

















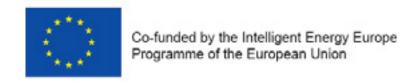
# BUILD UP SKILLS SPAIN CONSTRUYE 2020



# Intelligent Energy-Europe Programme Build Up Skills - Call 2013

Contract number:

# IEE/12/BWI/346/SI2.659665



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UILD UP Skills Spain Construye 2020 was aimed to improve the training on Energy Efficiency and Renewable Energy Systems applied to buildings, with the aim of helping to achieve the energy objectives 20/20/20.

This document explains the second stage of the project, which started in October 2013 and was based on the national Roadmap defined in spring 2013, during the first Pillar of the Build up Skills initiative.

With the support of the Intelligent Energy Europe program, the partnership has managed to put into practice several actions that had and still have a very sound impact in target groups, such as the new App "Construye 2020", the "Construye 2020" platform or the mobile route we carried out in summer 2016. Also, the sustainability of projects results is guaranteed by the introduction of the new training actions within the VET offer as well as the definition of new competencies for the National Qualification System.

As the project coordinator, we would like to thank the entities that formed the partnership FUNDAE, INCUAL, IETCC-CSIC, but specially the persons representing them, Sofía, Francisco, Ignacio and José Antonio, because without their implication and professionalism it wouldn't have been possible to achieve such good results.

Also, we would like to extend our thanks to the experts, which provide their expertise on EE and RES, core players (companies, workers, VET providers, etc.) that participated in the different planned activities and pilots, and stakeholders (public authorities, trade unions, employers' associations, etc.), which took part in the endorsement and dissemination actions, making the project a big issue and therefore maximizing its potential impact.

The project team wishes that the outputs produced are of interest and useful for all stakeholders, with the final hope that our work is helping to Build up 2020!

The BUILD UP Skills Spanish Team.

# RAINING NEEDS ON ENERGY ISSUES



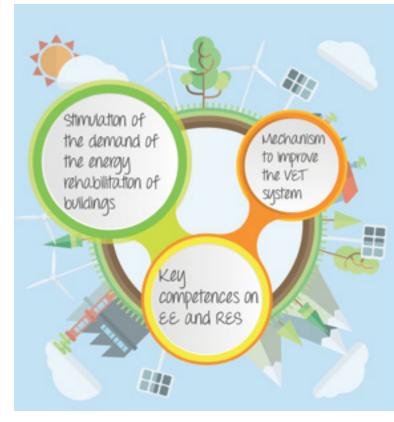
### THE NEED OF NEW SKILLS

n line with Directive 2009/28/CE (RES directive) of the European Parliament and of the Council, 23 April 2009, on the promotion of the use of energy from renewable energy sources, as well as the requirements for achieving "nearly zero-energy" buildings indicated in Directive 2010/31/EU, 19 May 2010, on the energy performance of buildings, the Spanish national strategy responded to the principle of sustainability, considered from three angles, economic efficiency, social equality and environmental quality. This strategy gives priority to actions aimed at renovating buildings.

To cover the training needs derived from the launch of the different strategies, the Spanish state has a specific legislation and several instruments, such as the Training System for Employment, which regulates vocational training for the employed and unemployed, the National System of Professional Qualifications, which is developing the National Catalogue of Qualifications, and designing the procedures to assess, acknowledge and accredit professional competences, as well as initial and formal training.

But, despite the legislation and instruments, the Build up Skills status quo<sup>1</sup> analysis stated that the VET system and the energy restoration activity needed:

- Key competences related to EE and RES such as geothermal and biomass heating installations, insulation, carpentry installation, etc.
- Implementation of some mechanisms to improve the performance of the VET system.
- Stimulation of the demand of end users of energy rehabilitation activities.



 $<sup>^{\</sup>mathrm{1}}$  Developed under BUILD UP SKILLS SPAIN PILLAR I

The construye 2020 initiative has tackled with the issues above, putting into motion a good bunch of the actions set up in the bus roadmap, with the final aim of contributing to attain 20-20-20 targets and to address the training needs detected during pillar I.









# A SOUND PARTNERSHIP



LABOUR FOUNDATION FOR CONSTRUCTION (FLC)

Paritarian non-profit foundation that provides training for construction workers at a national scope.



