



**International Forum  
on Skills Intelligence**  
in Post-Secondary & Higher Education

Advancing Skills Intelligence  
in Post-Secondary & Higher  
Education:

Anticipation, Alignment, and the Future of Work



Universitat  
Oberta  
de Catalunya

**Sustainability and digital transformation:**

# Key insights from University - Industry co- creation workshops

**Carles Bruguera, Natalí Basilico, Carme Pagés, Paula Pedro.**

cbruguerat@uoc.edu

nbasilico@uoc.edu

**July 2, 2025**

**#IFSI2025**



# 1. Labor Market- University Alignment

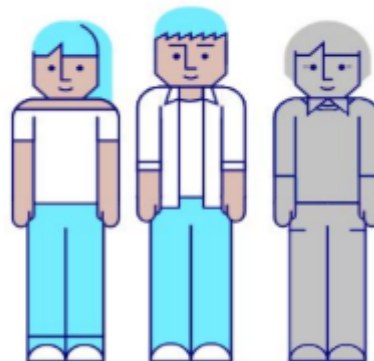
## First *online* university , with 30 years of experience in *e-learning*

- 87.150 students
- 113.500 graduates
- 41% between 25 and 34 years old
- **90% study and work**

Improving career perspectives  
and job quality are **main  
motivations** of students



"Two out of three students at UOC identify improving job opportunities as the main reason to enroll"



# How the UOC responded to this scenario

## Skills Intelligence Unit (UPAL)

scientific knowledge about

**Skills &  
occupation  
needs** in the  
labor market

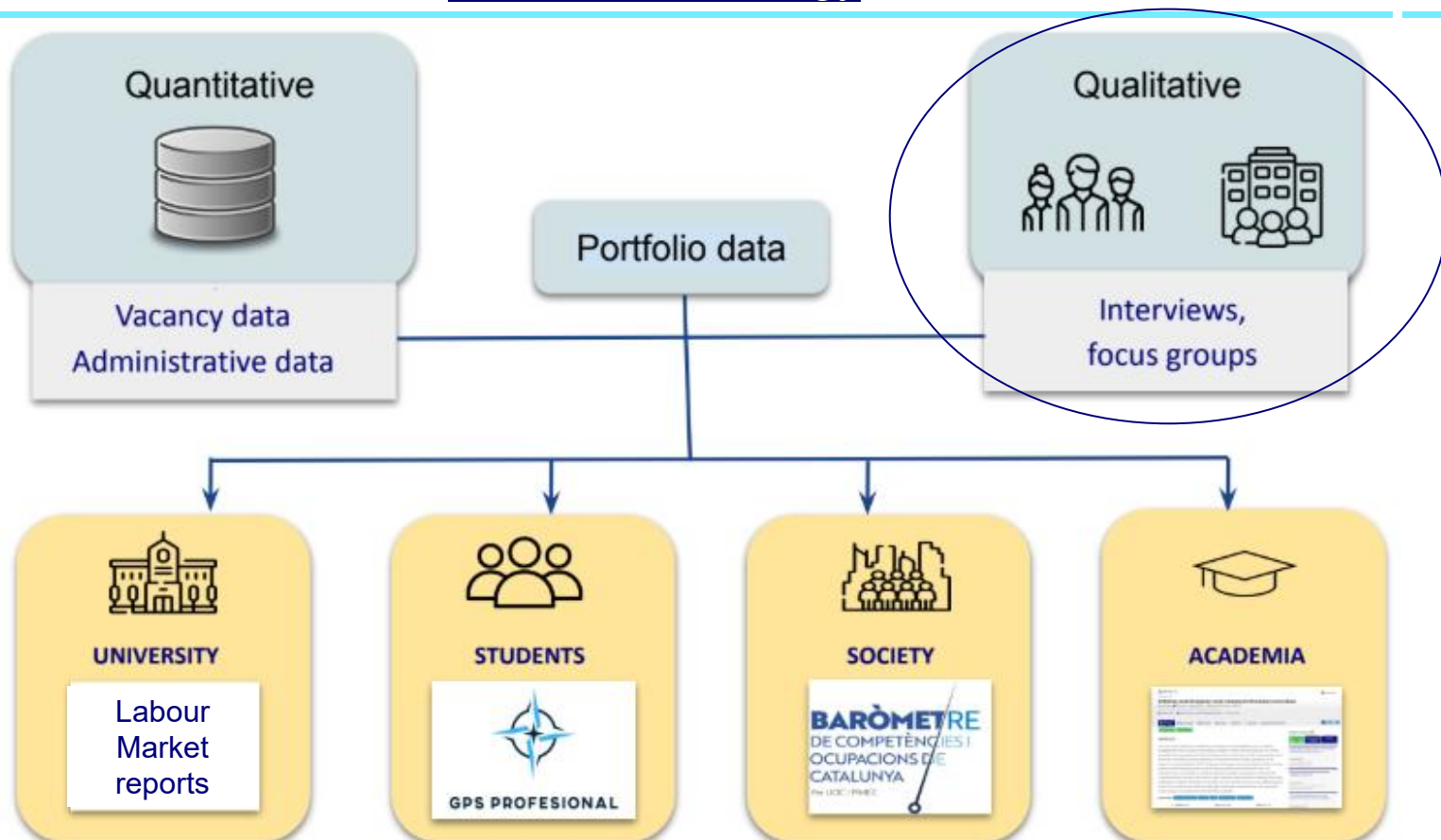


**Lifelong  
learners'  
learning needs**



**Support LM  
program  
alignment  
and career  
orientation**







**2.**

## **University-Industry co-creation workshops**

# University-Industry workshops: Conceptualisation

→ Organisation of collaborative workshops with key stakeholders to develop recommendations for UOC educational offerings:



