# ESCO and FIELDS

## WP1 meeting

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European Commission
DG Employment, Social Affairs and Inclusion
Unit E2 – Skills and Qualifications

# EU goals in a digital labour market

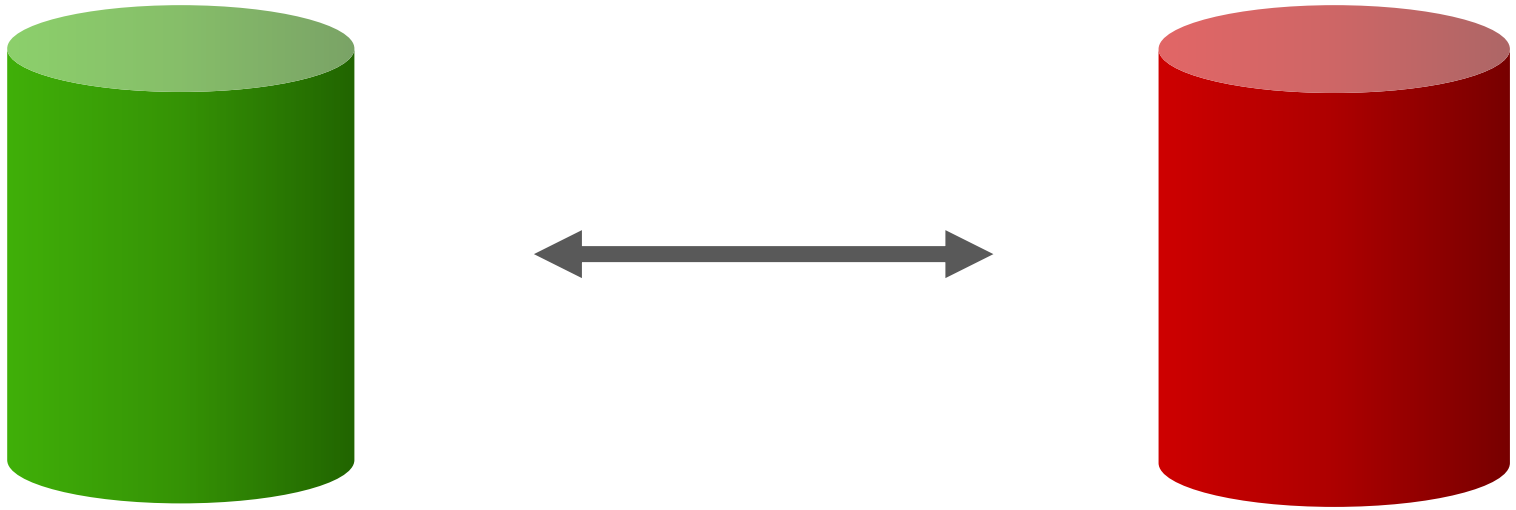
Better link education-training to labour ➡ ensure access to the best opportunities

Ensure transparency of information on skills through systems' interoperability

Allow open-fair access to information on skills, qualifications, jobs and training

- ➡ avoid monopolisation of data in digital labour market
- ➡ European open standards to counteract risks of proprietary standards

# ESCO pillars



2942
Occupations

13 500
Skills + Knowledges

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agriculture

**OCCUPATIONS**

agriculture, forestry and fishery vocati…
agricultural policy officer
agricultural inspector
agricultural scientist
agricultural engineer
livestock advisor
agricultural technician
Production managers in agriculture, for…
Life science technicians and related ass…
bioengineer
textile product developer
Agricultural, forestry and fishery labour…
Physical and earth science professionals
Subsistence crop farmers
Subsistence fishers, hunters, trappers …

# Occupations

**2942**
**occupations**

The occupations pillar is one of the three pillars of ESCO. It organises the occupation concepts in ESCO. It uses hierarchical relationships between them, metadata as well as mappings to the International Standard Classification of Occupations (ISCO) in order to structure the occupations.

Each occupation concept contains one preferred term and any number of non-preferred terms and hidden terms in each of the ESCO languages.

