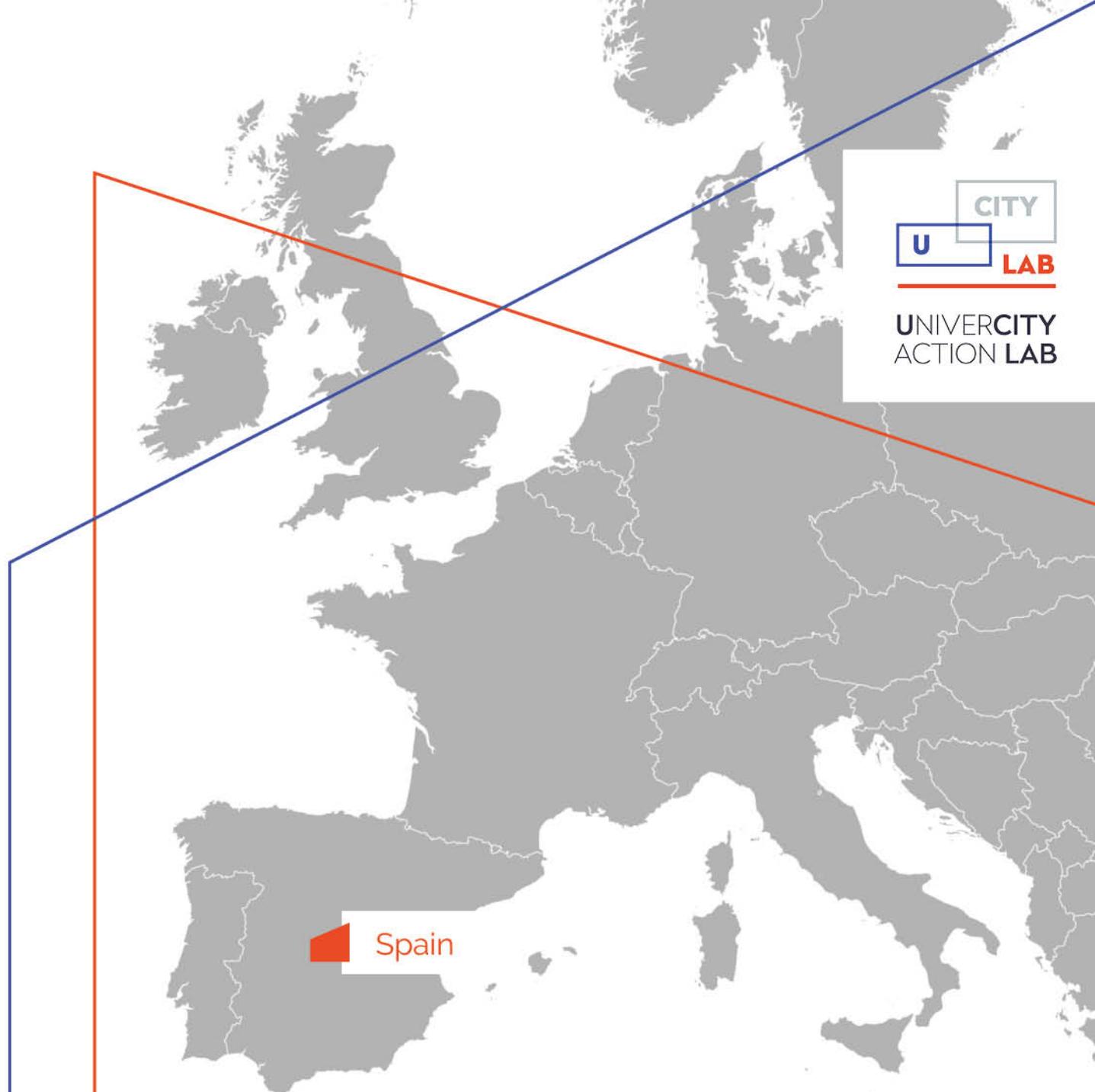




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A grey map of Europe with a white outline of Spain. A red arrow points to the word 'Spain' in a white box.

