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

Anticipating the Future of Work

The Role of the Skills Intelligence Unit (UPAL) at the Open University of Catalonia (UOC)

July 2 – 3, 2025

#IFSI2025

Today

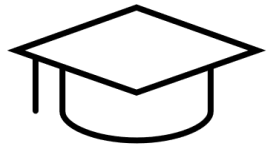
International Forum on Skills Intelligence in Post-Secondary & Higher Education

- About the Skills Intelligence Unit
- The Barometer of Skills and Competences

Technology and the green and demographic transitions are reshaping the labor market

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

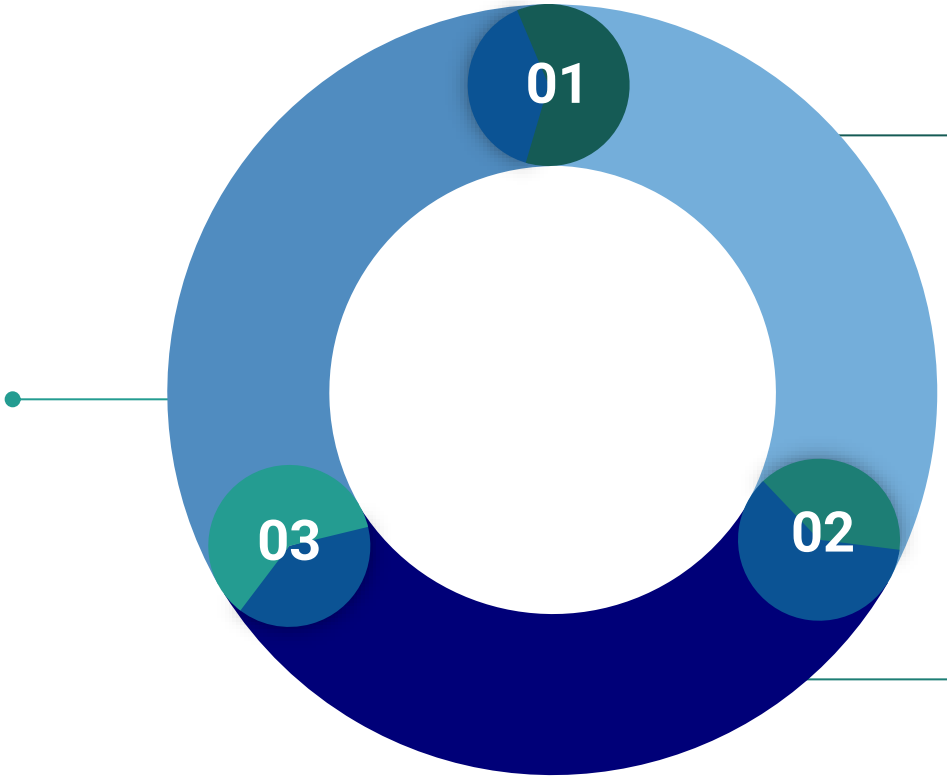
How can Education Institutions ensure that curricula remain relevant and provide effective career guidance to students in this context?



UOC STRATEGY

Leveraging **data** & **research** to help identify and interpret these changes—and to support informed decisions by UOC staff, students, workers, and companies

but institutionally: how?
Continuous updating



Labor market transformation

Skill intelligence

Curricula updating
Student career guidance

but institutionally: how?

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

Creating a **unit (Skills intelligence Unit, UPAL)** within the university whose specific mission is to generate **scientific knowledge** about:

- **Skills demand** across relevant economic sectors
- Workers needs for **lifelong learning** and **continuous education**
- Disseminate knowledge to empower **UOC students/alumni**, **Program Directors,** and **society**

A multidisciplinary team

Carme Pagès, Directora
Doctora en Economia. Economia del treball

Natali Basilico,
Doctora en Economia

Carles Bruguera
Doctor en Educació i TIC (e-learning)

Federico Christmann
Màster en Economia. Análisi quantitatiu

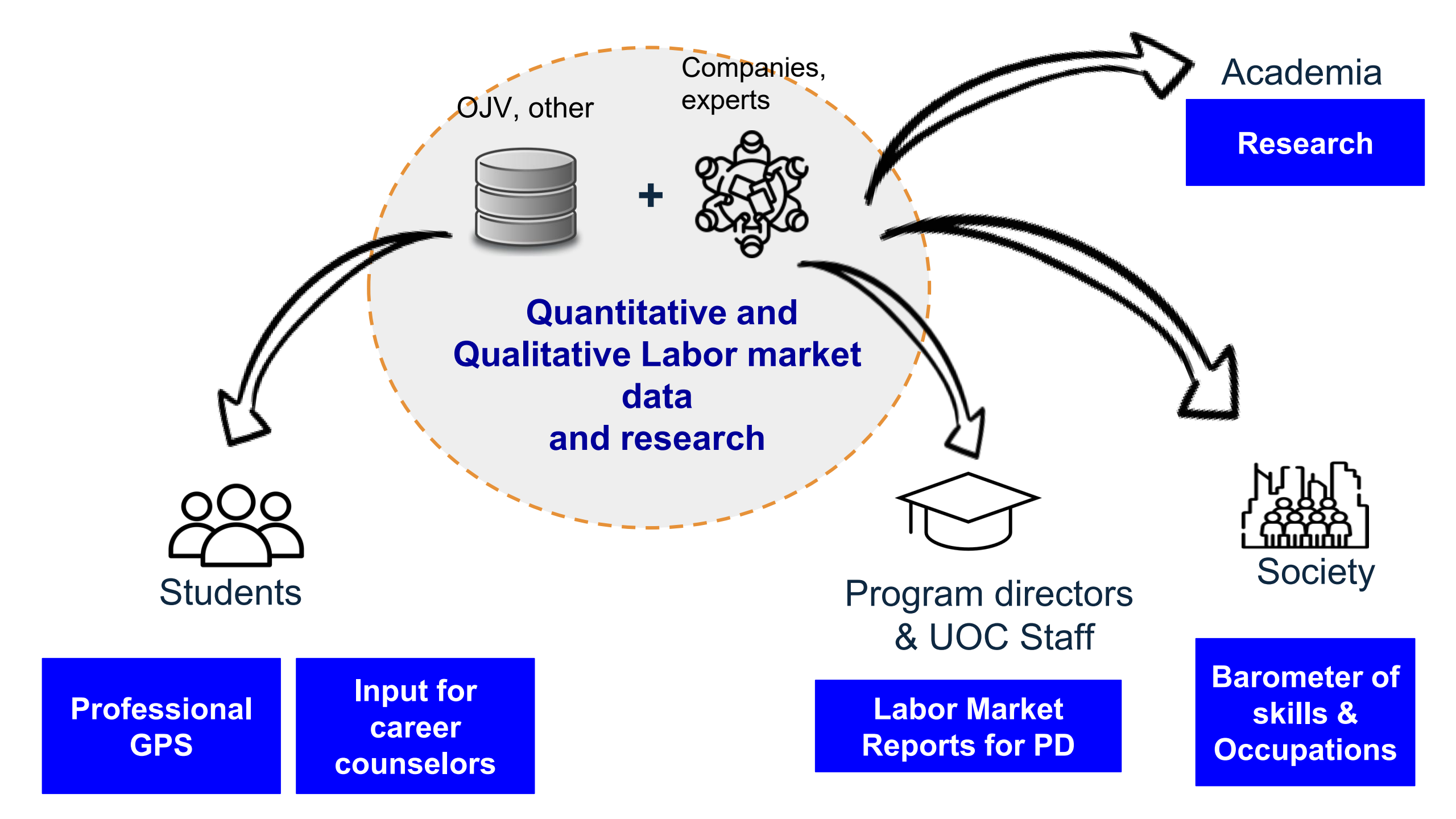
Gonzalo Cubillos
Màster en polítiques pùbliques i ciència de dades.

