

# ESCO

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

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16/10/2025

# 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 <sup>i</sup> Content <sup>i</sup> Language <sup>i</sup> File type <sup>i</sup>

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)

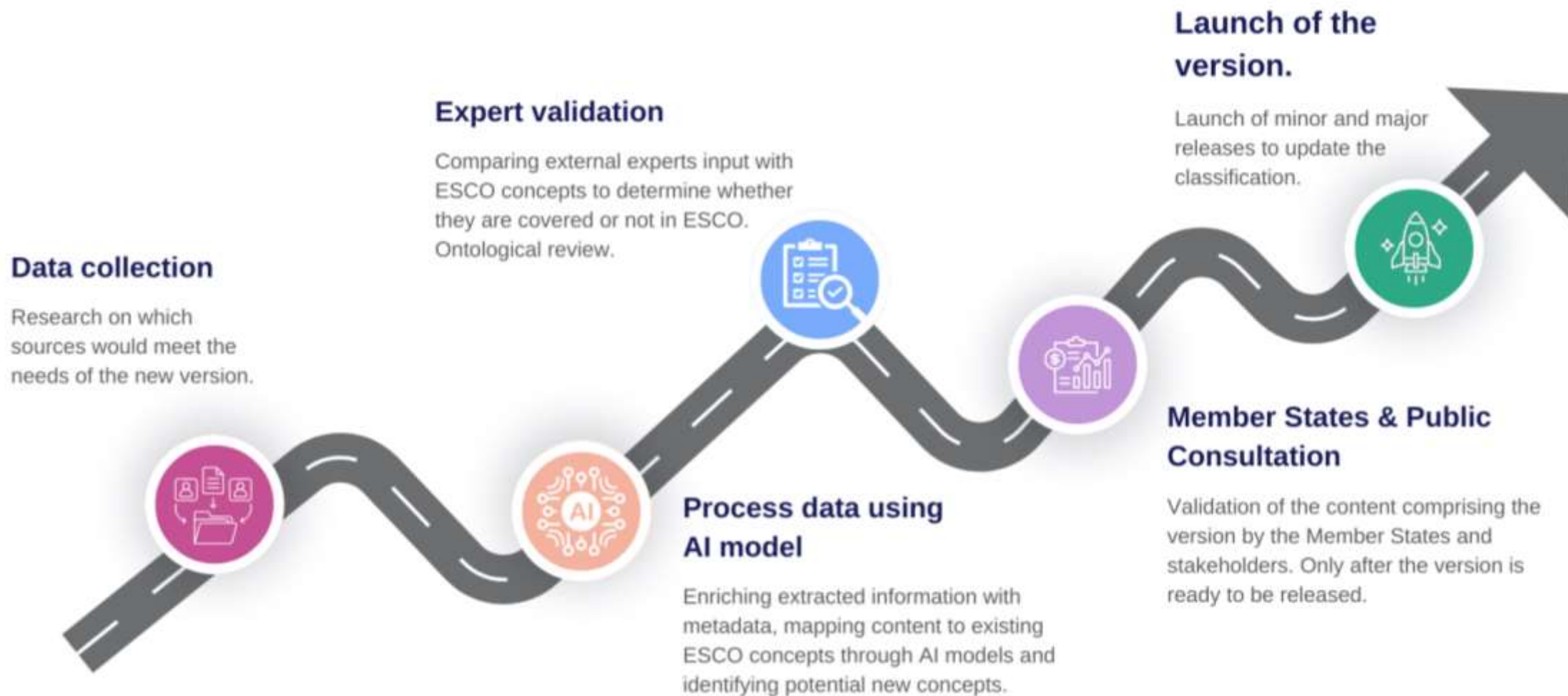
Name ^

-  broaderRelationsOccPillar\_en
-  broaderRelationsSkillPillar\_en
-  conceptSchemes\_en
-  digCompSkillsCollection\_en
-  digitalSkillsCollection\_en
-  greenSkillsCollection\_en
-  ISCOGroups\_en
-  languageSkillsCollection\_en
-  occupations\_en
-  occupationSkillRelations\_en
-  researchOccupationsCollection\_en
-  researchSkillsCollection\_en
-  skillGroups\_en
-  skills\_en
-  skillsHierarchy\_en
-  skillSkillRelations\_en
-  transversalSkillsCollection\_en





# 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

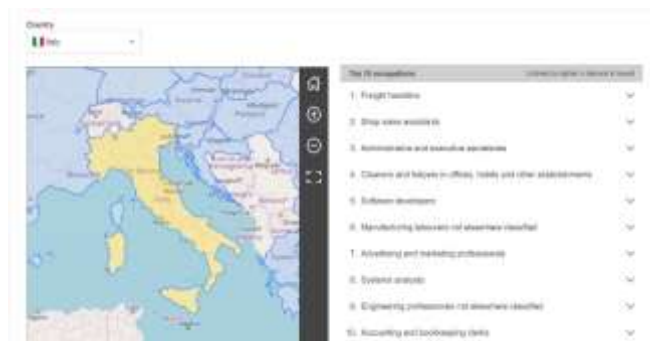
- **Collect, aggregate and interpret data across language barriers, IT systems and countries.**
- Facilitates the statistical analysis and visualisation of **emerging skills and occupational trends.**
- Facilitates the analysis of skills **shortages** and **surpluses.**
- Assist in **the assessment of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

Regione Emilia-Romagna



"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

### Connections

- Connection to the ISTAT CPI
- Hirings for ISTAT CPI (source: CO)
- Geolocation of the hiring companies (source: CO)



## Regional skills intelligence observatories

- Regione Emilia-Romagna.