Spain

Good Practice Case Study

Digital & Green Skills for a Sustainable Economy

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PROJECT PARTNERS



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GENERAL INFORMATION

Title of the case Digital & Green Skills for a Sustainable Economy
(www.digital4circular.com)

Sales pitch Become an agent of change!

Organisations

- Universitat Autònoma de Barcelona
- Consell Comarcal del Vallès Occidental

Country Spain

Authors

- Jordi Verdú
- Konstantinos Kourkoutas

Nature of interaction Student-city project; Academic, students, business, city challenge; City Lab

Level of mechanism

- Government policy (e.g. law, funding framework)
- Organisational strategy (e.g. university/business/agency)
- Structural element (e.g. centre, lab, office)
- Operational level (e.g. activity or programme)

Length of Programme

Not specified	Formality	Formal
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Curricula-bound, co or extra-curricular?

Curricula	Level of initiative	Cross-disciplinary
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Summary The “Digital & Green Skills for a Sustainable Economy” is a transversal project focused on people under 30 years, no matter their educational background, that reside in the Barcelona Province. The objective is to provide them with

different tools related to the digital technologies (Digital), as well as to the Circular economy principles (green). The project also contains an open innovation platform. Different groups of students are defined, considering diversity not only in the educational background, but also in gender. Each group is called to face a specific challenge through the different stages of the thinking process. Finally, 76% of the participants in the project (19 out of 25) were inserted into the labour market going beyond the expectations from the beginning of the project.



CASE STUDY PROFILE

BACKGROUND

The need to move from classical, linear models to circular models of production and consumption is something which is not under discussion in the different elements of the quadruple helix (society, administration, academia and industry). However, to carry out such transformation, different tools must be provided to each of the main agents.

The region of Vallès Occidental is the one with the most intensive industrial activities. Taking this into consideration, several actions and agreements have been developed together with the university and the County Council (Consell Comarcal). The training is considered as a key action in order to accelerate the transformation to more sustainable economic models.

CONTEXT

During 2016, both institutions, UAB and Consell Comarcal, started defining a training programme. It focused on young students with a labour insertion perspective (aimed for innovation departments of administrations and companies, innovation labs, or as innovation agents in more traditional companies), as well entrepreneurs. The programme was designed considering the possible different and non-technological educational background of the students. The programme was developed throughout 2017 (from April to July). At the end of the year, more than 50% of the participants achieved a qualified job position. A second edition is underway in 2019.

The powerful UAB Research, Higher Education and Technology transfer Ecosystem and transversal nature are very suitable to the program development & implementation. The critical

mass present within offers access to diverse specialties and talent, and the capacity to identify regional challenges as the ones utilized for the Digital & Green programme:

UAB Sphere (<https://www.uab.cat/web/about-the-uab/uab-cie-sphere/uab-cie-sphere-surroundings-1345667138446.html>) <https://www.uab.cat/web/research/cores-uab/core-in-smart-sustainable-cities/sphere-uab-cei-centres-1345698259430.html>

OBJECTIVES AND MOTIVATIONS

The development of circular economy entails several disciplines, which can be classified as general, digital (related to technology) and green (related to environmental sciences). Although there are several training and university study programmes in both specific cases, there is a lack of a joint programme with the objective to train “agents of change”. This should be a very transversal profile capable of facing a challenge, considering not only environmental, but also technological solutions.