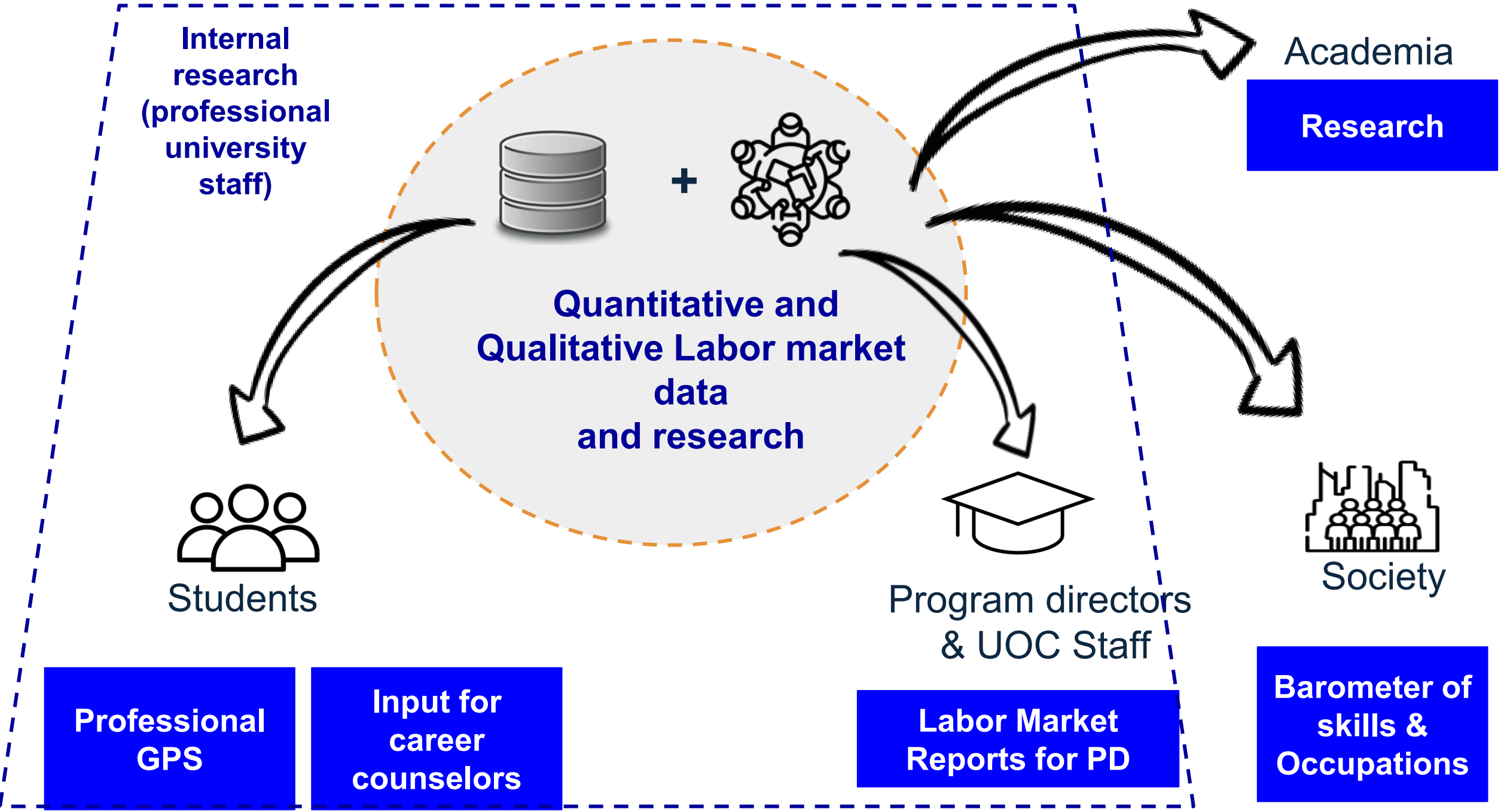
Adrià López Carrasco
Analista de dades

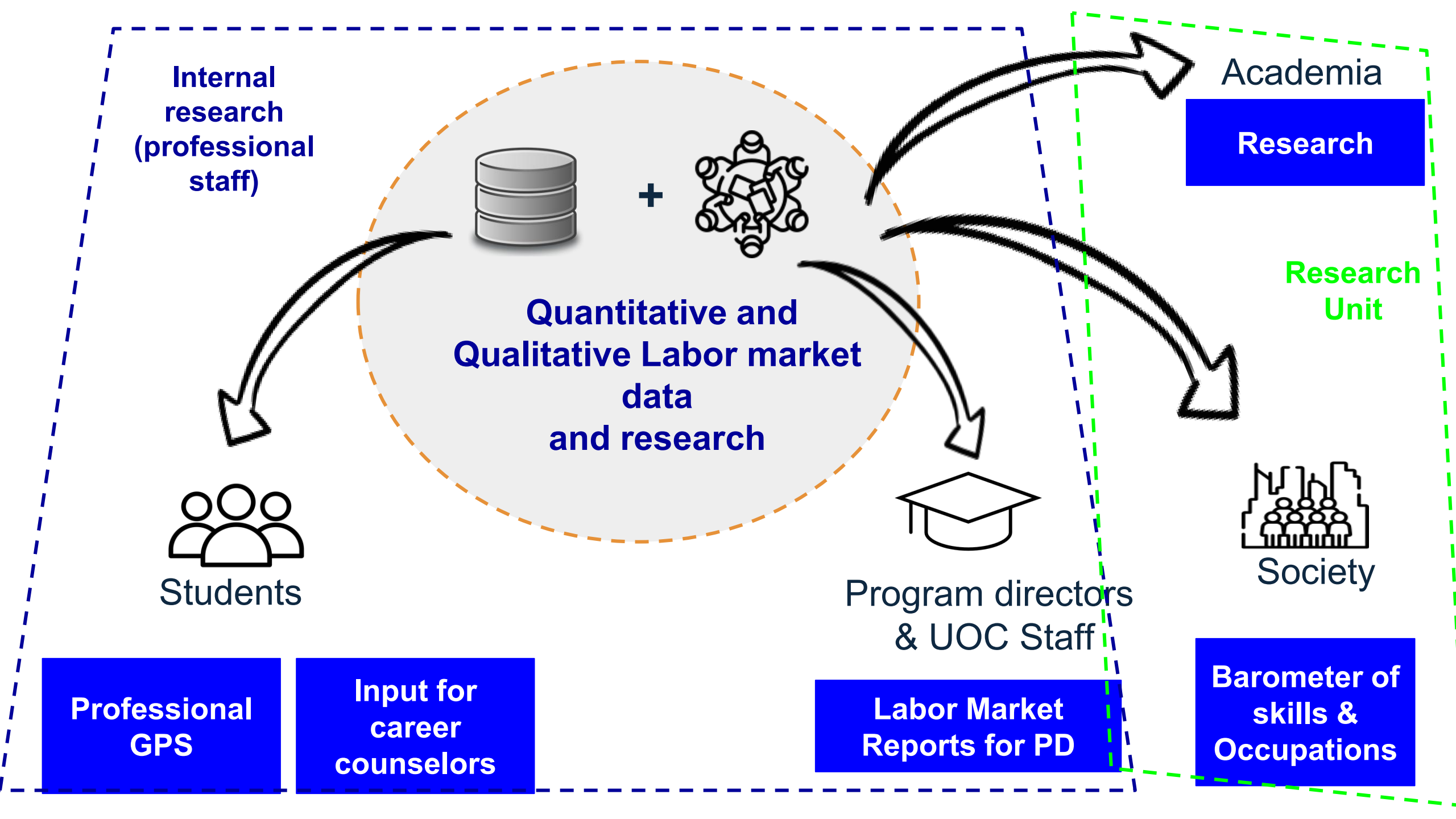
Marina Muñoz