# ESCO supports the analysis of LM data

## 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.



# ESCO connects the LM to Education


The screenshot displays the 'My Skills' interface. On the left, under 'Suggestions', there are various skill categories like 'protect health and well-being while...', 'use learning strategies', and 'support company plan'. A search bar with 'photography' entered shows a dropdown list of suggestions including 'advise customers on photography', 'work with the director of photography', 'commercial photography', and 'research new photographic procedures'. Below this, the 'My Skills' section is visible, followed by 'Application of knowledge' with sub-sections for 'Digital competences' and 'Numeracy and mathematics'. On the right, a 'Digital skills' modal is open, showing a search for 'excel' and a list of suggestions like 'Very good knowledge of MS Office (Outlook Word Pow...', 'Excellent use of wordcad', and 'Microsoft word, Excel'. A list of skills to add is shown on the right, including 'Microsoft Word', 'Microsoft Excel', 'Outlook', 'Power Point', 'Microsoft Powerpoint', and 'Word Press'. At the bottom, there is a 'Certificates and diplomas' section with an 'Add file(s)' button and a note about accepted formats: 'Accepted formats: PNG, JPG, PDF'.


Europass




# ESCO connects the LM to Education


## European Digital Credentials for Learning


**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


 Ana Andromeda


 University Graft


 Master of Science in Civil Engineering


 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

 Postgraduate doctoral study

 Civil engineer

 Recognition for credit

**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

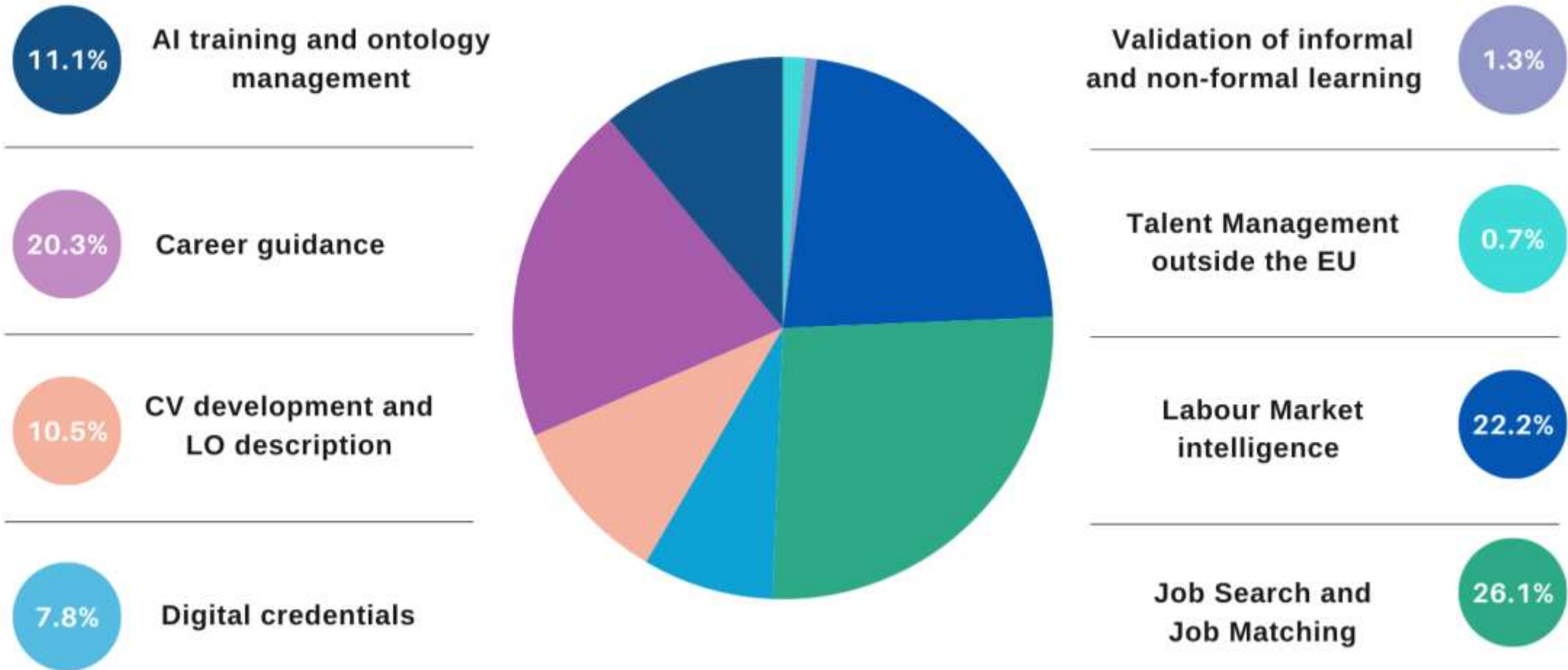
**Related ESCO Skills:** use mathematical tools and equipment, execute analytical mathematical calculations, geodesy

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





# ESCO use cases data





# Q&A



# Thank you



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Slides 3,8,9,21, source: Canva.com / Slides 12-20: source: National PES

