

# ESCO

European Skills, Competences, Qualifications and Occupations:  
*what it is and how it can be used*

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# Agenda

1. ESCO Overview
2. ESCO use cases
  - ESCO connects people to jobs
  - ESCO supports the analysis of the Labour Market
  - ESCO connects the Labour Market to Education & Training
3. Q&A





# ESCO overview



# ESCO

The European multilingual standard classification of Skills, Competences and Occupations. ESCO works as a dictionary, **describing, identifying and classifying** professional occupations and skills relevant for the EU labour market and education and training.

- ESCO is **not a recognition platform**, but rather a skills and occupations **taxonomy** that is used for job matching, career guidance and skills intelligence.
- It provides for a **standardized terminology** on occupations and skills.
- The inclusion of an occupation or skill in the classification has **no legal value** nor a recognition at European or national level, or that it will enhance a regulation change in a given Member State.
- ESCO skills requirements **do not mean to provide harmonized training content** for specific professions, since education and training requirements are also a competence of the EU Member States.



# ESCO

- Available in **28 languages** (all official EU languages plus Icelandic, Norwegian, Ukrainian, and Arabic).
- ESCO also gives data on **relations** between occupations and skills, i.e. listing **essential** and **optional** skills for each occupation. **Green and Digital** skill sets.
- **Freely accessible** on the ESCO portal. Data can be downloaded in various file formats or accessed via API.
- **Major and Minor versions** of ESCO in a continuous update process. **ESCOv1.2.** latest major version.



# How to access ESCO?

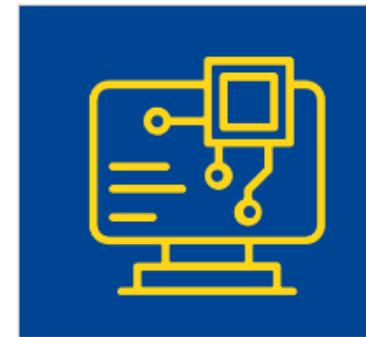
ESCO is published as Linked Open Data: data is openly available and interconnected, fostering collaboration and interoperability



## Download ESCO files

Download ESCO classification files in **various formats**:

- SKOS-RDF: ttl
- ODS
- CSV



## ESCO API

Access ESCO classification through two types of **Application Program Interface (API)**:

- an **ESCO web-service API**
- an **ESCO Local API**



# ESCO Download

You can download ESCO in various formats (*SKOS-RDF (ttl), ODS, and CSV*) by accessing the [ESCO download page](#) and applying specific filters. There is a possibility to download multiple package sets simultaneously! (i.e. in different languages or versions)

## Delta files

Version [i](#) Content [i](#) Language [i](#) File type [i](#)

ESCO dataset - v1.2.0 classification fr CSV

Version of the API to download Type of content to download Language of the content to download File type to download

Add to your package

Version: ESCO dataset - v1.2.0 Content: Classification Language: en File type: csv (41.4 MB)	Version: ESCO dataset - v1.2.0 Content: Classification Language: es File type: ods (7.71 MB)	Version: ESCO dataset - v1.2.0 Content: Classification Language: fr File type: csv (37.51 MB)
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Name
 <a href="#">broaderRelationsOccPillar_en</a>
 <a href="#">broaderRelationsSkillPillar_en</a>
 <a href="#">conceptSchemes_en</a>
 <a href="#">digCompSkillsCollection_en</a>
 <a href="#">digitalSkillsCollection_en</a>
 <a href="#">greenSkillsCollection_en</a>
 <a href="#">ISCOGroups_en</a>
 <a href="#">languageSkillsCollection_en</a>
 <a href="#">occupations_en</a>
 <a href="#">occupationSkillRelations_en</a>
 <a href="#">researchOccupationsCollection_en</a>
 <a href="#">researchSkillsCollection_en</a>
 <a href="#">skillGroups_en</a>
 <a href="#">skills_en</a>
 <a href="#">skillsHierarchy_en</a>
 <a href="#">skillSkillRelations_en</a>
 <a href="#">transversalSkillsCollection_en</a>



# ESCO update process





## ESCO use cases



# ESCO use cases



ESCO CONNECTS  
PEOPLE TO JOBS



ESCO SUPPORTS  
THE ANALYSIS OF  
LABOUR MARKET



CONNECTS THE  
LABOUR MARKET TO  
EDUCATION AND  
TRAINING



# ESCO connects people to jobs

- Facilitates the **design of job vacancies** and **job profiles** in different languages.
- **Recommends** occupations and skills to support the creation of job vacancies and CVs.
- **Improves matching algorithms** based on natural language processing.
- **Classifies** job vacancies in job portals and **improves search results**.
- **Boosts labour mobility** (i.e. EURES portal).