1) Companies and professionals → Field expertise



2) Professors and Faculty Directors (UOC) → Participate in the educational offering



3) Guidance professionals (UOC) → Professionals need expertise



4) UPAL → Dynamise the session and present labour market data

# University-Industry workshops: From Planning to Impact

## Before the sessions

Contact with  
Faculties

Research  
and data  
analysis

Study  
design

Participants  
recruitment

Preparation  
of materials

## During the sessions

The workshops include discussions, roundtables and interactive activities on profiles, competences, and emerging key trends in specific professional fields.

## After the sessions

UPAL prepares reports focused on specific, sectoral, or cross-sectoral themes, which are publicly available and shared with Faculties, guidance professionals, and participants.

## Main Focus Area: The Twin Transition

### ❖ Globally:

- Green Deal projects 2.5M new jobs
- Expected +25% growth in green-tech jobs by 2035

### ❖ In Catalonia:

- 5.3% of job postings require green skills
- +17% growth since 2018



### → Why is this relevant?

The climate emergency and digital disruption (twin transition) require changes within organisations and new professional profiles capable of recognising, anticipating, and adapting to the new socio-environmental, economic, and digital context.

## Main objective of the workshops

- With focus on the **twin transition**, the workshop addressed three core areas:
  - Key and emerging **occupations**.
  - Key and emerging **skills**.
  - **Trends** shaping the twin transition.

To date...

- **Two** participatory co-creation workshops hosted by UOC.
- Involved **30 Catalan organisations** immersed in the **twin transition**.



# Participant Profiles



Professionals specialised in management and sustainability within organisations, classified into two groups:

## Technical Profiles

**Technical roles related to the twin transition**

- Supply Chain Technician
- Technical Services Engineer
- Sustainable Housing Architect
- Digital Consultant for Sustainable Projects
- Energy Efficiency and Sustainability Manager
- Environmental Scientist
- Sustainability Technician

## Executive Profiles

**Professionals who have led transformation processes related to twin transition:**

- Chief Sustainability Officer
- Environmental Consulting Director
- Country Manager (Solar Technology)
- Head of Supply Chain Department
- Coordinator of Energy Efficiency Companies
- President of an Energy Company
- Director of Logistics and Transportation
- Environmental Manager
- Representatives of Professional Associations

# 3.



## Outputs of the workshop

## Output 1: Focus group discussions

- An effective strategic environmental management approach integrates both knowledge of **current regulations** and a critical, **analytical perspective** on reality, allowing for deeper analysis of processes so that organisations can reduce costs, identify new opportunities, and minimise risks.

*"I believe sustainability can be approached from three main vectors: regulatory, economic, and social awareness. (...) This degree program should cover all three areas, providing knowledge not only about regulations but also about the economic and social motivations driving sustainability."*

— Country Manager, Solar Technology

*"The degree should also include risk and opportunity analysis, which are equally important. We not only need to assess the impact of our actions but also identify the opportunities that may arise from new regulations or market changes. This is a key aspect that should be part of the degree or the knowledge that future professionals acquire."*

- Supply chain technician

## Output 1: Focus group discussions

3 participants foresee strong demand for **specialised technical profiles** related to specific aspects of sustainability, the green transition, and the environment

*"In certain sectors, such as industry, there is very high demand and a significant shortage of professionals specialised in environmental and technical matters, especially in renewable energy and engineering"*

- Environmental Consulting Director

5 participants believe that **sustainability officers** are becoming key to ensuring the compliance and viability of sustainable actions within organizations.

*"They may be called CSO, CEO, COO, CMO (...) and they are profiles that meet all the 'check, check' boxes for sustainability within companies. In recent years, these roles have gained visibility and are often held by individuals with backgrounds in sustainability, environmental studies, and social responsibility."*

- Founder of a consultancy for sustainable businesses

4 participants note that the growth of major consulting firms, driven by organizational needs, is boosting the hiring of **environmental consultants**

*"In recent years, as companies have placed greater emphasis on sustainability, the Big Four have added environmental services to their offerings, leading to a sort of 'boom' in the demand for environmental consultants—a segment that was previously covered mainly by small specialized firm."*