Each occupation also comes with an occupational profile. The profiles contain an explanation of the occupation in the form of description, scope note and definition. Furthermore, they list the

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**OCCUPATIONS**

- 0 - Armed forces occupations
- 1 - Managers
- 2 - Professionals
- 3 - Technicians and associate profe...
- 4 - Clerical support workers
- 5 - Service and sales workers
- 6 - Skilled agricultural, forestry and...
- 7 - Craft and related trades workers
- 8 - Plant and machine operators an...
- 9 - Elementary occupations

# crop production worker

Discuss this topic in the Online Forum

Code

9213.1

Description

Crop production workers carry out practical activities and assist in the production of agronomical crops.

Alternative label

crop worker

crops production worker

crop production workers

farm hand

crop growing worker

growing worker

farm worker

Regulatory aspect

To see if and how this occupation is regulated in EU Member States, EEA countries or Switzerland please consult the Regulated Professions Database of the Commission. Regulated Professions Database:

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Aptitudes et compétences essentielles

ensure soil fertility
execute disease and pest control activities
maintain storage facilities
maintain technical equipment
manage agricultural staff
manage production enterprise
monitor fields
operate agricultural machinery
store crops
store products
supervise crop production
supervise hygiene procedures in agricultural settings

Connaissances essentielles

agronomical production principles
crop production principles
ecology
environmental legislation in agriculture and forestry
fertilisation principles
health and safety regulations
leadership principles
pest control in plants

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# agricultural technician

Discuss this topic in the Online Forum

Code

3142.1

Description

Agricultural technicians collect and conduct experiments and tests on agriculture and aquaculture specimens. They provide support to scientists and farmers and also analyse and report on conditions in the collected specimens' environments.

Alternative label

biotechnician

viticulture technician

agricultural technologist

bacteriological testing coordinator

horticultural technician

aquaculture technician

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analyse environmental data
analyse scientific data
analyse test data
apply safety procedures in laboratory
conduct field work
execute analytical mathematical calculations
gather experimental data
maintain laboratory equipment
write work-related reports

Essential Knowledge

laboratory techniques

Optional skills and competences

advise on fertiliser and herbicide
advise on the causes of crop disorders
assess crop damage
collect weather-related data
culture aquaculture hatchery stocks
evaluate vineyard problems
evaluate vineyard quality
inspect agricultural fields
irrigate soil
maintain aquaculture containers

Search

SKILLS/COMPETENCES

- A - attitudes and values
- K - knowledge
- L - language skills and knowledge
- S - skills

# Skills

**13485**
**skills / competences**

The ESCO skills pillar distinguishes between i) skill/competence concepts and ii) knowledge concepts by indicating the skill type. There is however no distinction between skills and competences. Each of these concepts comes with one preferred term and a number of non-preferred terms in each of the 27 ESCO languages. Every concept also includes an explanation in the form of

**SKILLS/COMPETENCES**

- A - attitudes and values
- K - knowledge
- L - language skills and knowledge
- S - skills
  - S1 - communication, collaborati…
  - S2 - information skills
  - S3 - assisting and caring
  - S4 - management skills
  - S5 - working with computers
  - S6 - handling and moving
    - S6.0 - handling and moving
    - S6.1 - sorting and packaging…
    - S6.2 - moving and lifting
    - S6.3 - transforming and blen…
    - S6.4 - tending plants and cr…
    - S6.5 - assembling and fabric

Description

Propagating, cultivating, pruning, caring for and harvesting plants and crops.

Autre libellé

plants and crops

Aptitudes/compétences plus générales

S6 - handling and moving

Aptitudes/compétences plus précises

S6.4.0 - tending plants and crops
S6.4.1 - cultivating land and crops
S6.4.2 - planting crops, trees, or other plants
S6.4.3 - pruning, cutting and harvesting, trees crops and other plants

Concept URI

http://data.europa.eu/esco/skill/S6.4

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**SKILLS/COMPETENCES**

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    - S6.2 - moving and lifting
    - S6.3 - transforming and blen…
    - S6.4 - tending plants and cr…
      - S6.4.0 - tending plants a

# apply prescribed herbicides

Description

Carry out, under supervision and as authorised, the spraying of prescribed herbicides in accordance with training and skills acquired, using manufacturers' application rates, in accordance with materials safety data sheets and any formal procedure and practice in place, and for which clearance has been issued.