## PES examples



## Job portals



## Eures portal



# ESCO connects people to jobs



## PES use cases

- Ireland
- Greece
- Island
- Denmark



# ESCO connects people to jobs

## Skills

Please describe the skills related to the job you are looking for

As an IT project manager, I possess a diverse skill set to effectively lead and manage Information Technology projects. My skills collectively enable me to plan and execute projects successfully, communicate with stakeholders, lead and motivate teams, manage budgets, and ensure the quality and security of project deliverables.

## Keywords

You will get keyword suggestions based on your text. Please choose the most suitable ones. Keywords are used for job recommendations.

Agile project management    Lean project management    build business relationships  
create project specifications    identify legal requirements    manage budgets    manage project changes  
manage project information    organise project meetings    provide cost benefit analysis reports  
ICT project manager    operations manager    programme manager    project support officer

[Modify keywords](#)

## PES use cases

### ■ Finland

Display of ESCO skills in their system.



# ESCO connects people to jobs

EURES

EURES regulation 2016/589

- ESCO makes EURES services more pertinent to the current demands of the labour market.  
Decision of **adopting/mapping depends on national needs and expectations.**
- Promotes intra-EU labour mobility.
- Facilitates exchange of job vacancies and job seeker profiles.
- Ensures high-quality matching across different languages and national contexts.



# ESCO supports the analysis of LM data

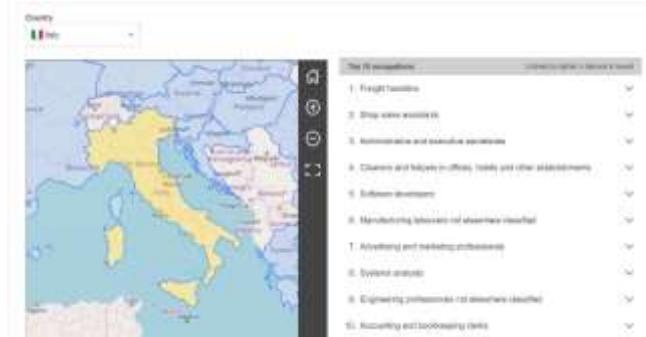
- Collect, aggregate and interpret data across language barriers, IT systems and countries.
- Facilitates the statistical analysis and visualisation of emerging skills and occupational trends.
- Facilitates the analysis of skills shortages and surpluses.
- Assist in the assessment of career paths of graduates and their skills mismatches.

## CEDEFOP OVATE project



Detailed information on the jobs and skills employers **demand** based on online job adds (OJAs) in 28 European countries.

## Europass Job & SkillTrends tool



Using OVATE and ESCO Europass created tool that give information on demand of **specific occupations by country**.

## Research and statistical offices



Different organizations that focus on gathering LM intelligence or doing specific analysis on Green or Digital skills and jobs

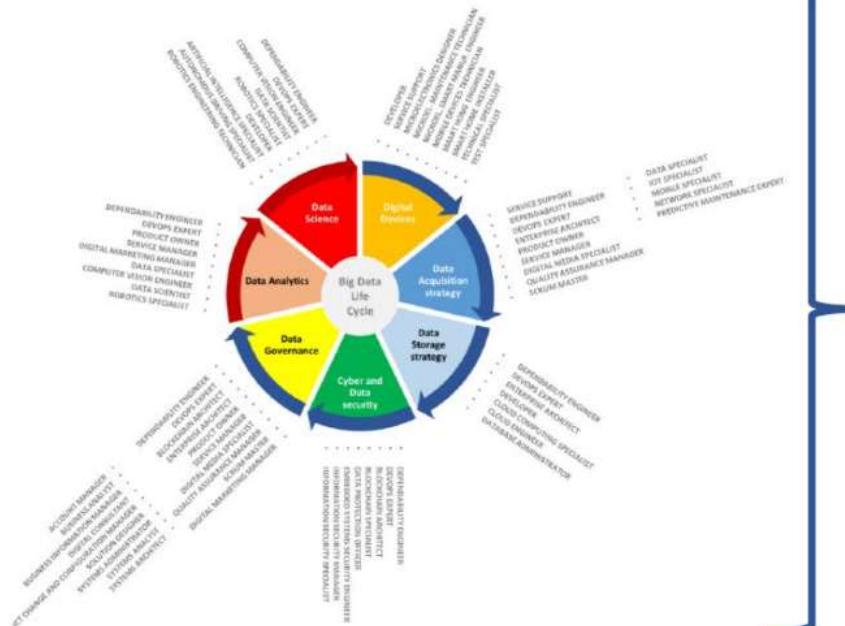


# ESCO supports the analysis of LM data



*"Enhancing labour mobility for EU enlargement economies: the role of ESCO"*  
24-25 June 2025, Turin (Italy)

