GOBIERNO DE ESPAÑA
MINISTERIO DE HACIENDA
SECRETARÍA DE ESTADO DE PRESUPUESTOS Y GASTOS
DIRECCIÓN GENERAL DE FONDOS EUROPEOS

Generalitat de Catalunya

UNIÓN EUROPEA

Una manera de hacer Europa

BUENAS PRÁCTICAS
Actuaciones Cofinanciadas

"IOTICAT - Internet of Things Institute of Catalonia"
Fundació Privada Universitat i Tecnologia (FUNITEC)

Programa Operativo de Cataluña

Año 2019

Fondo Europeo de Desarrollo Regional

The "IOTICAT - Internet of Things Institute of Catalonia" project of the Fundació Privada Universitat i Tecnologia (FUNITEC) is presented as Best Practice.

The project consists of the construction of the new IOTICAT - Internet of Things Institute of Catalonia laboratory, with the architectural actions and facilities necessary for the transformation of a 2,000 square meter space, situated in the building where the residence is located, in La Salle Campus Barcelona- Ramon Llull University (URL), for research, technology-based innovation and promotion of talent and entrepreneurship.

This is the first European R&D laboratory in which everything related to the interaction of people with the social and technological changes of their environment will be worked on, with a focus on the Internet of Things (digital interconnection of everyday objects with the Internet) and, by evolution, on the Internet of the Future. The space, being operational from 2020, will be adapted to design, prototype and scale tomorrow's products and services to bring society and business, as well as students and teachers, closer to the new realities and needs of the society of the future.

The project will have a total cost of 3,064,773 € and an eligible cost of 2,030,545 €, and an ERDF grant of 1,015,272 € (ERDF co-financing 50% of the project).

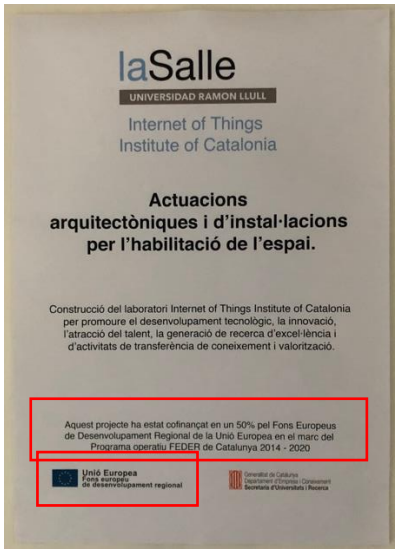
The new laboratory will allow the recruitment of 10 new researchers (4 men and 6 women) who will join the staff to reach a total of 46 researchers who will work in the facilities. In addition, the number of companies or institutions cooperating with the center will be increased and the scope of the center’s research lines will be broadened, in order to make it a cross-sectional activity with the ICT, Health and Smart Cities sector.

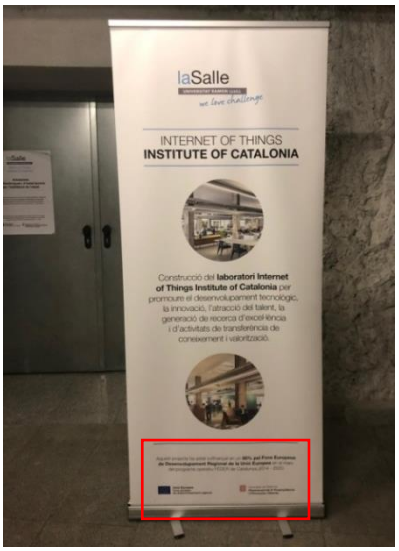
This operation is presented as Best Practice because it meets the following criteria:

1. **High dissemination among beneficiaries, potential beneficiaries and the general public**

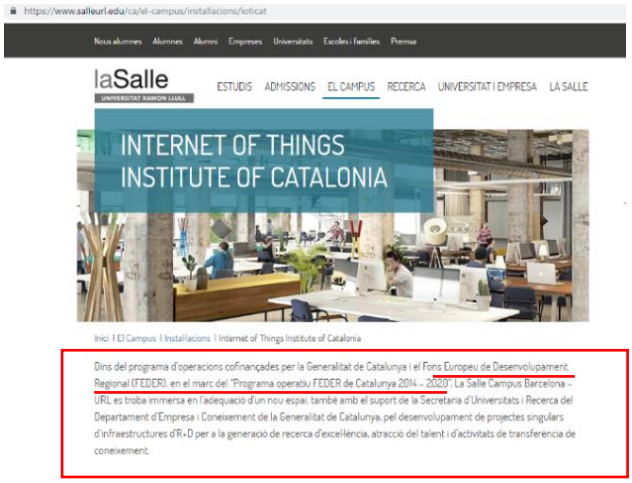
The communication actions associated with the execution of this operation are as follows:

- **Signs** to visualize the architectural adaptation works, located in the accesses of the new laboratory.





- **Specific website for the project**: https://www.salleurl.edu/ca/el-campus/installacions/ioticat which details the project and highlights the ERDF co-financing.



