

Skills Intelligence for informing HEIs curricula:

UPAL Labour Market tools

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**Harnessing web data for
next-generation skills
intelligence**

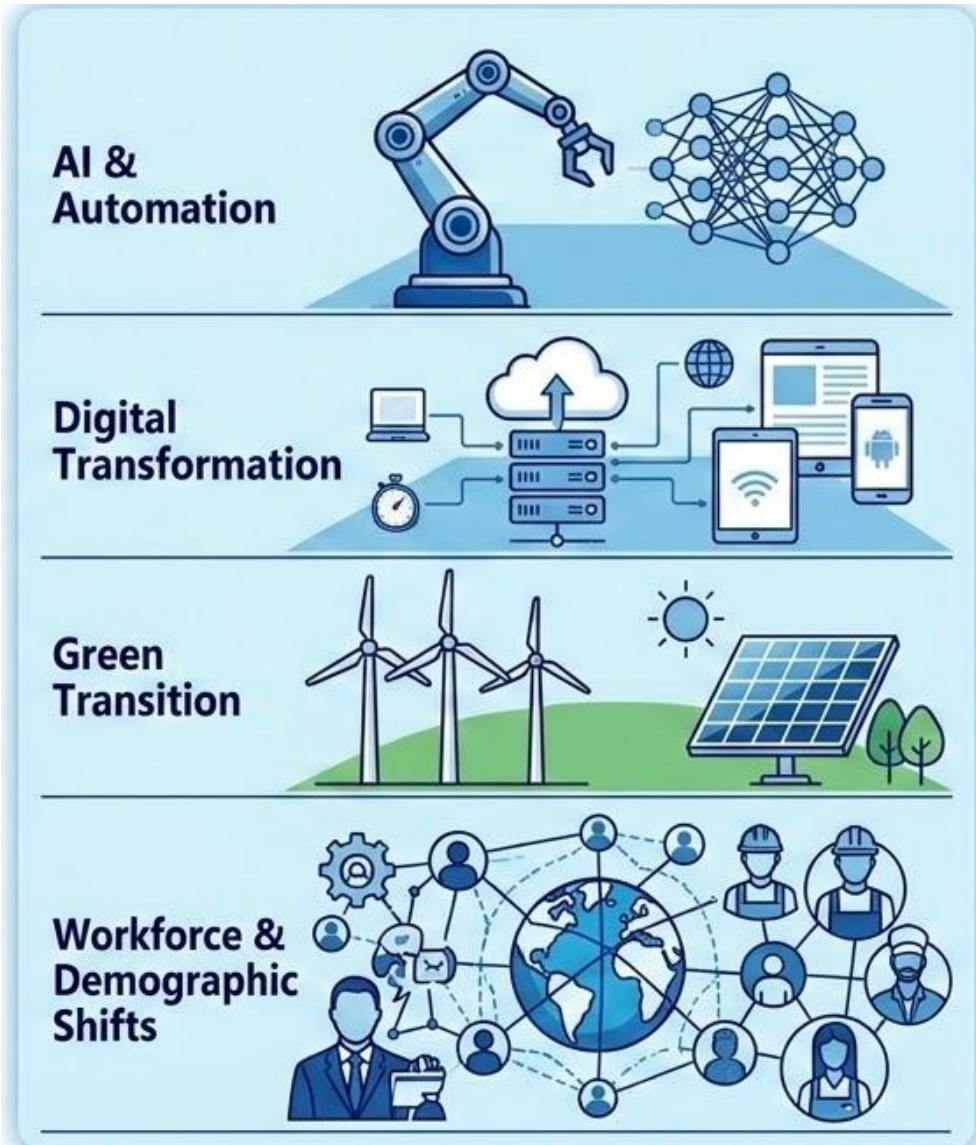
Cedefop and Eurostat research
conference



1.

Introduction

1. Challenges for HEI decision makers



**How is this impacting in my...
region/field/current and future students?**

- **Traditional methods are not enough**
- **Speed of change**
- **Information overload // Lack of specific (and useful) information**
- **Structural vs. cyclical trends**
- **Curriculum alignment**
- **Lifelong learning pathways**

2. The Skills Intelligence Unit (UPAL)

The **UPAL** was created in 2022 to generate scientific knowledge about a fast-changing labor market.