## ***Esco system in sectoral analyses: the case of Big-Data and AI jobs***



Of the 33 professions mapped in ESCO we have:

- Description of the profession
- *Knowledge* that is both essential and optional
- *Skills/Competencies* that are essential and optional

# Regional skills intelligence observatories

## ■ Regione Emilia-Romagna.



# ESCO supports the analysis of LM data



The screenshot shows the homepage of the Luxembourg Jobmarket. The top navigation bar includes the ADEM logo, the text 'The Luxembourg Jobmarket', and links for 'Jobseekers', 'Employees', 'Employers', and 'Job Mobility'. The main banner features a photograph of several people in a workshop or laboratory setting, with the text 'Formatiounen, déi nei Karriärméiglechkeeten opmaachen.' (Trainings that open new career opportunities) in Luxembourgish and its English translation below it. The right side of the page shows a 'JobBoard' interface with a search bar and language options (FR, DE, EN).

## Luxembourg

- Agence pour le développement de l'emploi (ADEM).
- Use of ESCO for Data Science.
- Extract ESCO skills from ADEM job adds.
- Skill Analytics.



# ESCO connects the LM to Education

- Supporting **transparency, analysis and comparability of skills** contained in the content of qualifications and learning opportunities. Universities key stakeholders.
- Facilitating the **formulation of learning outcomes** through a standard vocabulary.
- Enabling evidence-based **curricula reforms**.
- Enhancing **personalised digital career guidance services**.
- Creating **tailored recommendations of courses** based on skills gap analysis and/or desired career path.

## Europass



europass

## European Digital Credentials

European Digital Credentials for Learning

Prove your learning activities and achievements with electronically sealed digital records fully integrated with your Europass profile.

## Universities



Universitat  
Oberta  
de Catalunya



UNIVERSITÀ  
DEGLI STUDI  
DI MILANO



# ESCO connects the LM to Education

The screenshot shows the ESCO Platform interface. On the left, a sidebar titled 'My Skills' displays a list of skill suggestions such as 'protect health and well-being while...', 'use learning strategies...', 'support company plan...', 'apply quality standards...', 'support cultural diversity...', 'follow environmentally-sustainable...', 'attend to detail...', 'accept constructive criticism...', 'support gender equality...', and 'person...'. A search bar for 'photography' is shown, with results including 'photography', 'advise customers on photography', 'work with the director of photography', 'commercial photography', and 'research new photographic procedures'. Below this is a section for 'Application of knowledge' and 'Digital competences' with various sub-options. On the right, a modal window titled 'Digital skills' is open, showing a search bar for 'excel' and a list of results including 'Very good knowledge of MS Office (Outlook Word Pow...', 'Excellent use of autocad', 'Microsoft word, Excel', 'Microsoft Office: Word, Excel, Access, Power Point, O...', 'Microsoft Office Word Excel Access Power Point Outlook...', 'MS Office (Word, Excel, Power Point, Access)', and 'excellent knowledge of software for technical drawings...'. A sidebar on the right of the modal says 'Add to your digital skills from the list below. Click on the skill and drag it to the left.' with buttons for 'Microsoft Word', 'Microsoft Excel', 'Outlook', 'Power Point', 'Microsoft Powerpoint', and 'Word Press'. At the bottom of the modal are 'Cancel' and 'Save' buttons.

## Europass



# ESCO connects the LM to Education

Graduate University Study of Civil Engineering

Valid from: 20/09/2019 00:00 GMT +0200 | Type: Mandated issue

Credential Preview | Export | Upload another credential | Share | English

Proven by

Title	Grade
Overall Assessment	excellent (5)

Influenced by: Applied mathematics course, Applied mathematics Study visit, Concrete structures I course, Dynamics of structures and earthquake engineering course, Geotechnical engineering course, Stability of structures course.