- **Media**: reputable newspapers talked about the new laboratory in its printed version (La Vanguardia, El Mundo, Expansión) as well as in online media. It is worth mentioning the report on the co-financed project in Sociedad Digital, the special edition from La Vanguardia.
  https://www.pressreader.com/spain/la-vanguardia/20170918/282870845992007

LA SALLE-UNIVERSITAT RAMON LLULL

Laboratori europeu de la internet de les coses

La Salle-Universitat Ramon Llull acollirà el primer laboratori universitari europeu sobre investigació de la internet de les coses, l'Ioticat (Internet of Things Institut of Catalonia). Les obres de condicionament del nou laboratori costaran 3 milions d'euros i serà operatiu a partir del 2020. El projecte està cofinançat pel Fons Europeu de Desenvolupament Regional. / Redacció

El laboratori estarà llest el 2020

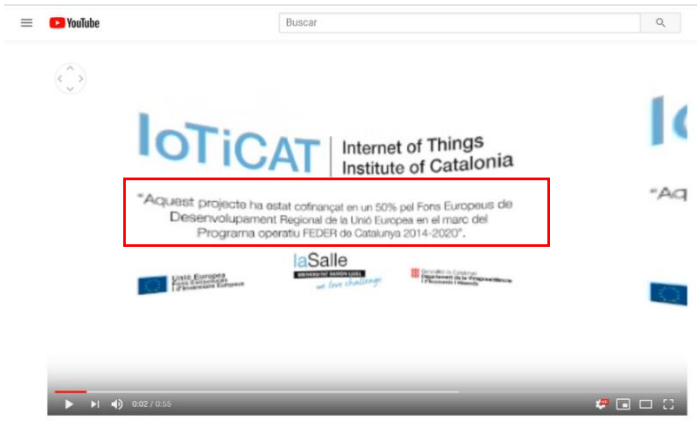
La Salle, Universitat per formar als líders de la societat digital

LA SALLE CAMPUS BARCELONA - UNIVERSITAT RAMON LLULL

En marxa el primer laboratori universitari europeu d'innovació i recerca sobre la Internet del futur

- **Calls for public presentation events** such as the ceremony to lay the first stone, the visit of the Secretary of Universities and Research of the Generalitat de Catalunya or the Agency for Competitiveness of Enterprise (ACCIÓ), visits of collaborating centers (such as the ESAN university in Peru) and companies. In all these public presentation events, a visit to the laboratory works was made and as well as a description of the project with personalized power point presentations with the presence of EU logos and information on the ERDF program.

- The [video presentation] **of the new laboratory spaces** also includes a reference to ERDF co-financing.



La Salle-URL | IOTICAT, Laboratorio Internet of Things

2. Incorporation of innovative elements

The "Internet of Things Institute of Catalonia" project was presented as a singular project, as "the first European university laboratory for innovation and research on the Internet of Things and its evolution towards the Internet of the future".

On the other hand, in order to improve the innovation ecosystem, and linked to the Research and Innovation Strategy for Intelligent Specialization in Catalonia (RIS3CAT), the project focuses on actions that directly affect the quality of the innovation environment, such as support for projects in the areas of smart city and smart region, improvement of connectivity between the innovation agents and entrepreneurial ecosystem, promotion of innovation related to new social, organizational process or access challenges to new markets, promotion of actions that bring the educational system closer to the needs of the production network, etc. In this sense, and among others, explicit actions will be carried out for the application of the Internet of Things in Cities (Smart City) and Territory (SmartRural), coordinating and actively participating in the dialogue with City Councils, Provincial Councils and the Government of Catalonia (SmartCAT) and promoting entrepreneurship by facilitating access to the market.

3. Adequacy of the results obtained from the operation to the established objectives

With the construction of the IOTICAT laboratory - Internet of Things Institute of Catalonia, the initially planned objective of developing the necessary facilities will be achieved with the transformation of the 2,000 square meters available in the building where the Campus residence is located. The main objective is to provide it with the necessary spaces to improve research, innovation and promotion of talent and entrepreneurship. ERDF support was needed to overcome the "classic laboratory" space to incorporate the technological aspects, the people and the habitats created by the new forms of interaction, and to adapt new spaces for interdisciplinary collaboration between researcher profiles from different disciplines to generate university-company commitment and to increase cohesive creativity among the fields of knowledge of La Salle Campus Barcelona - URL.

The new immersive research spaces allow working as a team alongside all interest groups to develop the necessary collaboration processes to respond to the challenges posed, with the aim of structuring a living space that contributes to the transformation of society. Among these spaces, the *Ágora* (as a social meeting space), the *Creativity Room* (as a space intended to foster creativity and the exchange of information where challenges from the imagination and creativity are addressed), the *Maker Space* (as a workspace designed to provide tools to the community of Architecture, Management and Engineering researchers together with designers, inventors and entrepreneurs so that they can develop projects to promote participatory development, facilitate interdisciplinary learning and promote co-creation activities) and the *City Lab* (as a space for the assembly and testing of the technologies that are developed; the demonstration space in which the work carried out within the final phase of any project: valorization is displayed).