Màster en Economia. Mètodes estadístics.

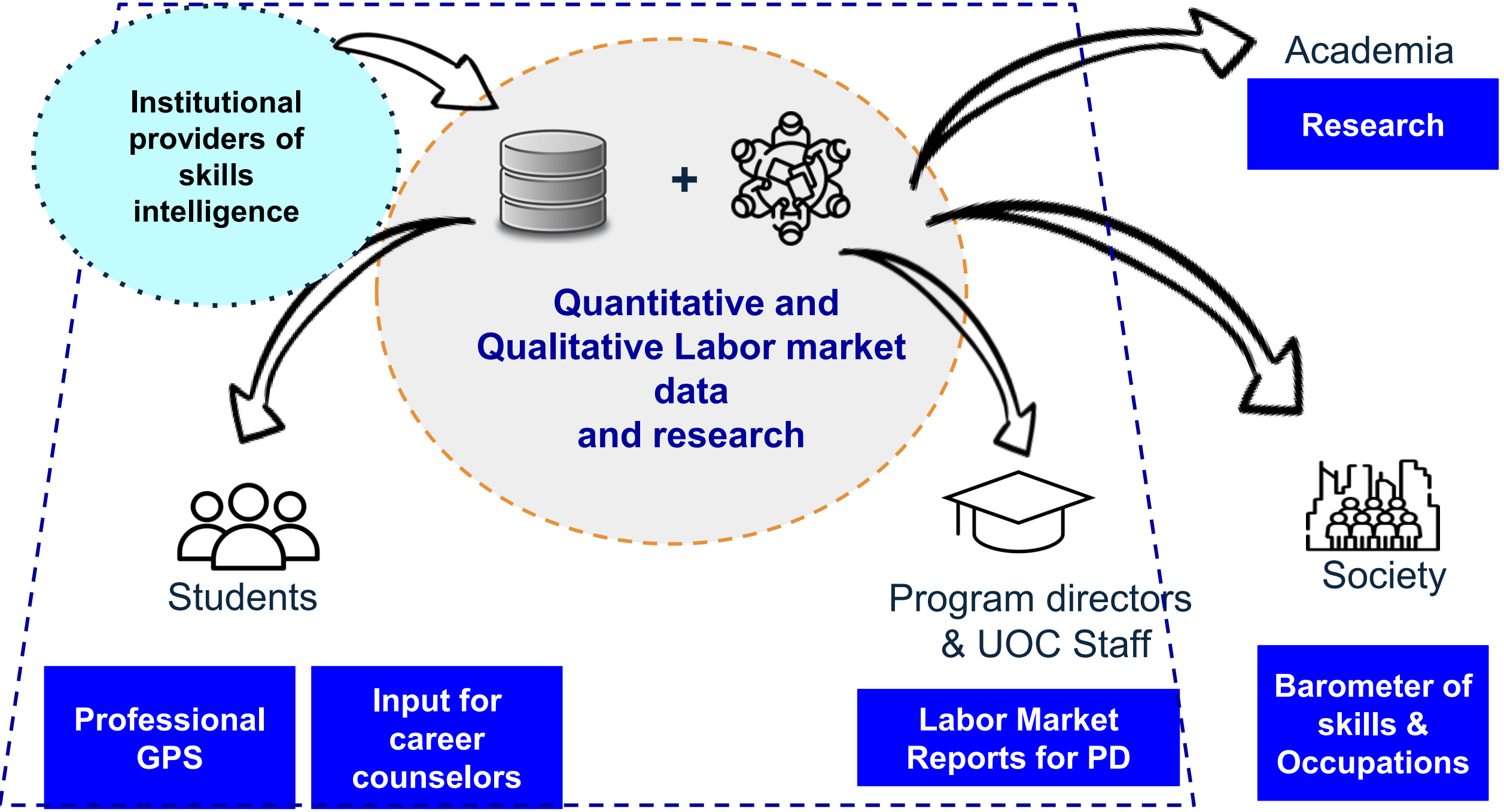
Paula Pedro
Sociòloga i Màster en anàlisi política. Anàlisi qualitatiu

