ESCO

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

Valentina Grganovic

European Commission

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
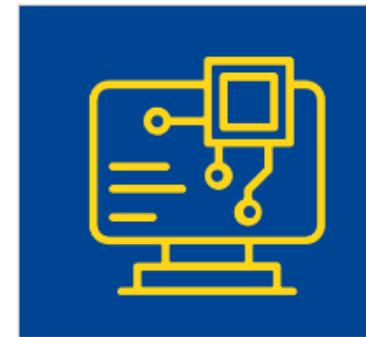
ESCO API

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

ESCO update process

Launch of the version.

Launch of minor and major releases to update the classification.

Expert validation

Comparing external experts input with ESCO concepts to determine whether they are covered or not in ESCO. Ontological review.

Data collection

Research on which sources would meet the needs of the new version.

Process data using AI model

Enriching extracted information with metadata, mapping content to existing ESCO concepts through AI models and identifying potential new concepts.

Member States & Public Consultation

Validation of the content comprising the version by the Member States and stakeholders. Only after the version is ready to be released.

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

- 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	**Europass Job & SkillTrends tool**	**Research and statistical offices**

Detailed information on the jobs and skills employers **demand** based on online job adds (OJAs) in 28European countries.
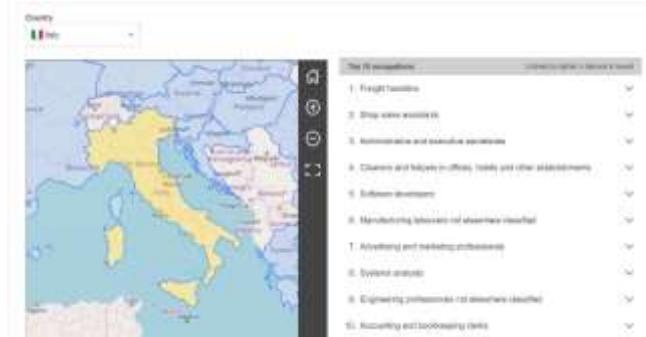
Using OVATE and ESCO Europass created tool that give information on demand of **specific occupations by country**.

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

Sviluppo Lavoro Italia

"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
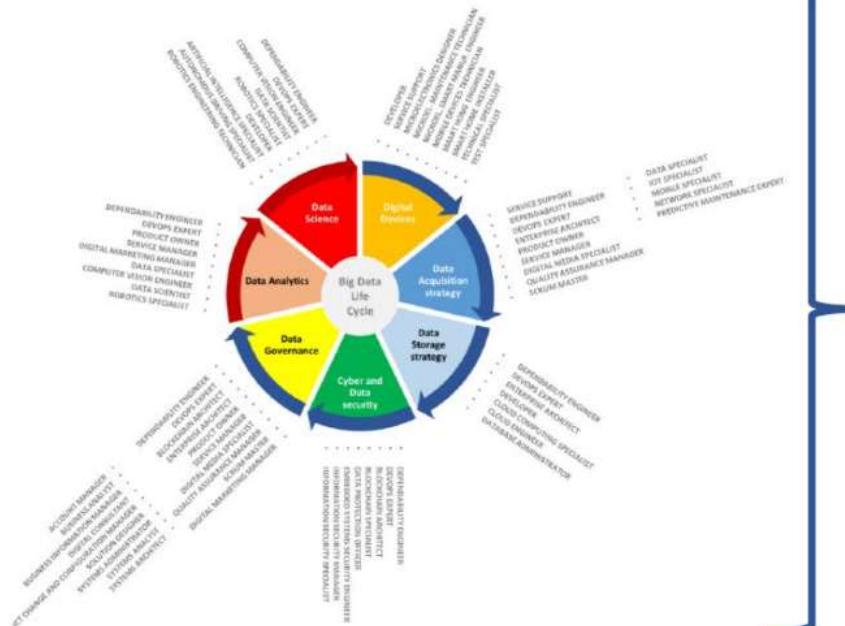
Of the 33 professions mapped in ESCO we have:

➢ 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.