Our Mission

To **obtain and provide relevant and timely information on labour market** demand and requirements in terms of competencies and lifelong learning in different sectors and workplaces, with a regional perspective.



UPAL Labour Market tools

for informing HEIs curricula



2.

UPAL Labour Market tools

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1.

The Labour Market Reports for informing HEIs curricula



Project foundations started **in 2022** → major impulse in 2025



Objective: Providing valuable information to enrich curriculum alignment reflections and decision-making processes.



How: Connecting OJA data, explanations and recommendations with:

- Academic leaders
- Teachers
- Other community members

2.

The Labour Market Reports (today)



Describing labour market trends to provide relevant information that **helps the UOC adapt its offerings to current and future needs.**

- better alignment between academic programs and labor market needs

employability ↩



3.

**The interactive
labour market tool
for informing HEIs curricula**

The Interactive Labour Market Tool: Intro

Explore, filter, and discover the latest trends in the labor market

Browse the report for:

- Discover the **most relevant occupations** for UOC programs
- Compare **changes in competency profiles** in recent years
- Explore **in-demand skills**: digital, green, soft, and more!



Personalize your experience!

- Use filters to see the information that interests you
- Whether by occupation, program, study, or geographical area, the report adapts to your needs

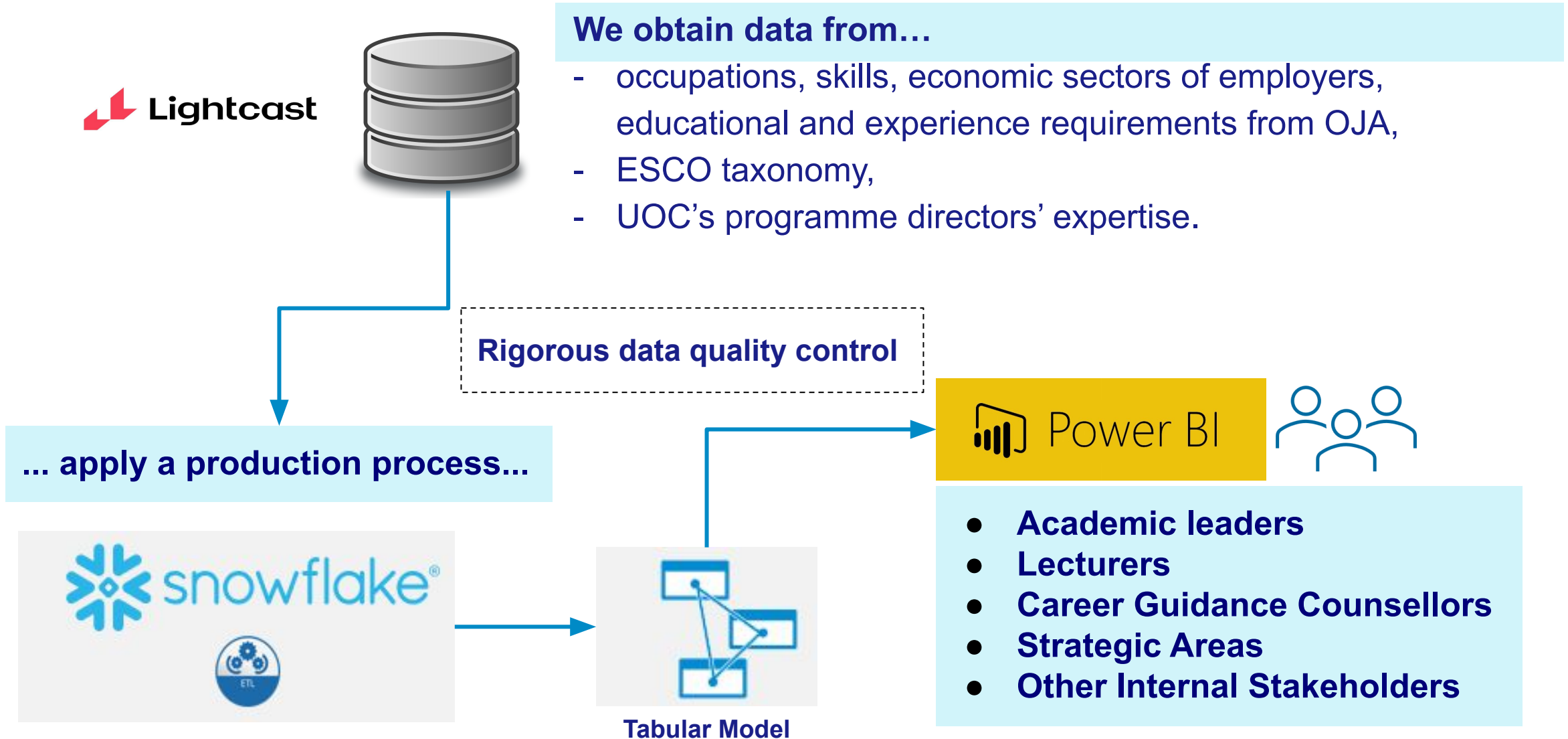


In the interactive labor market report, you will be able to find information on the demand for occupations and competencies, personalizing filters according to your needs!

Do you feel like exploring the data?

Start browsing and I will go discover opportunities, trends, and key data for strategic decision-making.

Inside the Interactive Labour Market Tool



The Interactive Labour Market Tool: Occupations