Mitch Peters
Doctor en Educació i TIC (e-learning). Microcredencials.

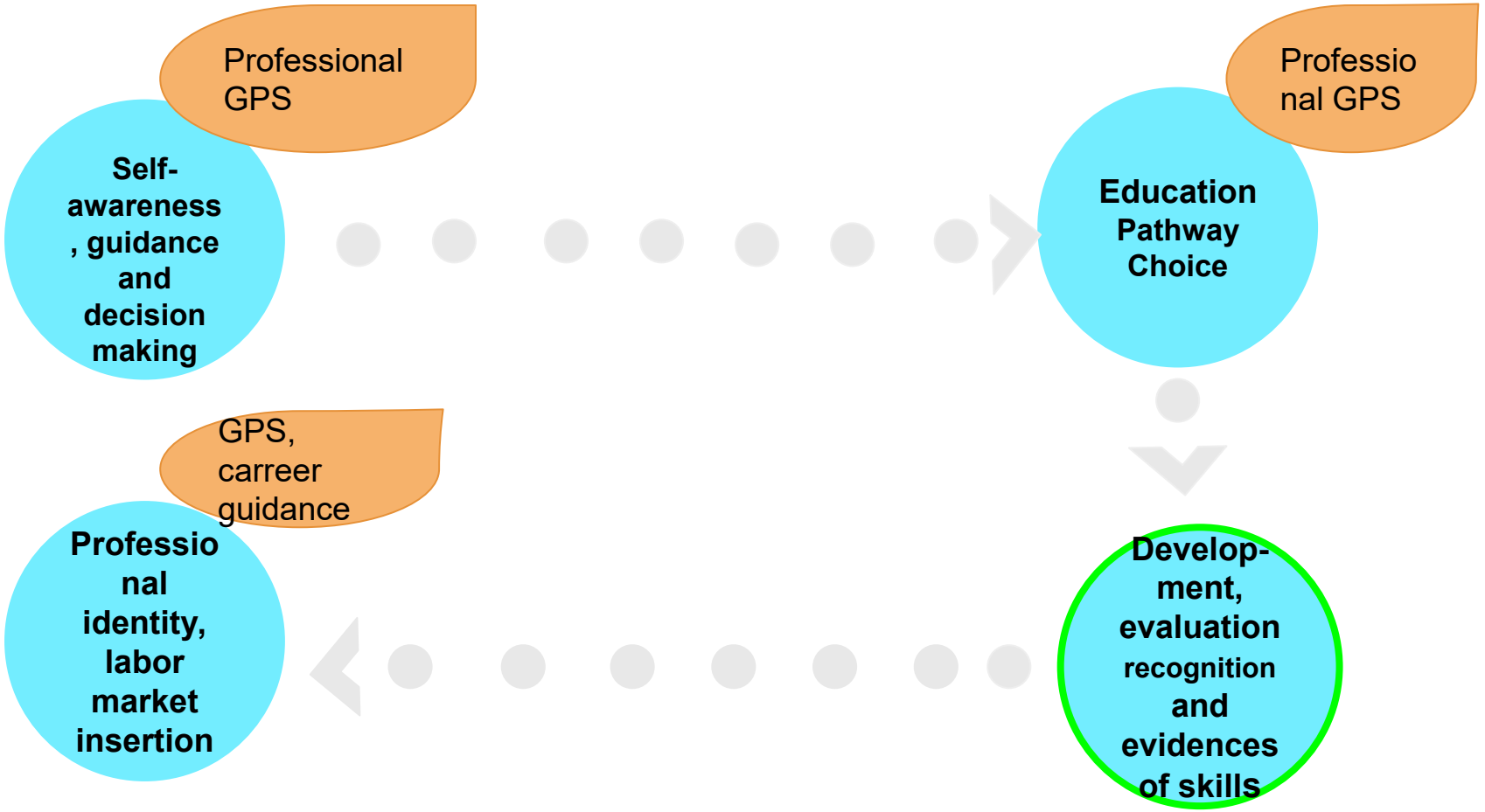

OJV, other
Companies, experts
+
Quantitative and Qualitative Labor market data and research
Academia
Research
Students
Program directors & UOC Staff
Society
Professional GPS
Input for career counselors
Labor Market Reports for PD
Barometer of skills & Occupations


Internal research (professional university staff)
Quantitative and Qualitative Labor market data and research
Academia
Research
Students
Professional GPS
Input for career counselors
Program directors & UOC Staff
Labor Market Reports for PD
Society
Barometer of skills & Occupations