Europass	**European Digital Credentials**	**Universities**

ESCO connects the LM to Education

Europass

ESCO connects the LM to Education

European Digital Credentials for Learning

ESCO use cases data

11.1% AI training and ontology management

20.3% Career guidance

10.5% CV development and LO description

7.8% Digital credentials

1.3% Validation of informal and non-formal learning

0.7% Talent Management outside the EU

22.2% Labour Market intelligence

26.1% Job Search and Job Matching

Q&A

Thank you

https://esco.ec.europa.eu/en
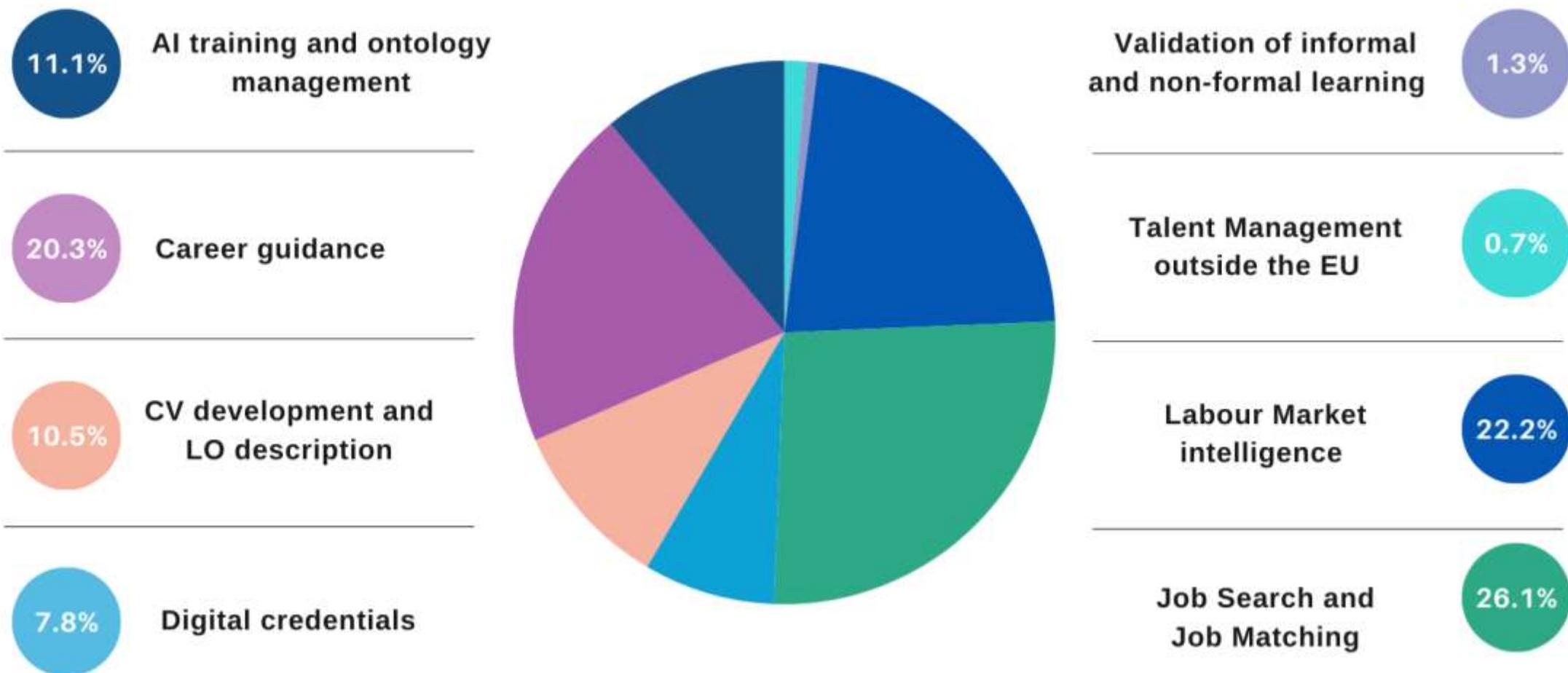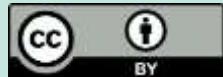
EMPL-ESCO-SECRETARIAT@ec.europa.eu