Example:

MBA

1. Occupations

Clear filters



Select by UOC estudi UOC

Select by UOC degree

Select by occupation group

Select by occupation

Filter by Autonomous Community (CCAA)

EEE

Master in Executive Business Administration

All

All

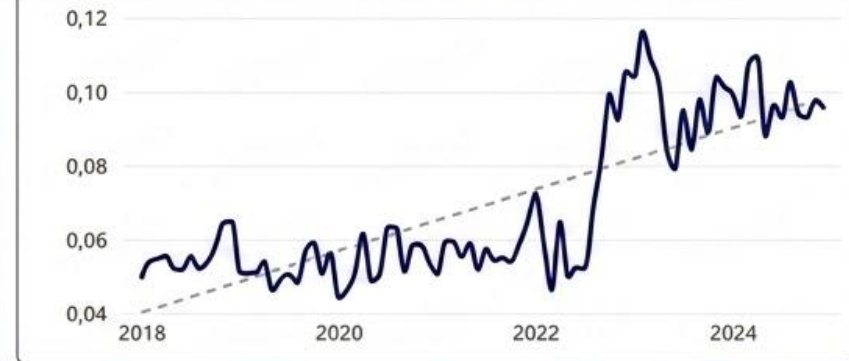
All

Filtres actius: Estudi = EEE | Programa = Màster en Direcció Executiva d'Empreses | Active filters: Study = EEE | Occupation Group = All | Occupation = All | CCAA = All

Vacancies by occupation *(Percentages are calculated on the total vacancies that specify an occupation)

Occupation (ESCO Level 4)	Click tic per veure en valors: <input type="radio"/> Absoluts <input checked="" type="radio"/> Relatius		Vacancies 2024	Vacancies 2018-2024	Trend
Research and development managers			2,45%	1,82%	0,24 %
Directors/es de vendes i comercialització			1,67%	1,21%	0,13 %
Directors/es de serveis de tecnologia de la informació i les comunicacions			1,27%	0,84%	0,12 %
Gerents de comerços majoristes i minoristes			0,98%	0,71%	0,08 %
Directors/es d'administració i serveis no classificats sota altres epígrafs			0,81%	0,71%	0,03 %
Directors/es d'indústries manufactureres			0,48%	0,34%	0,04 %
Directors/es d'empreses de proveïment, distribució i afins			0,41%	0,20%	0,02 %
Directors/es financers/es			0,39%	0,25%	0,05 %
Directors/es generals i gerents generals			0,36%	0,37%	-0,01 %
Directors/es de publicitat i relacions públiques			0,20%	0,13%	0,02 %
Directors/es de recursos humans			0,19%	0,20%	0,01 %
Directors/es de serveis d'educació			0,19%	0,11%	0,02 %
Gerents d'hotels			0,15%	0,11%	0,01 %
Directors/es de polítiques i planificació			0,13%	0,07%	0,02 %
Directors/es i gerents de serveis professionals no classificats sota altres epígrafs			0,13%	0,10%	0,01 %
Gerents de sucursals bancàries, de serveis financers i d'assegurances			0,07%	0,05%	0,00 %
Directors/es de serveis de salut			0,06%	0,05%	0,00 %
Directors/es d'empreses de construcció			0,06%	0,04%	0,01 %
Gerents de restaurants			0,06%	0,05%	-0,00 %