- Director of Innovation and Product

## Output 2: Roundtable synthesis

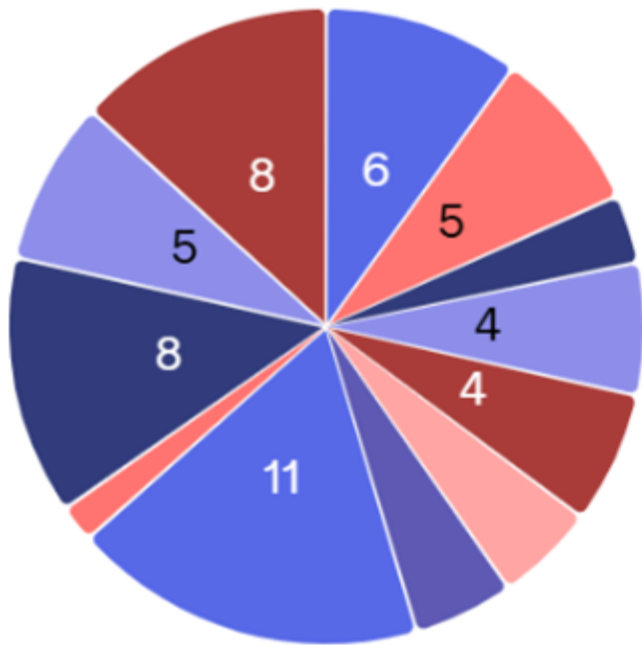
"The tourism sector is, by nature, diverse and complex, although we can identify two major challenges: the green transition and digital transformation. Sustainability must be conceived as a cross-cutting mandate within the sector, and although a specific role is currently needed to drive it, in the long term it will naturally become integrated into all professional profiles. It is essential **to have sustainability experts within organizations**—from large companies to microenterprises and suppliers—in order to ensure an effective and genuine transition."

"With regard to digital transformation, one of the major challenges is the **strategic and operational management of the flood of generated data**. It's not just about implementing sophisticated technologies, but about ensuring that digitalization also reaches the operational tasks carried out by most of the sector's workers, such as housekeeping or restaurant staff. In this respect, the key is not so much advanced technical training, but awareness and adaptation to digital tools that facilitate and optimize daily work."

"Finally, one concept that stood out during the discussion was that of micro-credentials, especially in training related to data, cybersecurity, and legal frameworks. Companies don't need large degrees to cover specific needs, but **short, practical training programs** that allow professionals to quickly adapt to the sector's new demands. This training model, put forward by the UOC, is emerging as a nimble and effective solution for the evolution of the tourism sector."

## Output 3: Interactive activity (i.e. voting through Mentimeter)

### The 5 Key Competencies for Professional Profiles to Address the Twin Transition



- 11 Coneixement de IA
- 8 Creativitat i anàlisi crític
- 8 Autogestió (proactivitat, gestió dels temps, adaptació, curiositat)
- 6 Competències verdes i coneixement de sostenibilitat
- 5 Habilitats socioemocionals (relació amb altres)
- 5 Coneixement turístic
- 4 Competències digitals per ajudar a l'economia circular
- 4 Gestió empresarial
- 3 Gestió de solucions integrades d'empreses
- 3 Power BI i similars
- 2 Coneixement de productes i serveis de proximitat
- 1 Programació (back end)

## Output 4: Report with key insights



### 1. Importance of Combining Technical Knowledge with Soft Skills

Companies place high value on graduates possessing skills such as critical thinking, self-management, problem-solving, and communication—essential for applying technical knowledge in changing environments and for driving sustainability projects that are profitable for organizations.



### 2. Knowledge and Use of New Technologies and Artificial Intelligence

It is considered important that graduates of the degree program are familiar with emerging digital and data management tools, with particular attention to artificial intelligence, in order to understand their applications in sustainability-related projects and support more informed decision-making within companies.



### 3. Key Knowledge in Environmental Legislation and Green Technologies

Companies emphasize the importance of professionals linked to the degree having a solid understanding of environmental legislation and being capable of identifying which green technologies are applicable based on specific sustainability goals.



# **5.**

## **Importance of the workshops and future steps**

## Study Significance

Why?	Initial Input Matters
A continuous dialogue with the sustainability sector is essential <b>for the development of new programs related to Sustainability Management, Digital Transformation, and Environment.</b>	Early interaction with professional associations and sustainability-focused organisations — especially those impacted by digital challenges — <b>was key in drafting the initial program outline of the degree and microcredentials.</b>
Co-creation Tools	Maintaining Academic Independence
Workshops and focus groups <b>help align the program's proposed knowledge and skills with real labor market needs.</b>	<b>Collaboration does not compromise academic autonomy</b> —it enriches and informs curriculum design and ongoing program updates.

## Challenges and next steps

- Focus on emerging topics (e.g., digital skills, sustainability) aligned with academic needs.
- Work with the different UOC faculties and programs.
- Connect and improve UOC stakeholders network.
- Publish periodic labor-market trend reports.
- Integrate the data collected with other UOC areas (i.e. Faculties, microcredentials, marketing, guidance services...)





**International Forum  
on Skills Intelligence**  
in Post-Secondary & Higher Education

Advancing Skills Intelligence  
in Post-Secondary & Higher  
Education:

Anticipation, Alignment, and the Future of Work



Universitat  
Oberta  
de Catalunya

# Thank you!

#IFS2025