Entitles Owner to: Postgraduate doctoral study, Civil engineer, Recognition for credit

Sub-Achievements

Applied mathematics, Concrete structures I, Dynamics of structures and earthquake engineering, Geotechnical engineering, Stability of structures

Specification

Ach-Spec-ID-Scheme identifier: AchSpecID-72

Learning Outcomes:

LO1 related to applied mathematics

LOID-Scheme identifier: LOID-73a

To formulate equations of mathematical physics for engineering problems, and to solve them analytically or with numerical methods.

Type: knowledge

Reusability Level: cross-sector skills and competences

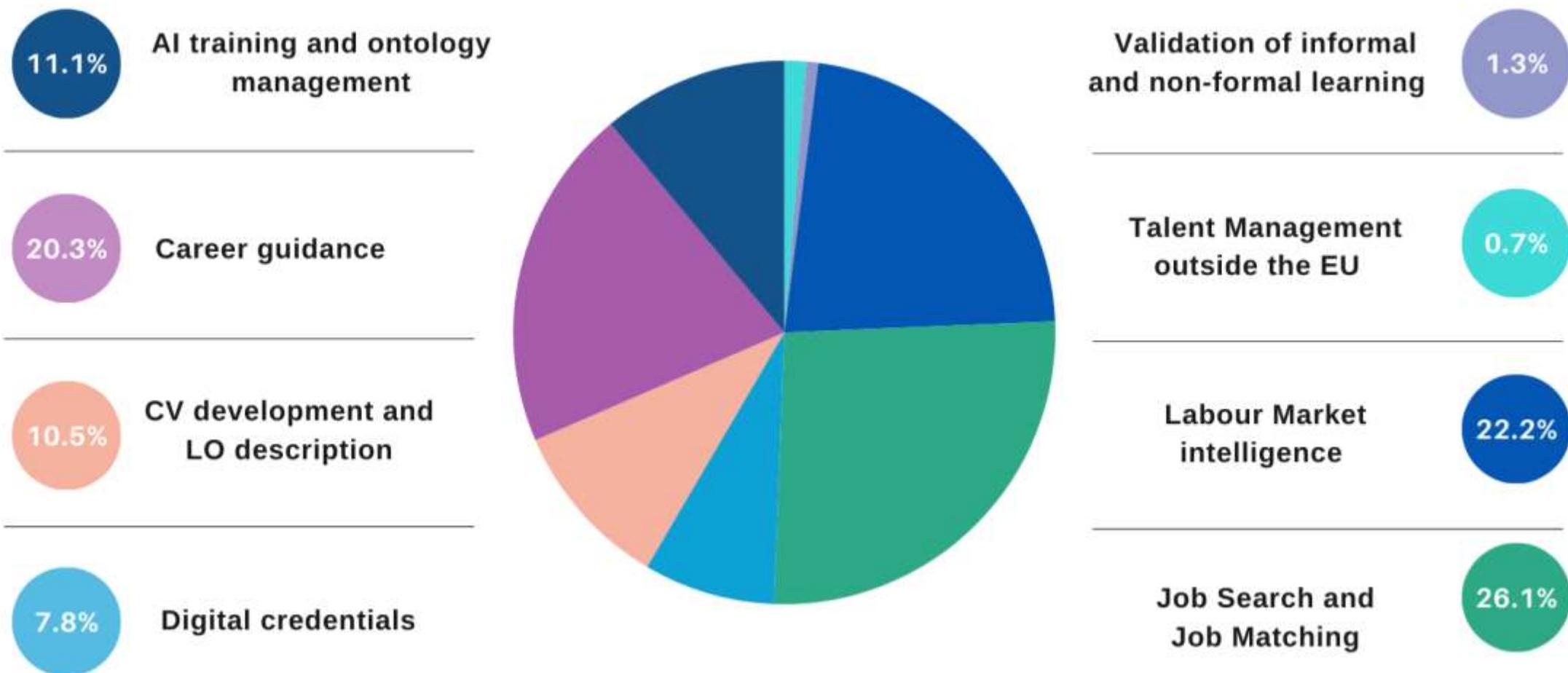
Related ESCO Skills: use mathematical tools and equipment, execute analytical mathematical calculations, geodesy

Related Skills: applied mathematics, perform engineering calculations, construct earthquake resistant structures

## European Digital Credentials for Learning



# ESCO use cases data

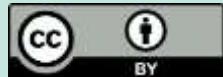




# Q&A



# Thank you



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