Monthly trend of vacancies (2018-2024)



Sectors with the most vacancies (2024)

Professional, scientific and technical activities	35.00 %
Administrative and support service activities	18.06 %
Information and communication	10.38 %
Manufacturing	9.68 %
Wholesale and retail trade; repair of motor vehicles and motorcycles	7.79 %

Ocupacions emergents (pròximament)

The Interactive Labour Market Tool: Changes in skills profiles

Example:
MBA →
“Managing directors and chief executives”

2. Skills profile changes

Clear filters 

Filter by UOC study: EEE | Filter by UOC degree: Executive Business Management Master | Filter by occupation group: All | Filter by occupation: Managing directors and chief executives | Filter by CCAA: All

Active filters: Study = EEE | Program = Executive Business Management Master | Occupation Group = All | Occupation = Managing directors and chief executives | CCAA = All

In-demand skill profile in 2018-2019	
(Vacancies percentages are calculated on selected filters)	
Competencies	% Vacancies 2018-2019
Adapt to change	50,93 %
Have IT skills	45,89 %
Assume responsibility	43,12 %
English	37,59 %
Use Microsoft Office	29,54 %
Manage time	27,75 %
Use administrative systems	27,09 %
Sales strategies	25,15 %
Project management	23,29 %
Think creatively	23,24 %
Economy	23,11 %
Delegate responsibilities	22,63 %
Teamwork	22,09 %
Principles of teamwork	22,09 %
Communicate with managers and directors	20,91 %
Office suite programs	19,39 %
Create solutions for problems	18,71 %
Office administration	18,40 %
Problem solving	17,71 %

In-demand skill profile in 2023-2024			
(Vacancies percentages are calculated on selected filters)			
Competencies	% Vacancies 2023-2024	Specificity 2023-2024	Changes
Corporate social responsibility	20,30 %	17,66	△
Brand marketing techniques	13,94 %	7,84	↑
Develop commercial relations	20,36 %	5,84	△
Strategy	13,57 %	5,73	△
Economy	45,20 %	5,22	△
Promote team spirit	42,62 %	4,81	△
Principles of design	14,55 %	4,75	△
Manage budgets	29,92 %	4,44	△
Supervise work	10,03 %	4,22	↑
Office administration	32,24 %	4,02	△
Planning	25,46 %	3,93	△
Project management	47,46 %	3,73	△
Sales strategies	43,50 %	3,44	△
Communicate with managers and directors	32,57 %	3,39	△
Coordinate team communication	11,72 %	3,20	△
Cost management	14,06 %	3,19	△
Maintain relationships with suppliers	12,02 %	3,17	↑
Self-promote	10,97 %	3,15	△
Accounting	13,74 %	3,10	△