NATIONAL INSTITUTE OF QUALIFICATIONS - MINIS-TRY OF EDUCATION (INCUAL)

National Public Authority in charge of developing professional qualifications.



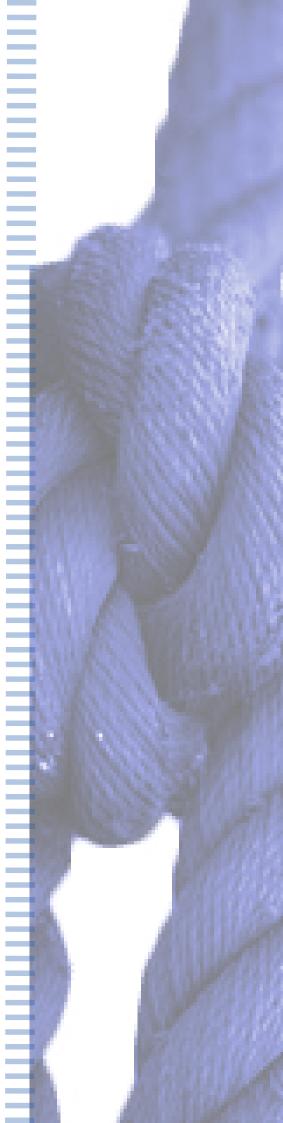
NATIONAL RESEARCH COUNCIL (CSIC)

Multidisciplinary public reserarch organization.



TRIPARTITE FOUNDA-TION FOR TRAINING FOR EMPLOYMENT (FUNDAE)

National public entity in charge of managing permanent training.





# NATIONAL BACKGROUND ON ENERGY AND TRAINING

## IMPROVING THE ENERGY PERFORMANCE OF BUILDINGS

he Spanish national strategy responded to the principle of sustainability, considered from three angles, economic efficiency, social equality and environmental quality, giving priority, at the present time, to actions aimed at renovating buildings, improving urban spaces and territorial cohesion, as the existing buildings are the ones that contribute the most to energy expenditure and it is foreseen that a lot less new buildings will be constructed than in the previous economic cycle.

Given that the building sector has traditionally been orientated in Spain towards the construction of new buildings, especially insofar as the residential sector is concerned, the policy development of strategies aimed at the restoration of buildings is much less important than that of strategies related to new construction. These strategies are materialized in:

economy efficiency, **Social** equality and envronmental quality

- Improvement of the existing urban fabric in order to improve the environmental quality and reduce energy consumption and CO2 emissions.
- Improvement of the energy performance of the building stock.
- © Establishment of minimum energy performance in new buildings and in those that undergo major reforms, evidencing this by means of energy efficiency label.







# VOCATIONAL EDUCATION AND TRAINING AVAILABLE TO DEAL WITH ENERGY ISSUES

Vocational Training is currently regulated by Organic Law 5/2002 (19 June), on Qualifications and Vocational Training, and by Organic Law 2/2006 on Education, which develops Vocational Training within the Education system and the Organic Law 8/2013, (9 December) for improving the quality of the education. Besides, the Law 30/2015, (9 September) regulates in particular the training for employment system.

Therefore, it aims to develop a comprehensive system for vocational training, qualifications and accreditation, which respond efficiently and transparently to the social and economic demands, adapting to the different personal and professional expectations and situations.

THE LEGISLATION
ABOUT EDUCATION
TRIES TO INTEGRATE:

VET AND
QUALIFICATIONS SYSTEM

CERTIFICATION
AND
ACCREDITATION

DIFFERENT
EDUCATION
OFFERS

LIFE- LONG
LEARNING



### **VOCATIONAL TRAIN**ING QUALIFICATIONS

THEORIC AND PRACTICAL CONTENT +
TRAINING MODULE
IN WORK CENTRES

Professional training in the educational system consists of a combination of training cycles organised into professional modules of a variable length and with theoretic and practical content, suitable for various professional fields including a training module in work centres.

Training cycles are mid-grade and higher-grade and are referred to the National Catalogue of Professional Qualifications. The curriculum of this training is adjusted to the demands derived from the NQTS.

### CERTIFICATES OF PROFESSIONAL STANDARDS

Certificates of professional standards consist of training courses aimed at the gaining and improvement of professional skills and qualifications. Training aimed at obtaining certificates of professional standards is carried out in a modular manner with the aim of favouring partial accreditation which can be accumulated which allows the worker to advance in their vocational training program regardless of their working situation at any given moment...