Alternative label

spray prescribed herbicides

applying prescribed herbicides

spray herbicides as prescribed

prescribed herbicides applying

apply herbicides as prescribed

spraying prescribed herbicides

prescribed herbicides spraying

Skill type

skill

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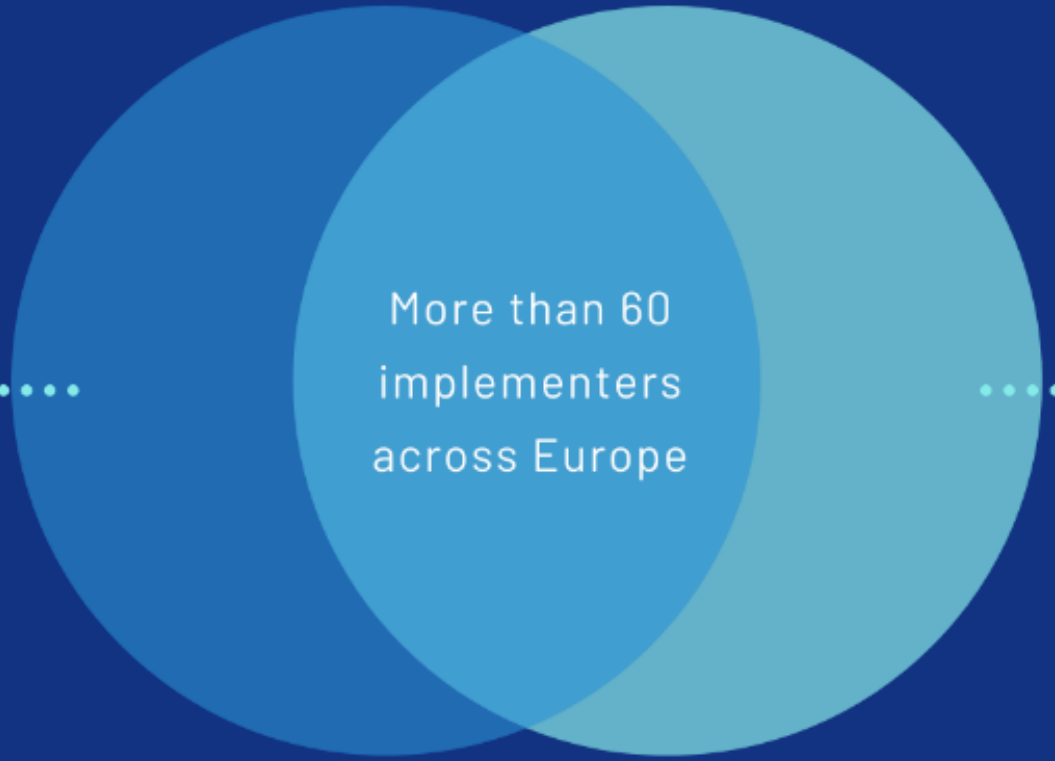
# CURRENT ESCO IMPLEMENTATION- JANUARY 2020

- All the European PES by the end of 2021
- 5 Implementations in EU Public Administrations (e.g. EURES, CEDEFOP EUROPASS)
- 15 EU-Funded Projects




- 8 Job-boards
- 40 Private Companies
- 5 Education Institutions
- 4 Public & 1 Private Employment Service use ESCO directly in their system

https://ec.europa.eu/esco/portal

# ESCO mission & implementers

ADRESSING THE NEEDS OF JOB-SEEKERS AND EMPLOYERS: **ESCO** SUPPORTS BETTER MATCHING OF PEOPLE TO JOBS

## ESCO matches people to jobs

### Public Implementers

- Almalaurea-Italy
- European Commission EMPL-EURES
- European Commission EMPL-Europass
- House of Skills-Netherlands
- Public Employment Service of Finland
- Public Employment Service of Hungary
- Public Employment Service of Iceland
- Public Employment Service of Ireland

### Private implementers

- Actonomy-Belgium
- Adzuna-UK
- Dit Werkt-Netherlands
- eHRgo-France
- Experteer-Germany
- Foreammati-Finland
- IGB-Belgium
- Joblift-UK
- Kimbo-Italy
- Milch und Zucker - Germany
- Monster-Spain
- Nalantis-Belgium
- Opening.io-Ireland
- Randstad - Netherlands
- Textkernel-Netherlands
- WCC-Netherlands
- Wollmilchsau GmbH-Germany
- X-learn-France
- X-tramile-France