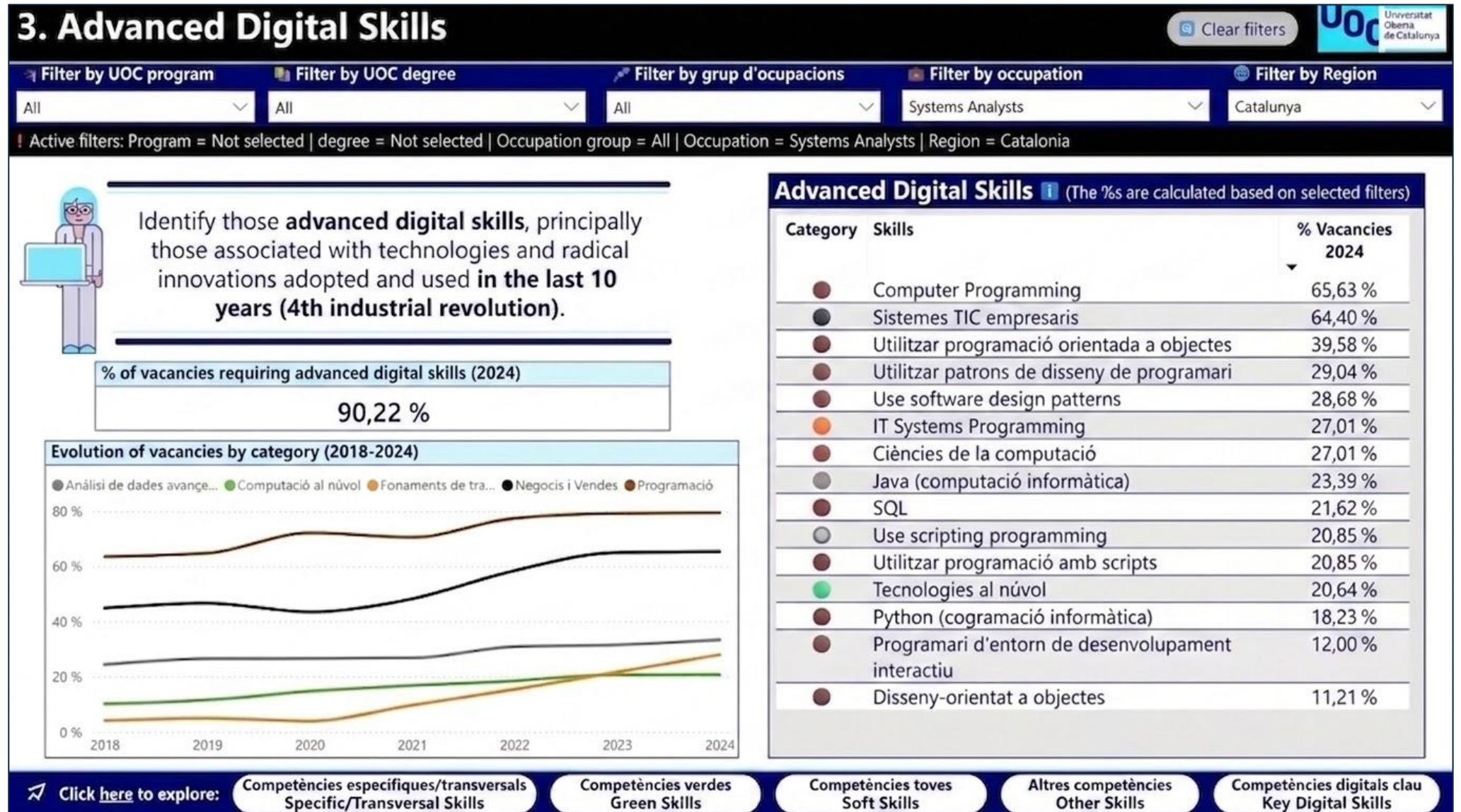
Click to exclude transversal competencies

Exclude

⚡ Occupations that have experienced the strongest changes (coming soon)

The Interactive Labour Market Tool: Trends impact

Example:
“Systems Analysts”
in Catalonia



4.



The descriptive labour market report

Shared Intelligence to Adapt UOC's Academic Offer

- The Labour Market Unit (UPAL) leads labour market analysis and foresight within UOC's Committee for Intelligence and Foresight (CIP).
- The CIP aims to connect units that often work in silos — academic, strategic, innovation, and labour market areas — enabling *more integrated and informed decision-making*.
- **Our activity is part of the university strategic plan.**



Method: LM source hybridization to Educational Strategy



Global overview

Secondary Sources

Megatrends



Labour market

Local OJAs

Lightcast & ESCO 5+



Local Expertise

Innovation Camps

Stakeholder
Reflection

Applied Result

+ A specific **AI Impact Evaluation** for each **faculty**, defining a future scenario for representative occupations.

Macrotrends update (2025 -> 2026)



Digital & AI Transition

Generative AI and basic content automation.

Agentic AI & Robotics: Workflow autonomy and legal compliance (EU AI Act).



Demographics

Focus on the "Care Sector" due to population aging.

Replacement Demand: 90% of opportunities driven by generational turnover.



Green Transition

Regulation-driven (Net-Zero Industry Act).

Green Talent: Demand tied to the practical application of climate regulations.



