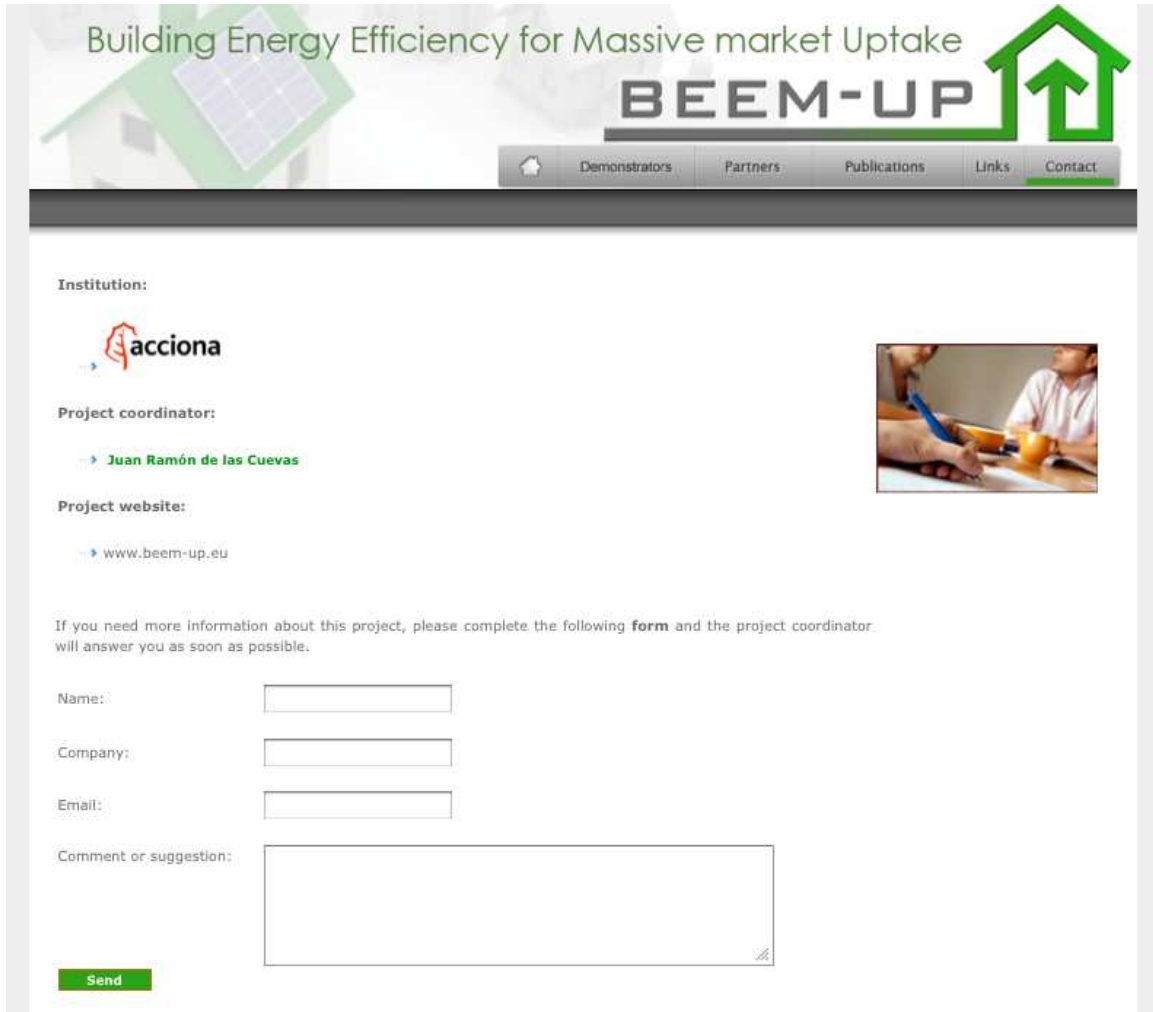


Figure 10 - BEEM-UP public website: Links section screenshot

1.1.7 Contacts section

In this section it can be found all needed information to contact the BEEM-UP project coordinator, in order to get further information about the project or to make any comment/suggestion. Additionally there is a form that allows contacting him directly from the BEEM-UP platform (see Figure 11).