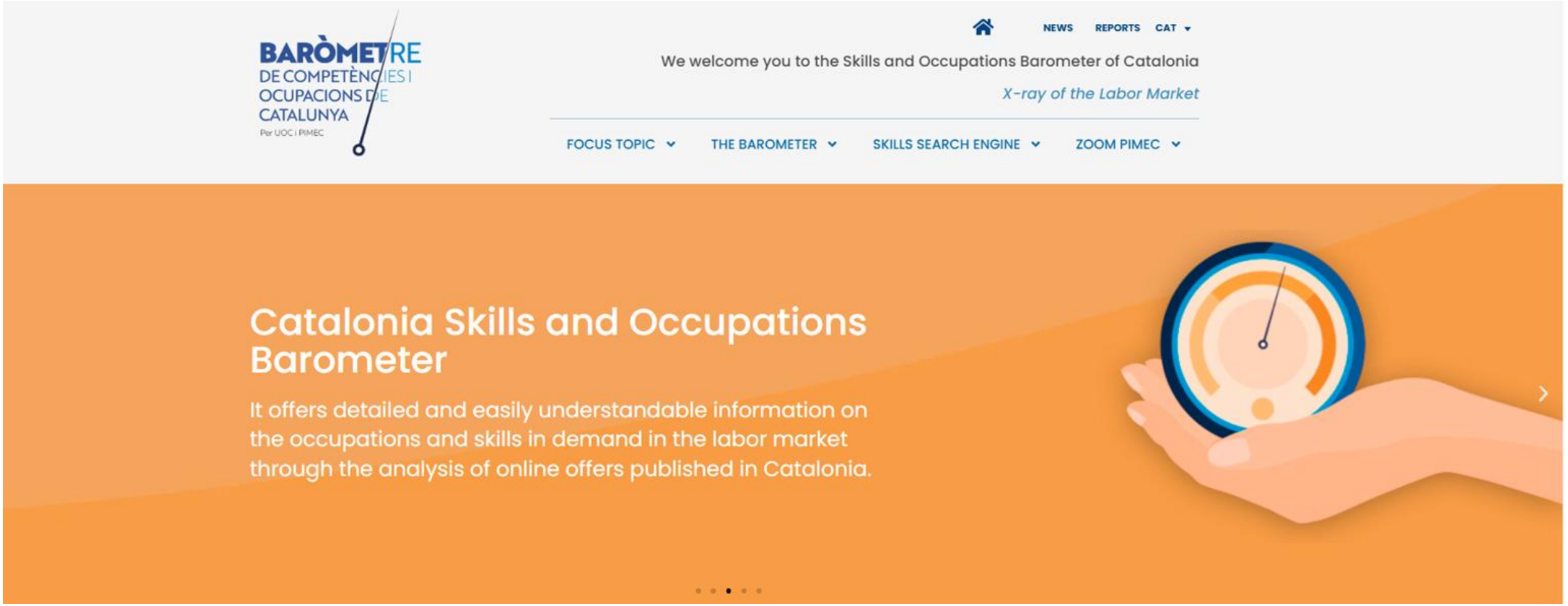

Internal research (professional staff)
+
Quantitative and Qualitative Labor market data and research
Academia
Research
Research Unit
Students
Program directors & UOC Staff
Society
Professional GPS
Input for career counselors
Labor Market Reports for PD
Barometer of skills & Occupations


Institutional providers of skills intelligence
+
Quantitative and Qualitative Labor market data and research
Academia
Research
Students
Program directors & UOC Staff
Society
Professional GPS
Input for career counselors
Labor Market Reports for PD
Barometer of skills & Occupations

UPAL in the overall LLL strategy



Barometer of skills and occupations



A project developed with PIMEC, the association of the small and medium-sized enterprises in Catalunya

Barometer of skills and occupations

➔ **Uses data from online job ads (Lightcast) + other**

➔ It provides **interactive dashboards** with data on:

- Most in-demand occupations
- Most in-demand skills
- Geographical location of vacancies
- Data by occupation, economic sector

➔ Detailed data by type of skill: **digital, soft and green**

BARÒMETRE DE COMPETÈNCIES I OCUPACIONS DE CATALUNYA

Each quarter, a special focus topic:

Soft skills in a digitalized world

March 2024

Download report

Digital transformation from the perspective of the labor market

July 2024

Download report

Green jobs and skills for the ecological transition

November 2024

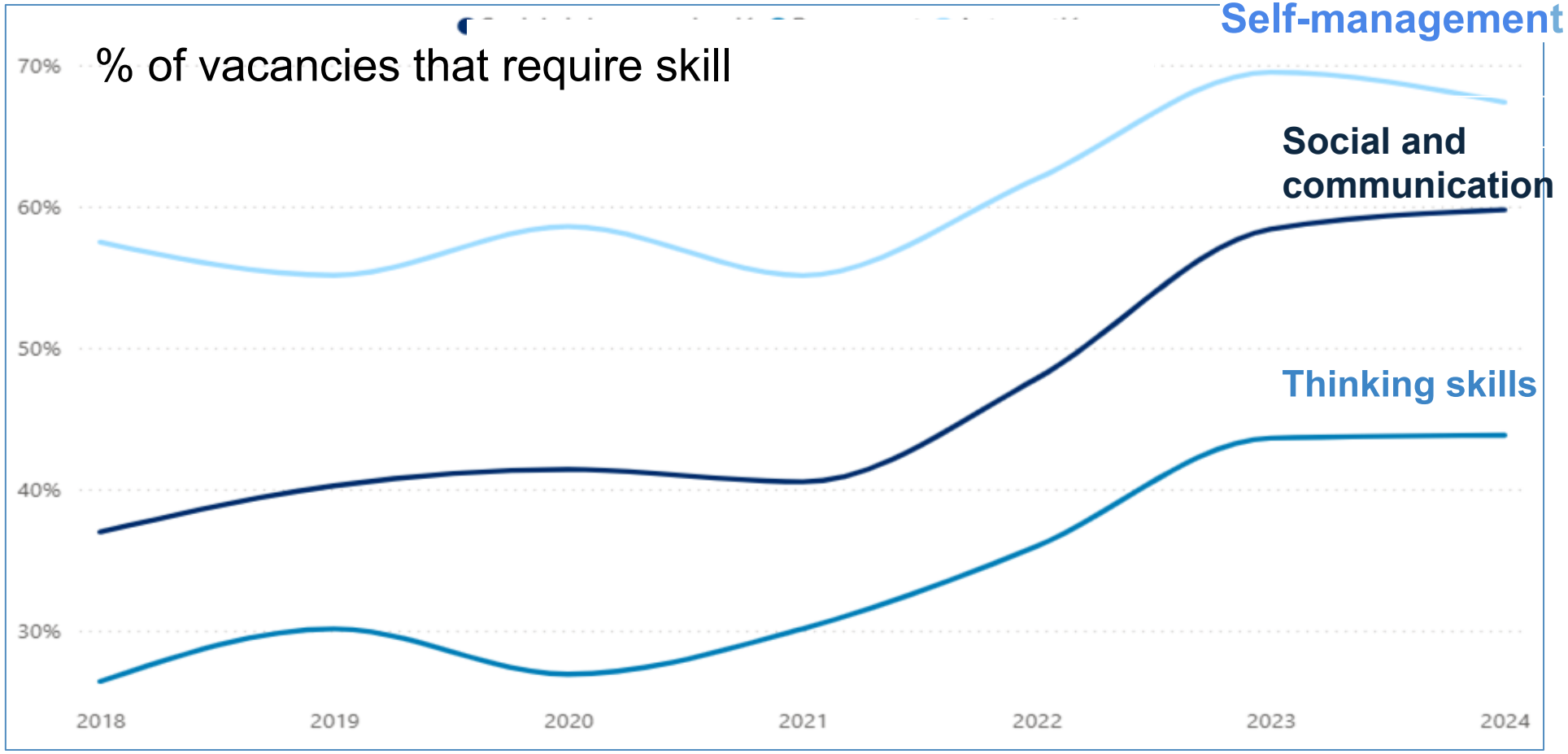
Download report

X-ray of the demand for talent in Catalan MSMEs

March 2025

Download report

Insights: the demand for soft skills has grown substantially since 2018

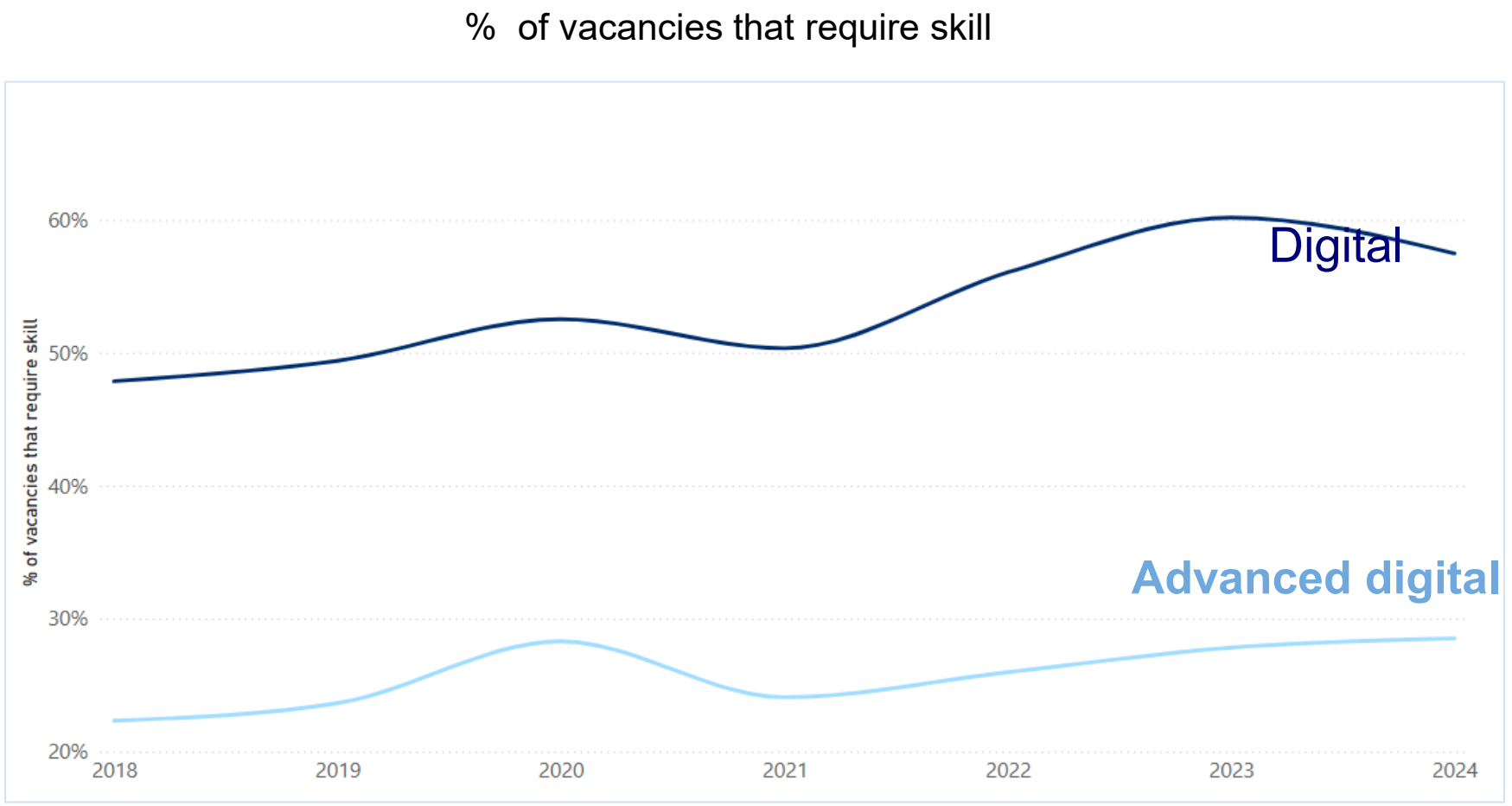


Own Soft skills classification based on sub-categories of ESCO transversal Skills

Source: Barometer of skills & occupations from Lightcast data

Insights: The demand for digital skills (overall and advanced) is also growing

Own classification of Digital Skills based on 3 and 4th IR and Gen AI analysis



Source: Barometer of skills & occupations from Lightcast data

Insights: The demand of IA skills is growing rapidly since 2020, but still less than 1%.