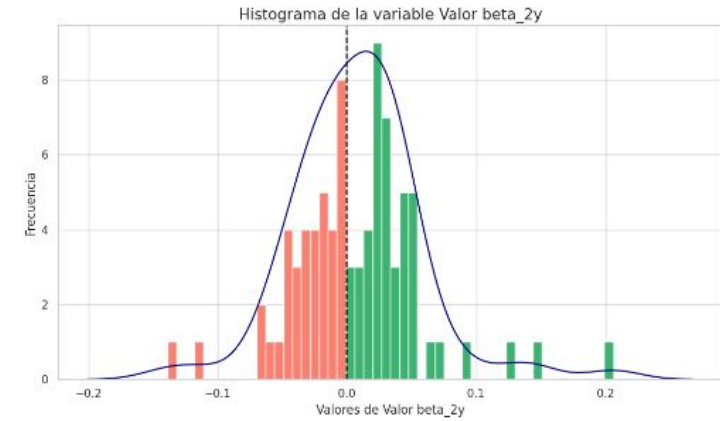
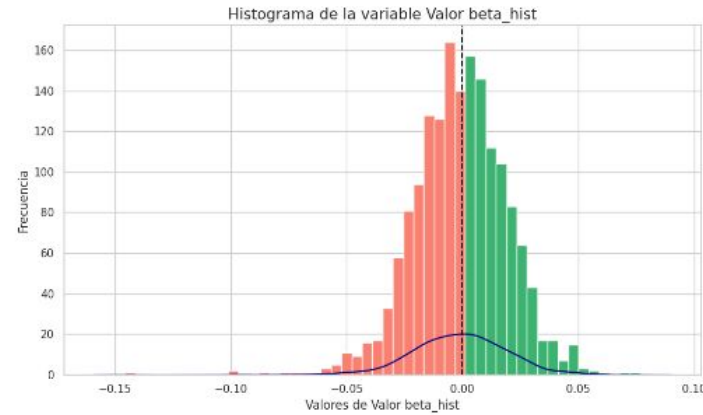
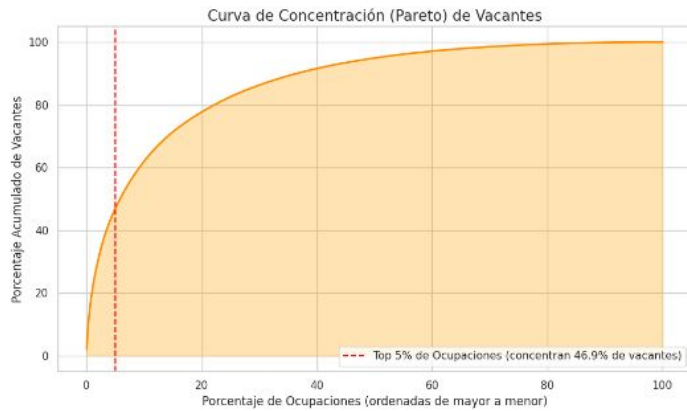
Geopolitics & Sovereignty

Brief mentions of global conflicts.

Tech Sovereignty: Resilience, defense investment, and high-skill job creation.

The advancement of artificial intelligence is deeply intertwined with all other megatrends

Lessons about granular OJAs data.



The integration of indicators is fundamental to comprehensive data reporting.

LMI diagnosis by faculty (Estudis)



IT & TELECOM

- [+++] Data Scientist
- [+++] Software Engineer
- [+-+] Web Developer



BUSINESS

- [+++] Digital Marketing
- [+++] Logistics Director
- [+-+] Sustainability Mgr



HEALTH

- [--+] Biomedical Eng.
- [--+] Social Worker
- [---] Dietician



PSYCHOLOGY

- [--+] Clinical Psych.
- [--+] Psychotherapist
- [++-] Recruitment



EDUCATION

- [--+] Psychopedagogue
- [--+] Secondary Teacher
- [---] VET Teacher



LAW & POLITICS

- [+++] Lawyer
- [+-+] Policy Consultant
- [---] Criminologist



ARTS & HUMANITIES

- [--+] Digital Artist / Hist.
- [--+] Interpreter
- [---] Cultural Manager



INFO & COMM

- [--+] Journalist
- [---] PR Manager

STRATEGIC OPPORTUNITIES

Agile Hub (Bootcamps) Quick wins: Blockchain Architects, AI Designers, Life Coaching.

Structural Growth Expansion: Cloud Systems, Health ESG, Sustainable Energy.

Curricular Pivot From technical execution to strategic direction across faculties.

5.

Importance of the initiative and next steps



The Labor Market Reports Significance

- Feedback is everything.
- We are always late and that's ok.
- As long as we never stop monitoring (LMI + Multiple data sources).
- Example of agile, skills-driven learning ecosystems that are better aligned with ongoing societal and labour market transformation.
- These tools stands for UOC's vision: lifelong learning, upskilling, and re-skilling for employability.
- These tools don't compromise academic autonomy.

Thank you

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