Building Energy Efficiency for Massive market Uptake

BEEM-UP

Demonstrators Partners Publications Links **Contact**

Institution:



Project coordinator:

→ **Juan Ramón de las Cuevas**

Project website:

→ www.beem-up.eu

If you need more information about this project, please complete the following **form** and the project coordinator will answer you as soon as possible.

Name:

Company:

Email:

Comment or suggestion:

Send

Figure 11 - BEEM-UP public website: Contact section screenshot

1.2 Technology Used

For the development of the website, PHP v5.0 [2] programming language has been chosen for three main reasons:

- Its coding style is quite easy to understand and therefore it facilitates the maintenance of the website.
- It is strongly efficient in many platforms: Windows, Linux, UNIX, etc.
- It generates light programs that don't put strain on servers: It uses its own inbuilt memory space that decreases the workload in the servers and the processing speed is notably increased.

Apart from PHP, the following technologies were used for the website development:

- HTML (Hyper Text Markup Language): main markup language for web pages.
- CSS (Cascading Style Sheets) [3]: style sheet language used for describing the presentation semantics of a document written in a markup language.
- JavaScript: scripting language used to enable programmatic access to objects within other applications.

Regarding the Database technology, MySQL [4] was the chosen one since it is an open source, robust and fast solution. Additionally it can be easily installed in most Operating Systems.

Finally, Photoshop CS5 was used to touch up and enhance some of the pictures selected for the website.

1.3 Additional features

Although it is not part of the website development, it was detected the necessity of creating several mail distribution lists to easily address different groups of people. Hence, the distribution lists shown in Table 2 were defined in the same server where the BEEM-UP website [1] resides to respond this requisite.

Distribution List	Addressee
finadminissues@beem-up.eu	Members in charge of the Financial and Administrative issues of the Project
generalassembly@beem-up.eu	Members of the General Assembly
steeringcommittee@beem-up.eu	Members of the Steering Committee
wp1@beem-up.eu	Members of WP1
wp2@beem-up.eu	Members of WP2
wp3@beem-up.eu	Members of WP3
wp4@beem-up.eu	Members of WP4
wp5@beem-up.eu	Members of WP5
wp6@beem-up.eu	Members of WP6
wp7@beem-up.eu	Members of WP7
wp8@beem-up.eu	Members of WP8

Table 2 - Distribution Lists of BEEM-UP project

Chapter 2 BEEM-UP Restricted Area

2.1 Objectives and structure

2.1.1 User role

As it has been introduced in previous sections, the BEEM-UP website [1] is complemented by a platform whose access is restricted to people working on the project. This collaborative platform is an online place secured and with regular backup, for document sharing and exchange, whose main objective is smoothing communication among partners, avoiding at the same time e-mail flooding.

Figure 12 depicts the appearance of this tool, where two main windows can be clearly differentiated. The upper window shows a typical file explorer where all the documents are organized in folders. On the other hand, the bottom window contains a registry with the last actions committed in the platform, giving information about the last uploaded document, its path, its owner and the date.

Name	Comment	Revision	Status	Owner	Version	Issuance date
Documents (Deliverables, Templates...)		-	-	Maite Berasategi Agirre	-	-
Financial Issues (Administrative documents)		-	-	Maite Berasategi Agirre	-	-
Grant Agreement (Documents)		-	-	Maite Berasategi Agirre	-	-
WP1 (Integrated Design for Energy Optimisation)		-	-	Maite Berasategi Agirre	-	-
WP2 (Execution and supervision of retrofitting works)		-	-	Maite Berasategi Agirre	-	-
WP3 (Monitoring and Evaluation)		-	-	Maite Berasategi Agirre	-	-
WP4 (Technology innovation and Tailoring for Replication)		-	-	Maite Berasategi Agirre	-	-
WP5 (Tenant involvement for energy savings)		-	-	Maite Berasategi Agirre	-	-
WP6 (Exploitation and market replication based on green value)		-	-	Maite Berasategi Agirre	-	-
WP7 (Dissemination, training and showcases)		-	-	Maite Berasategi Agirre	-	-
WP8 (Project Management and Coordination)		-	-	Maite Berasategi Agirre	-	-
* Social photos ... ()		-	-	Rolf Basthaanssen	-	-
GUIDE OF USE				Maite Berasategi Agirre	1	