Each professional certificate accredits a professional qualification from the NQC. Professional certificate training modules are those in the Vocational Training Modular Catalogue.

### PERMANENT TRAINING

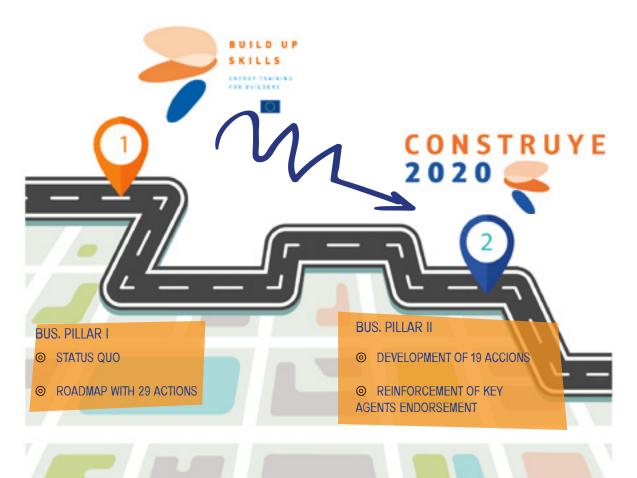
Apart from official paths there is a permanent or continuous training offer that is organized around training programs proposed annually by social agents, which is launched every year.





# FROM BUILD UP SKILLS SPAIN TO "CONSTRUYE 2020"

he outputs developed during the "Construye 2020" project were based on the roadmap defined during the Pillar I of the initiative.



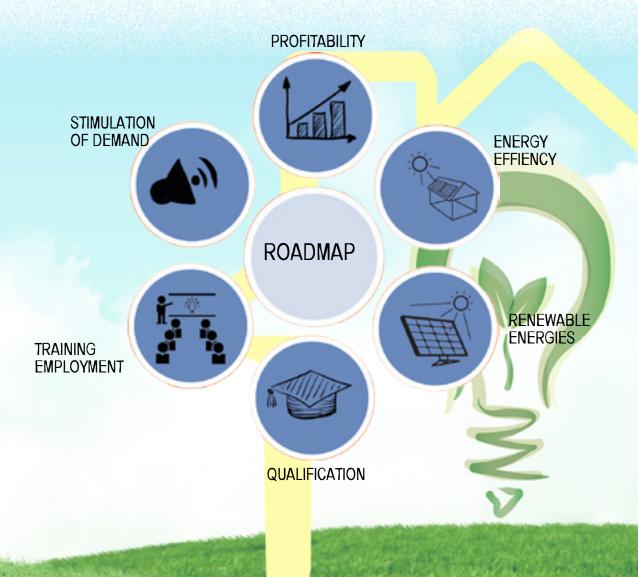
# FROM BUILD UP SKILLS SPAIN TO "CONSTRUYE 2020"

29 actions were defined and 19 out of them were developed during Pillar II.

- The roadmap was based on 6 core axis:
- O Profitability of Energy Efficiency measures.
- Training actions related to the improvement of energy efficiency of buildings.
- $\odot$  Training actions related to the installation of renewable energies in buildings .



- Actions aimed to introduce energy efficiency criteria in qualifications catalogue.
- Actions aimed to improve the VET system.
- Actions aimed to stimulate the demand of energy rehabilitation of buildings.



Also, the "Construye 2020" project reinforced the endorsement of key agents to project outcomes, as can be shown on the following video:





## **VERY AMBITIOUS OBJETIVES**

#### GENERAL OBJETIVE

To provide building workers in Spain with the competences and skills required in the fields of Energy Efficiency (EE) and Renewable Energy Systems (RES) in order to contribute to achieve 2020 energy objectives.

### Specific objetives

- To develop training schemes that have been prioritized in the roadmap, in order to be put into motion by training centers and building companies:
- ⊚ To improve the design of the existing qualifications as well as associated training. It aims to incorporate key competences considered as necessary in the field of EE and RES in those current qualifications related to the achievement of 2020 goals. It also aims to design the training contents of each new competence and to adapt professional certificates already available to on-line modality.
- To develop those mechanisms identified on the roadmap in order to improve the Vocational Education and Training Spanish system.
- ⊚ To inform and to raise awareness of users of buildings in order to incentivize demand of restoration activities in the EE and RES field.
- To design and plan the communication actions that will be carried out during the implementation of the whole project.
- To monitor and evaluate systematically the quality of the project, in a planned and systematic way, counting on the participation of all the partners.