IA skills:
Speech recognition

Optical character recognition software

Data extraction, transformation, and loading tools (ETL tools)

Natural language processing (NLP)

OpenCV

Scikit-learn

Computer vision

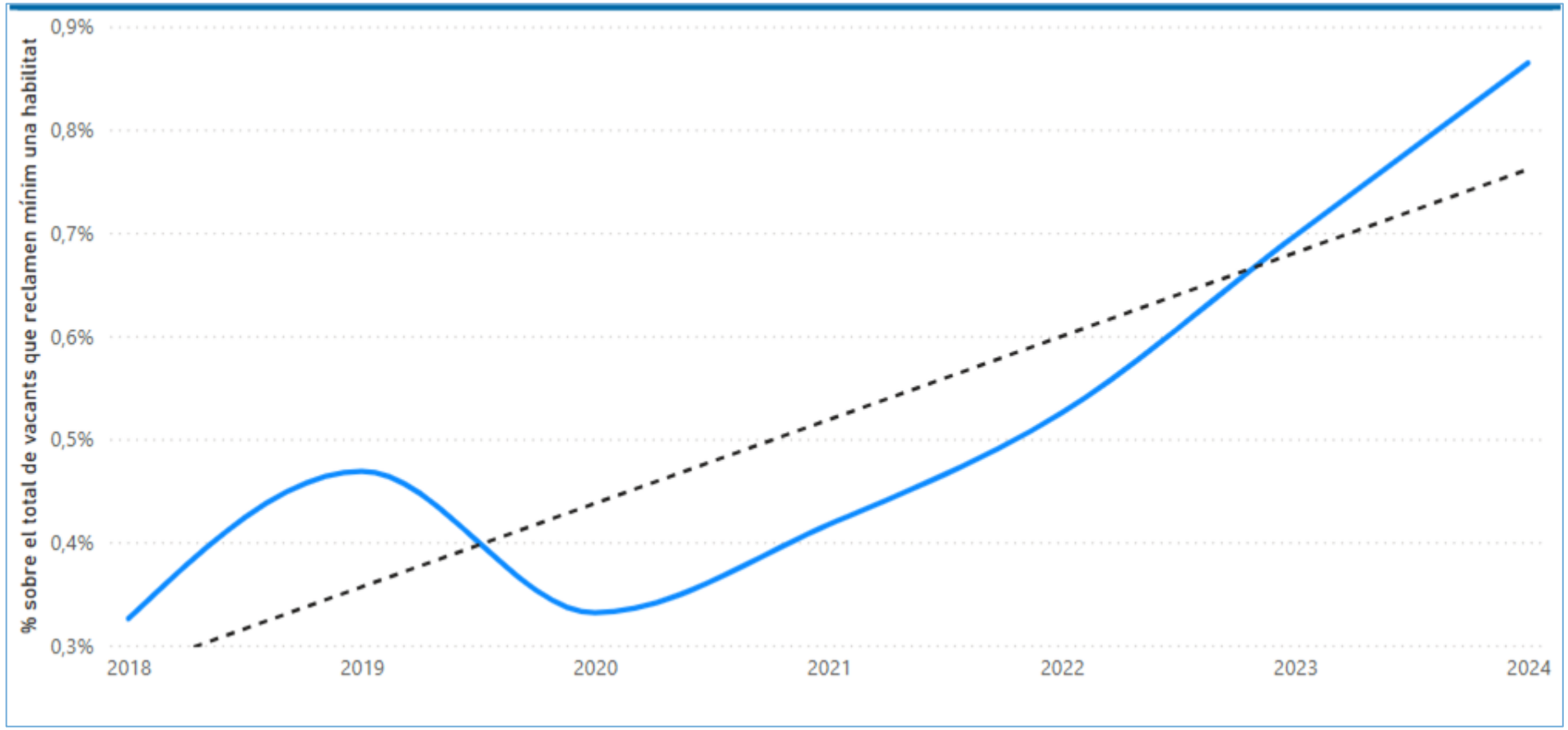
Artificial intelligence (AI)