Name	Root folder	Owner	Upload Date
D5.2 Protocol of tenant involvement strategies - Version 7 - 2012-05-08.doc	Directorio raiz / WPS / Task 5.2 (Pre-retrofit analysis of tenant retrofit priorities)	Carolina Hiller	24.05.2012
D5.1 Report on Pre-occupancy analysis - version 5_2012-05-08.doc	Directorio raiz / WPS / Task 5.1 (Alignment of process for tenant involvement)	Carolina Hiller	24.05.2012
Annexe 13 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012
Annexe 12 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012
Annexe 11 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012
Annexe 10 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012
Annexe 9 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012
Annexe 8 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012
Annexe 7 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012
Annexe 6 out of 13	Directorio raiz / Documents / Swedish input to WP4 deliverables (Report and Annexes to be included in the WP4 deliverables 4.1, 4.3, 4.4)	Linda Martinsson	16.05.2012

Figure 12 - BEEM-UP Restricted Area screenshot

Below the main features available for the user role will be presented:

- Addition of documents: in order to add new documents a form with the following fields has to be filled in (see Figure 13):
 - Title

- Keywords
- Document Status
- Revision
- Issuance date
- Response date
- Expires

The screenshot shows a web form titled "Add document" with the following fields and options:

- Local file:** A text input field with a button labeled "Examinar..." to its right.
- Name:** A text input field.
- Comment:** A large text area.
- Keywords (*):** A text area.
- Related Documents:** A text area with a "New link" button below it.
- Document Status:** Radio buttons for "Not applies" (selected) and "Select Option" (with a dropdown arrow).
- Revision:** A text input field.
- Issuance date:** Radio buttons for "Not applies" (selected) and a date selector (27/1/2012).
- Response date:** Radio buttons for "Not applies" (selected) and a date selector (27/1/2012).
- Expires:** Radio buttons for "Does not expire" (selected) and a date selector (27/1/2012).
- Error getting Text: obligatory_docs_update_date (English):** Radio buttons for "Not applies" (selected) and a date selector (27/1/2012).

An "Add document" button is located at the bottom left of the form.

Figure 13 - BEEM-UP Restricted Area: form to add a document

- Editing document details: Details can be modified according to user privileges, in such a way that the Administrator can modify everything and the user will have read/write access only if he is the owner of the document (see Figure 14).

Document Information

Owner: Jose Luis Burón Martínez
Comment:
Created: 14.03.2011 - 23:33
Keywords: Directorio raiz / Deliverables / Delivered () Jose Luis Burón Martínez?*/N/A?*

Current version

Version	Revision	File	Comment	Actions	Approval
2	Set revision	D_3_1_v1.0_after_review.pdf 1.52 MB application/pdf Uploaded 07.10.2011 - 07:49 by Jose Luis Burón Martínez Does not expire		Change comment Change file associated with document Delete	Set status Set response date

Previous Versions

Version	Revision	File	Comment	Actions	Status
1	Set revision	D_3_1.pdf 2 MB application/pdf Uploaded 14.03.2011 - 23:33 by Jose Luis Burón Martínez		View detail Change comment Change file associated with document Delete	Set status Set response date

Related Documents

No related documents

Add link
Choose document:
Public: Yes No

Figure 14 - BEEM-UP Restricted Area: Document Information

1. **Set Revision:** new versions can be added with the option “Update” of the drop-down list in the page of details of the document. This functionality allows a version controlling of the documents, being able to have access to old versions if necessary.
 2. **Set Issuance date:** the issuance date is editable so that it can be a different one from the date when the document was uploaded.
 3. **Change comment, change file associated to document, delete:** these features allows editing the comments associated to a document, changing the files a document is associated to or deleting the document respectively.
 4. **Set Status, Set response date:** The status can be chosen from the next options: (submitted for revision, submitted for approval or approved). There is also the option to indicate the date when a document has been read or approved by the addressee.
 5. **Related documents:** this box allows the user creating links among documents stored in the platform.
- **Document search:** In addition to the search box that can be seen in Figure 12 it is also possible to carry out an advanced search as depicted in Figure 15. This feature is especially useful when the amount of documents stored is notably large. In these situations it is really useful being able to filter our search by different criteria (e.g. keywords, owner, folder where it is placed, date of creation, etc).