# NEW TRAINING ACTIONS AND DIDDACTICAL RESOURCES TO DEAL WITH TRAINING NEEDS

### ADAPTED TRAINING COURSES

9 new training courses have been worked out that match with the training needs detected during BUS Pillar I: 9 New TRAINING COURSES

- PROFITABILITY IN EE
- O INSULATION
- ALUMINIUM AND PVC CARPENTRY
- MEATING AND AIR CONDITIONING
- ENERGY EFFICIENCY IN BUILDINGS
- RENEWABLE ENERGIES IN BUILDINGS
- GEOTHERMAL ENERGY INSTALLATIONS
- BIOMASS ENERGY INSTALLATIONS

. . . .

http://construye2020,eu/construye2020/descargas

# **INNOVATIVE DIDACTICAL RESOURCES**

One of the best results achieved by Construye 2020 project was the implementation and launching of an APP on good practices on EE that includes valuable information for energy renovation such as insulation, energy efficiency, installations, etc.







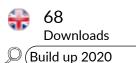


AVAILABLE:









### DIDACTIC GUIDES FOR TRAINER AND TRAINEE

### BY TRAINING ACTION.

In order to facilitate the teaching and learning, the project has produced a didactic guide for each training action that gathered all the key information to provide the course.

# **B** training Manuals **available**

### **C**ONTENTS MANUAL BY TRAINING ACTION

8 training manuals are now available to provide the new training actions:

The contents are adapted to blue collar workers, so they have lots of pictures, diagrams, photos, and so on and little wording.

These manuals are offered for free on the following link:



http://construye2020.eu/plataformasobre-formacion-profesional/recursosde-formacion







### MULTIMEDIA RESOURCES TO LEARN ABOUT **EE**

### AND RES

### Webinars

Two open webinar are available on the project website that aim to support face-to-face training actions and foster self-learning:

### Good practices on energy rehabilitation

Based on the contents from the App explained above, a shorter version thereof was produced for PC

Link I Link II Good practices on Energy Efficiency in energy rehabilitation **Buildings** of buildings

Link

Good practices on energy rehabilitation

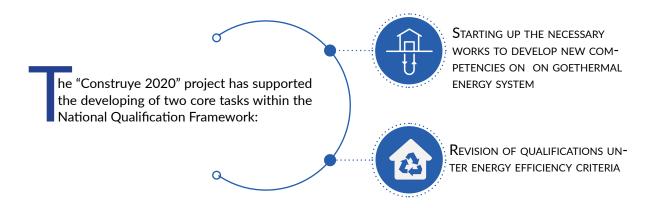
# TESTING THE NEW PRODUCTS: PILOT TRIALS

25 courses were carried out with a participation of 429 trainees for more than 1.400 hours of training. It is noteworthy that five of these courses were funded by the project, while the rest 20 were financied by national funds, concretely by the National VET Plan for Permanent Training for Employment.

# 25 COURSES



# UPGRADING EXISTING QUALIFICATIONS



Also, several contents related to professional certificates were adapted to e-learning modality, with the aim of starting to provide the theoretical part of the training throughout this mean.

This on-line materials can be found on the following link:https://www.campusfundacion.org

Usuario: EASME

Contraseña: Construye2020

# SETTING UP MECHANISMS AND TOOLS TO ENHANCE THE VET SYSTEM

A good bunch of actions were launched to hone the Spanish VET system:





# SECTORIAL OBSERVATORY OF TRAINING NEEDS

The project has put into motion a permanent observatory that aimed to anticipate changes in the labor market and related training needs, allowing that way to adjust the qualifications and training thereof.

That way, the building sector would be eventually able to count on skilled workers well in advance to match real market demands. The observatory was composed of two tools



### ON-LINE SURVEY

The on-line survey is a complete questionnaire prepared to gather information with regard to training needs of companies from the construction sector, but also others aspects such as the utility of the training already provided, demand of new occupations, innovation, new labor contracts, etc.

### STATISTICS VISOR

The on-line survey was answered by some 400 companies. The key results are shown on the statistics visor, which displays the most important features and figures from the survey.