Deep learning

TensorFlow

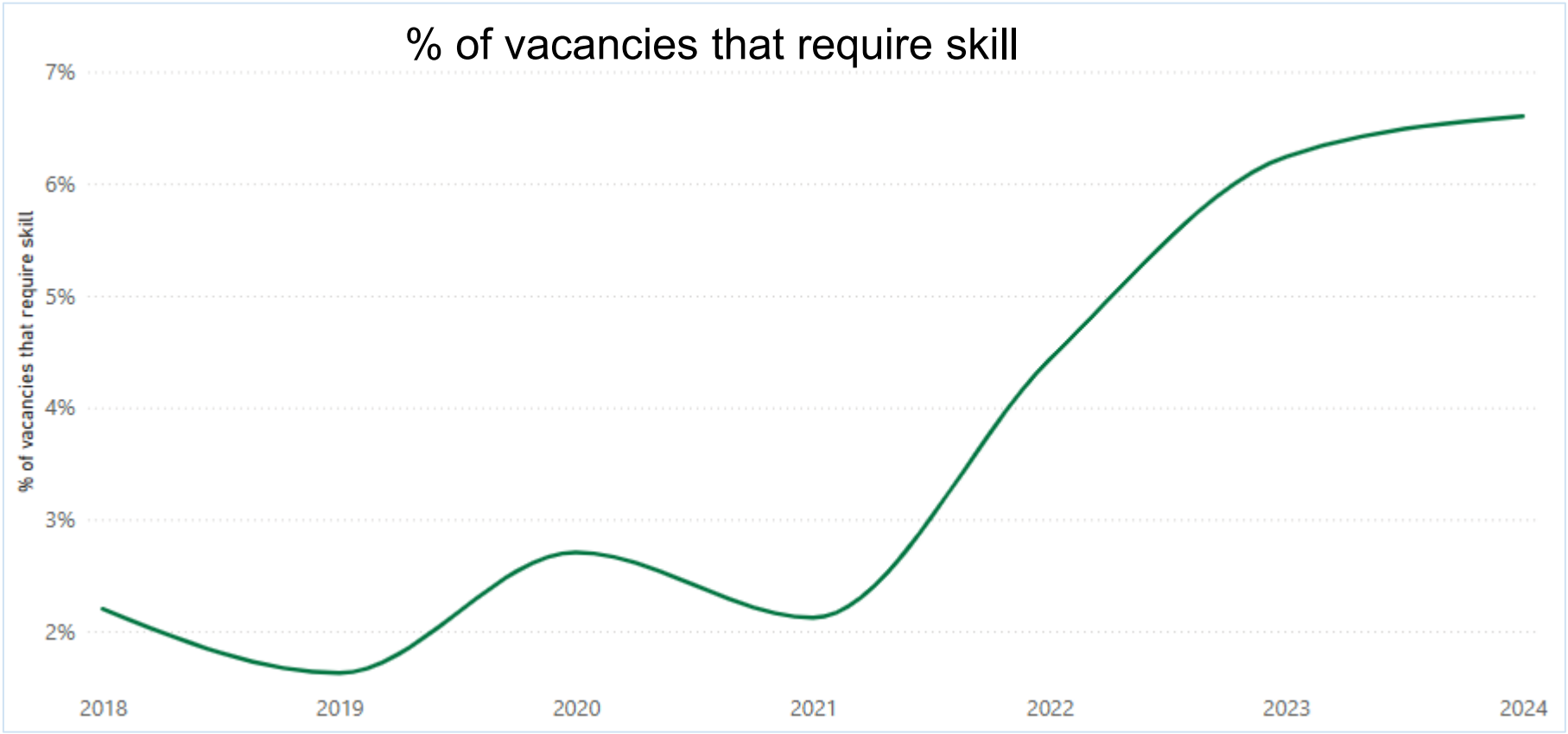
Machine learning

% of vacancies that require skill



Source: Barometer of skills & occupations from Lightcast data

Insights: The demand for green skills is still relatively low, but growing.

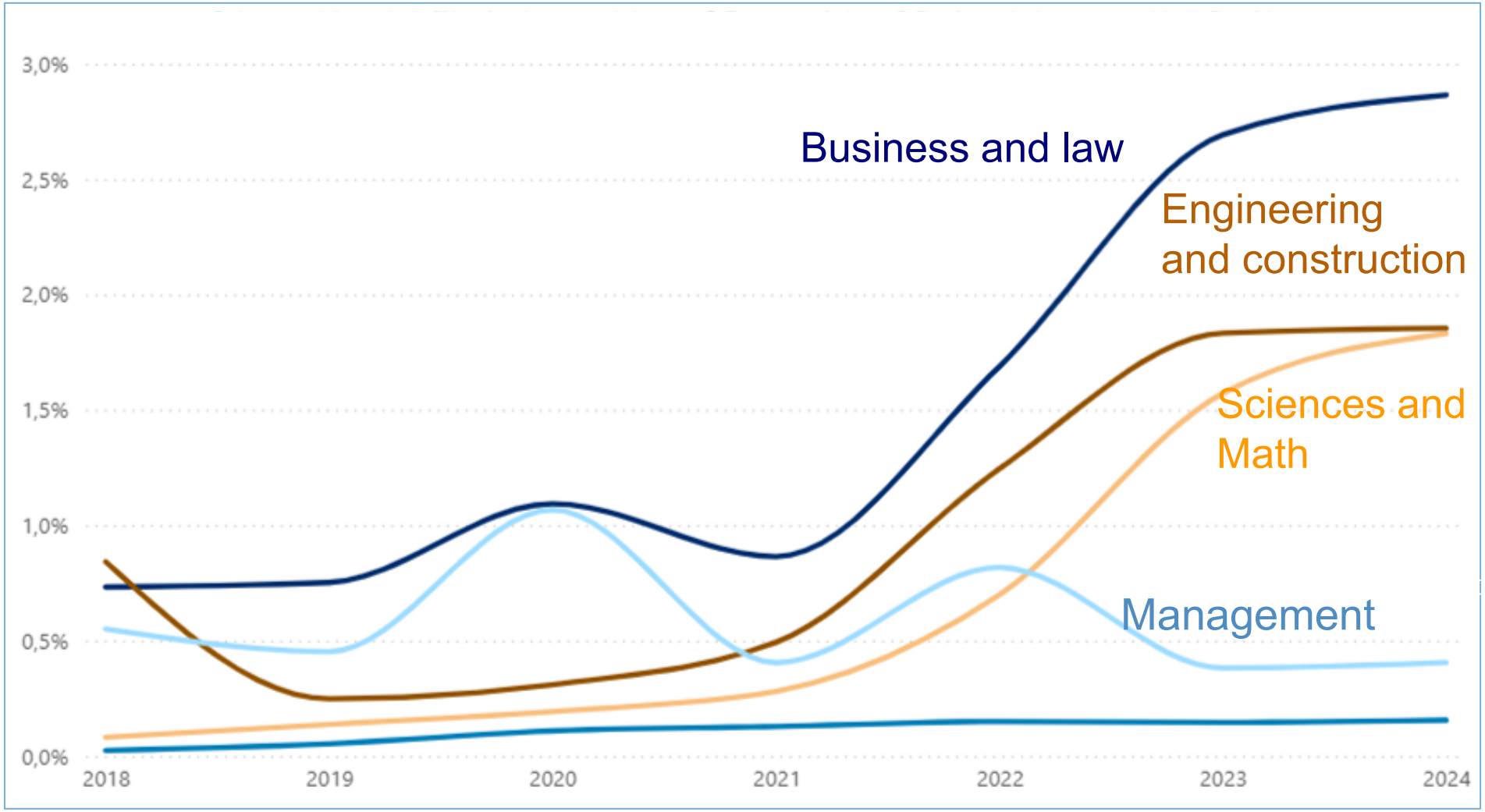


Green skills classification based on ESCO

Source: Barometer of skills & occupations from Lightcast data

Insights: The most in-demand green skills

% of vacancies that require skill



Green skills classification based on ESCO

Source: Barometer of skills & occupations from Lightcast data

CLUB EXCELENCIA EN GESTIÓN

PREMIO BUENAS PRÁCTICAS EN GESTIÓN

UNIVERSIDAD

★GANADOR★

2023

Summary

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

- UPAL serves as a **hinge** between outside providers of skills anticipation, research, data and internal use.
- UPAL plays a key role in UOC´s LLL strategy: it **leverages data** & **research** , arguably HEIs advantage, to guide learners´employment and education pathways and to keep curricula updated & relevant.
- Rising demand for soft, digital, and green skills. Need to **integrate** in curricula
- **Data granularity** reveals *what, where,* and *when*

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!

July 2 – 3, 2025

#IFSI2025