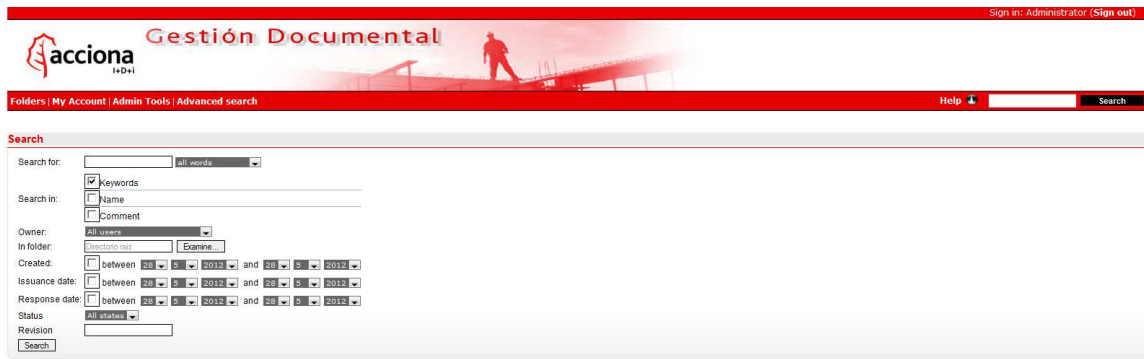


Figure 15 - BEEM-UP Restricted Area: Advanced Search screenshot

2.1.2 Administrator role

Apart from the Administrator privileges previously introduced, there exist additional features that are only available when logged as Administrator. These are the cases shown in Figure 16 where it can be seen that these features are related to users and group administration, configuration of news reports and visualization of statistics about access and use of the platform.

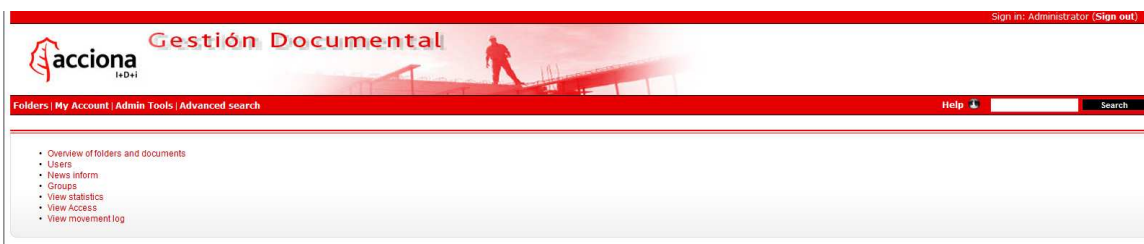


Figure 16 - BEEM-UP Restricted Area: Administrative Tools screenshot

2.2 Technology Used

The technologies selected for the development of the collaboration platform are the same as those ones chosen for the public website, since both developments aim at the same performances: stability, maintainability, interoperability and little processor workload.

Conclusions

This document presents the main characteristics and features offered by the BEEM-UP public website [1] and its collaborative platform. These tools are key elements to ensure reliable and secure exchange of information both, internally and externally to the project. Main criteria to choose the technologies were stability, maintainability, interoperability and little processor workload.

References

- [1] BEEM-UP PUBLIC WEBSITE, 2011: <http://www.beem-up.eu>.
- [2] PHP DEVELOPMENT TEAM WEBSITE: <http://www.php.net>.
- [3] CSS SPECIFICATIONS: <http://www.w3.org/Style/CSS/>
- [4] MYSQL WEBSITE: <http://www.mysql.com>.