The observatory can be found by clicking on the following link:

http://construye2020.eu/observatorio-necesidades/formularios/lorem-ipsum

### A NEW TRAINING PLATFORM TO INFORM STAKEHOLDERS

### WHAT COURSE DO I NEED?

The roadmap came up with the conclusion that there are lots of webs that provide information and documentation about VET training courses, but most of them give vague and fragmented information, being really difficult to find out the course that the user is interested in. On top of all this, there are not webs specialized in informing exclusively about training related to energy topic.

For that reason, the project has implemented an on-line platform about the training available related to EE and RES topics.

Thus, the VET platform contains a complete browser to guide the user in the selection of the most suitable VET course for him/her:

http://construye2020.eu/plataformasobre-formacion-profesional/que-cursonecesito

- \*Access requirements
- \*Objectives
- \*Career opportunities
- \*Availability of the course



TRAINING **RESOURCES** 

- Webinars
- App Construye 2020
- Didactic manuals

What course © DO I NEED?

- Browser
- Detailed Information

# INFORMATION ABOUT ENERGY ISSUES FROM DIFFERENT POINTS OF VIEW

Several activities were launched to provide information about energy issues:



http://construye2020.eu/informacion-sobre-ee-eerr/buenas-practicas-enrehabilitacion



GOOD **PRACTICES** 

- Webinars
- Useful tips on EE
- What do you know about EE?
- Construyeficiente tool

TECHNICAL DOCUMEN-**TATION** 

- Guides
- O Legislation
- Tools

LINKS

- Energie agencies
- Associations
- Energiy bodies

# GOOD PRACTICES ON ENERGY REHABILITATION OF BUILDINGS

This section contains open webinars on EE as well as useful tips about energy topics. Also, there is an on-line tool that help users to valorize their knowledge about Energy Efficiency.

In addition to this, it is now available on-line the www.construyeficiente.com tool, a consultative service that put into contact potential clients, who are willing to undertake an energy renovation, and building companies. It is noteworthy that the system allows to simulate accurately the energy performance of a given building, providing data such as energy consumption and CO2 emissions that may help users to make a decision.

### TECHNICAL DOCUMENTATION FOR STAKEHOL-DERS

Technical guides, legislation and tools of interest for different stakeholders.

**U**SEFUL LINKS

List of key links related to energy issues: Energy agencies and bodies, associations, etc.



# CONSTRUYE 2020 FORUM. AN ONLINE SPACE TO MAKE ENERGY CONSULTATIONS

The project has created a specialized on-line forum on EE and RES. This communication tool is flexible and open to any sort of participant (workers, stakeholders, experts, etc.), on which they could ask any question related to EE and RES applied to buildings and/or share practical and technical information. Technicians from FLC answer off-line any question related to energy topics. http://foro.construye2020.eu/



# ENDORSEMENT AND DISSEMINATION

## STAKEHOLDERS ENDORSE CONSTRUYE 2020 INITIATIVE

The project got the direct endorsement of 121 different stakeholders such as councils, Autonomous Communities, VET public entities, companies, workers, employers' associations, trade unions, etc., which clearly y show that "Construye 2020" was deemed as a really important and valuable initiative by key actors.

## SEMINARS TO INFORM AND GET ENDORSEMENT

The partnership carried out three endorsement seminars during project lifetime, which had a very sound success

The first seminar was held in Valencia in September 2014 and counted on the attendance of 78 participants (70 in the venue and 8 more from different countries on-line). During this seminar AIDICO mainly introduced the project to different kinds of stakeholders.

The second one took place in Madrid in March 2015. The seminar gathered 120 stakeholders coming from different fields: energy, education, construction, etc. This seminar was particularly devoted to present the new App "Construye" 2020

The last one was organized in Madrid in December 2015. In this case, we summoned 102 attendees mainly from public bodies. The seminar was devoted to present the new didactic materials created, the pilot experiences carried out and the first draft of the new "Construye 2020" platform.