4. Contribution to the resolution of a regional problem or weakness

In recent years, La Salle Campus Barcelona - URL (Ramon Llull University) has identified the need to create interdisciplinary research groups to facilitate innovation and development of new products or a business and entrepreneurship model, all requiring a component of structured design and creativity.

The lack of clear spaces for cooperation such as those proposed in the project's *Creativity Room*, the *Makerspace* and the *CityLab*, has led to the loss of good opportunities to offer a better service from the University to society.

One of the examples that requires a unified vision of solutions (integrating Engineering, Architecture and Management) are the technologies and systems that allow presence detection - **Ambient Intelligence**, for example, in mobility projects in the city to make it more sustainable. The project will also be useful for making every day vital processes become intelligent.

In the field of **robotics**, the existence of new spaces will improve research and offer the possibility of carrying out field tests close enough to reality.

Finally, there is the will to delve into all those aspects that make **Mediterranean architecture** (and especially Barcelona) a compact, sustainable and intelligent city model.

5. Coverage rate of the target population

According to the United Nations, 50% of the population resides in the city, and this percentage will grow to 75%, reaching 9 billion inhabitants. This global growth that cities will have in the coming years will mean doubling their current size. This means building a city equivalent to the entire London metropolitan area every month until 2050. The city is and will be an undeniable field of interest. It also points out that the greatest growth will take place in medium-sized cities (similar to Barcelona) and highlights the importance that governments, public and private institutions and, above all, the professionals involved, are aware of their opportunity and responsibility in making this growth a value of social equity and improving the quality of life of their citizens.

As the first application of the research to be carried out in the laboratory, the CityLab is intended to be used as a space that facilitates an innovative urban, scalable modelling approach, that works as an integrating of intelligent technology, to demonstrate the different conceptualizations of the super island concept. In this sense, the impact of the planned actions will be very important for the Catalan population as a whole.

6. Compliance with horizontal principles (sustainable development, equality between men and women and the principle of non-discrimination) and environmental regulations

In relation to policies for the integration of persons with disabilities, La Salle Campus Barcelona - URL has a campus accessible to their students, teachers, administration and service personnel and researchers in compliance with the obligations resulting from the legislation in force.

In reference to the non-discrimination policies based on sex, the university has ensured that in an environment so traditionally massified by the male gender, as in Engineering and Architecture, the volume of women workers and collaborators is not only enhanced but very significant. In this sense, it adheres to the non-discrimination policies based on sex established by the European Charter for Researchers in all European R&D projects in which it participates. Furthermore, it has developed important projects to assess the situation of women in these environment settings. Through La Salle School of Engineering and Architecture, in collaboration with the private sector, has elaborated the first part of a study that aims to show what the ICT woman is like, how she lives and how she feels valued by her environment. It also actively participates in the Commissions of the Observatory for equality of the Ramon Llull University, which is responsible for drawing up the proposals of the action plan for equality at the University and is in charge of carrying out the studies and managing the website as an instrument for information and debate.

With regard to the sustainability of the project, it carries out several actions aimed at the elimination and replacement of non-sustainable materials (such as plastic) and initiatives related to energy efficiency in buildings (efficient use of resources and green economy). Thus, for example, the knowledge of the Internet of Things applied to buildings (home automation) and the design of more energy efficient buildings will be explored.

7. Synergies with other policies or instruments of public intervention

The project and the beginning of its activity on Campus will reinforce the current actions of La Salle Campus Barcelona - URL in the areas of research, innovation, teaching, relationships, etc. On the one hand, it will contribute to the expansion and consolidation of the network of regional, national and European collaborators and, on the other hand, it will increase the capacity to participate in new projects, also in those that receive public funds and in which other universities, companies and agents involved participate.

It should also be noted that it is aligned with the strategic objectives of the Research and Innovation Strategy for Intelligent Specialization in Catalonia (RIS3CAT), contributing to the

commitment to Applied Research, Innovation and Transfer to the business sector, promoting collaborations and projects with companies that transform society and the well-being of the country (R&D as an engine of economic growth).

In addition, the project allows to strengthen, integrate and systematize the process of transfer and assessment of the research that is carried out in the six recognized Research Groups of La Salle Campus Barcelona - URL, as a vehicle instrument. The project will develop prototypes and pilots that will later be implemented in spaces where the impact of the solutions can be evaluated. It is the Quadruple Helix system (R&D system, companies, public administrations and innovation users) and public-private collaboration.

The main objective of uniting the fields of Engineering, Architecture, Management and Animation is to be able to take multidisciplinary projects of greater scope and with added value. (Critical Mass).

La Salle R&D has a clear vocation for internationalization through active participation in H2020 projects and technological platforms. To the extent that this internationalization takes place, it can also allow Catalan companies, hand in hand with the IOTICAT project, to carry out this internationalization process. In this sense, interrelationships in the different phases of valorization will be promoted, especially the pilots' validations of the international scalability developed in Barcelona (International Competitive Advantage).

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