STAKEHOLDERS

- Students (unemployed and with sufficient academic qualifications / open to all disciplines)
- Academics (multidisciplinary team)
- Industry: Eurecat Technological Centre
- County Council (economic promotion department)
- Regional Government (Occupational Service of Catalunya)

PROCESS

INPUT

- Human:
 - Students as conduits of knowledge and skill
 - Researchers as providers of scientific and environmental knowledge (Engineering School: (Telecommunications Department, Microelectronics department, Computer Engineering department, Environmental Engineering Department), Philosophy department, Psychology Department, Economy Department, Eurecat Technological Center)
 - Administration Technicians as connectors and facilitators (UAB: (CORE Smart Cities Research Parc) County Council technicians)
- Financial:
 - Funding by SOC (Servei d'Ocupabilitat de Catalunya / Occupational Service of Catalunya)
- Physical:
 - The activities took place in the Engineering School of the UAB and the nearby Eurecat Centre in Cerdanyola
 - Required material to carry out the training course and the prototypes

ACTIVITIES

The activities were divided into four categories:

- i) student recruitment
- ii) training activities
- iii) visits
- iv) labour insertion



OUTCOMES AND IMPACT

OUTPUTS

The students acquired skills in both green/environmental and technological & technical skills, becoming “agents of change” in the territory and in their future working positions. The developed work in the open innovation platform part of the programme led to the development of several projects based on specific challenges presented by the local stakeholders.

The participants first undertook a technical formation block featuring both Green and Digital skills related content. In parallel, they undertook a second block of training in transversal capacities, like creativity, leadership, communication or teamwork. The last part of the programme was the open innovation platform where participants, working in mixed teams, could develop further their ideas and reach the prototype phase.

(Example of such project: The BitLibrary https://www.youtube.com/watch?v=-_judlikuAU).

IMPACTS

The main indicator of the program impact was the percentage of students inserted into the labour market and applying circular economy principles in the territory. In the first edition of the program, a total of 19 out of 25 students were inserted into the labour market.

SUPPORTING ENVIRONMENT & SYSTEM

SUPPORTING MECHANISMS

- Policy: Circular Economy regulations (European and national level), UNSDGs
- Strategic: Circular network at Vallès Occidental (Vallés Circular), National Agreement on Circular Economy, Pact for the Re-industrialization of Vallés
- Operational: 300h training course on digital and green skills for a sustainable economy (financed by the Occupation Service of Catalunya - SOC)

BARRIERS AND DRIVERS

Barriers:

- Shortage of time to disseminate call for enrolment
- Difficulties to reach target audience
- Participation of the Industry

Drivers:

- Expertise of the researchers from academia and technicians from administration
- The relationship between academia-administration-society



LESSONS LEARNED

CHALLENGES

There are a few factors that pose challenges to the programme implementation:

- To be able to reach more participants in future editions
- To be able to incorporate the industry in a more intensive way
- To generate impact in the region by incorporating participants of the project in job positions with high responsibility
- To have a higher impact in the policies/strategies of the administration

KEY SUCCESS FACTORS

Key success factors include:

- The transversal nature of the campus of the university, incorporating researchers from different areas in the same project
- The role of the administration in considering the project essential for the achievements of the SDGs



FURTHER INFORMATION

AWARDS AND RECOGNITION

Finalist in the “European Digital Skills for the Labour Force Awards”.

TRANSFERABILITY

The program is easily replicable in other contexts (there is an on-going second edition). Content can also be adapted to shorter thematic capsules that can be developed ad-hoc (on going 10 hours capsule for digital & green) and inserted in different programmes.

LINKS

www.digital4circular.com

<https://www.uab.cat/web/news-detail/the-uab-digital-green-skills-valles-course-chosen-finalist-in-the-european-digital-skills-for-the-labour-force-awards-1345774819098.html?noticiaid=1345777844692>

<https://www.uab.cat/web/sala-de-premsa/detall-de-noticia/en-marxa-el-projecte-digital-green-skills-per-una-economia-sostenible-1345667174054.html?noticiaid=1345721135459>

<https://www.uab.cat/web/sala-de-premsa/detalle-noticia/seleccionados-los-25-jovenes-que-participaran-al-proyecto-digital-green-skills-1345667994339.html?noticiaid=1345720974487>

<https://www.uab.cat/web/investigador/cores-uab/core-ciutats-intel·ligents-i-sostenibles/la-xarxa-core-en-ciutats-intel·ligents-i-sostenibles-1345696629737.html>

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