# THE SUSTAINABILITY OF PROJECT OUTCOMES IS GUARANTEED

It is noteworthy to highlight that best endorsement to project outcomes was the integration of the new training actions within the National Reference Plan for Training for Employment. This plan is directly managed by the Ministry of Labour and FUNDAE, and serves as the basic reference to work out the permanent training offer for the construction industry

# SOUND IMPACT OF DISSEMINATION ACTIVITIES

The project has had a massive dissemination with more than 250 news published in different media. It is noteworthy the publication of "Construye 2020" project in really relevant general press such as El Mundo, La Vanguardia and 20 minutos, and specialized press such as Obras Urbanas, Construnario or Idealista. Further information in this respect can be found in the following link:

http://construye2020.eu/construye2020/actualidad/noticia/difusion-build-up

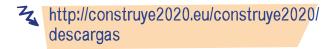


## BUILD UP SKILLS CONSTRUYE 2020: INFORMATION CAMPAIGN

We produced two products to inform about project results:

- Poster construye 2020

This items are available on:



# THE ENERGY UNIT. THE CONSTRUYE 2020 MOBILE CAMPAIGN

The Construye 2020 mobile consisted in a customized small truck that visited during almost two months several Spanish cities, with the aim of:

INFORMING CITIZENS ABOUT GOOD PRACTICES ON ENERGY REHABILITATION OF BUILDINGS AND ADVICES TO IMPROVE THE ENERGY EFFIENCY.

INFORMING BUILDINGS WORKERS ABOUT TRAINING SCHEMES TO UPGRADE THEIR SKILLS ON EE AND RES

POSTER: "Good practices on energy rehabilitation"

BROCHURE: "Advices to improve energy efficiency of dwellings"

LEAFLET: "Construye 2020 training"

Direct guidance and counselling

All this material can be downloaded on the following link:



As the graph below shows, the "Construye 2020" route was really successful:

"CONSTRUYE 2020" ROUTE Was Really **SUCCESFUL** 

Further information about the Construye 2020 route can be found on the following link:

http://microsites.fundacionlaboral.org/ruta-construye-2020?pag=3&idioma=0 **170 NEWS** 105 MEDIA myoconstruyozaza zy tú? +2000 **ADHESIONS** 15 **CITIES** #yocon 100 **ENDORSEMENTS** 

# PROJECT CULMINATION: THE FINAL DIFFUSION DAY

The final dissemination day was held in Madrid in the Official College of Architects of Madrid (COAM), located in Calle de Hortaleza, 63 (28004). The event was organized as a part of the "Architecture week", a yearly well-known set of conferences and others activities related to architectural issues.

This final event of the project had a sound impact on stakeholders and media.



120 ATTENDEES







1 RADIO INTERVIEW



TRENDING TOPIC IN TWITTER IN SPAIN



# LESSONS LEARNT AND SUCCESS STORIES

# LESSONS LEARNT

- can highlight three main lessons learnt during the execution of the
- Importance of the ICT to divulgate and raise awareness regarding EE and RES solutions. Also, it is really important to foster the delivering of courses on-line as well as to produce new media training resources.
- It is absolutely necessary to reach the final users by providing them basic information and general concepts regarding EE and RES solutions in order to stimulate the market demand.
- It is necessary to trigger and finance training programs on EE and RES at national level.

# SUCCESS STORIES

Generally, we can conclude that the project has been highly successful, but the following graph shows the most success stories:

2.300

25 courses 429 trainees 1.400 hours of training

APP CONSTRUYE 2020

15 cities

+2.00 adhesions

100 endorsements

**170** news

105 media

Apart from the figures shown above, it is noteworthy that two training actions has been provided internationally, for two groups of young trainees from Italy and France participating in ERASMUS+ mobility projects were trained by these BUS training courses:

- Mobility Project Erasmus+. CEAP Centro Edile Andrea Pallacio. 20 trainees from May 23rd to 27th. "Aluminum and PVC carpentry".
- Mobility Project Erasmus+.CCCA-BTP Comité de concertation et de coordination de l'apprentissage du bâtiment et des travaux publics. 12 trainees from June 13th to 17th. "Insulation".



Also, we can deem as a success story the creation of the "Construye 2020" platform that counts on two line of actions::

ENCOURANGING END USERS DE-MAND

Training needs observatory

Platform about professional training

Information on EE and RES

"Construye efficiente" tool

All of these new tools are success stories themselves for their innovative approach, but it is worth to mention the tool www.construyeficiente.com, a system that put in contact end users that are willing to start up an energy rehabilitation of their dwellings and building companies. The final aim is to increase the demand of building refurbishment.

INCREASE THE DEMAND OF BUILDING REFURBISHMENT.