**How can ESCO be used in job-search and job-matching applications?**

- **Connecting national classifications** to exchange information on labour market data
- **Suggesting occupations and skills** for the creation of CVs and job vacancies
- **Improving natural language processing**
- **Classifying job vacancies in job boards**
- **Improving matching algorithms** based on skills characteristics and other factors (skill demand and supply, emerging skills, potential career paths, etc)
- **Visualising relevant skills** in a skills hierarchy
- **Creating a skills map** of a company's employees and matching them to new projects
- **Improving search results** when looking for a job

# ESCO mission & implementers

## Public Implementers

- Caisse de dépôt-France
- European Commission EAC - EIT InnoEnergy
- European Commission EMPL -Europass
- European Commission EMPL-EU Skills Profile Tool for Third country Nationals
- European Commission HR - EU Learn
- House of skills-Netherlands

## Private implementers

- Accenture-Netherlands
- Ariston-Greece
- Boost.rs-France
- Certif-ID - Germany
- Cities of learning-EU consortium
- Docebo-Italy
- Fastgrowing - Italy
- Inforelea-Italy
- Odem-Switzerland
- Open badge factory-Finland
- Orange Cat-Netherlands
- Peers Solutions - Germany
- Skillab-Netherlands
- Skillsboard-France
- Techwolf-Belgium
- The Adecco Group-Italy

ADDRESSING THE NEEDS OF STUDENTS, EDUCATION AND TRAINING INSTITUTES AND EMPLOYERS: **ESCO** CONNECTS THE WORLD OF WORK WITH WHAT STUDENTS ARE LEARNING

## ESCO connects the labour market to education and training systems

**How can ESCO inform education and training reforms & talent management strategies?**

- **Curricula development:** transparency, comparison and analysis of the content of a qualification
- **Creation of learning outcomes**
- **Creation of skills passports**
- **Personalised digital career guidance services:** suggestion of online & offline courses based on skills gaps, desired career path and trends in the labour market
- **Skills assessments** and creation of psychometric tests
- **Endorsement and visualisation of informal/non-formal learning** via open badges
- **Evidence-based curricula reforms** through skills intelligence
- **Collection and analysis of data** on skills trends to inform education and training bodies
- **Creation of individual's skills mapping for up-skilling and re-skilling strategies**

# ESCO mission & implementers

**Public Implementers:**

- Biccoca University of Milano (CRISP)-Italy
- CEDEFOP-Greece
- University of Rzeszów-Poland
- West University of Timisoara-Romania

**Private implementers:**

- ETIL-Netherlands
- HeadAI-Finland
- Tabulaex-Burning Glass technologies-Italy

ADDRESSING THE NEEDS OF RESEARCHERS AND POLICY-MAKERS: **ESCO** FACILITATES THE COLLECTION AND ANALYSIS OF SKILLS AND OCCUPATIONAL INTELLIGENCE

## ESCO supports the analysis of labour market data on skills and occupations

**How can ESCO be used to carry out big data analysis of labour market information?**

- **Extraction and classification of data** from online job vacancies, CVs and qualifications
- **Statistical analysis** of such labour market data and comparison across the EU
- **Analysis and visualisation of emerging skills** and occupational trends across the EU and economic sectors
- **Analysis and visualisation of similar career paths** based on skills transferability
- **Analysis and visualisation of skills supply and demand**
- **Assessment of skills mismatch** between learning outcomes of qualifications and skills required by the labour market
- **Assessment of the career paths of graduates** (graduate tracking) to analyse the mismatch or frequent patterns
- **Analysis of skills shortages and surpluses**

europass

Take the next step

Your free, personal tool for learning and working in Europe.

Online job vacancies and skills analysis

A Cedefop pan-European approach

EURES

VINNUMÁLA STOFNUN

Jobs.ie

skills match

openSKIMR

HOUSE OF SKILLS

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# Objectives of ESCO version 1.1

**Changes in the labour market**: new & obsolete occupations, changing nature

**Changes in curricula**: new knowledge and skills in education-training

**Changes in terminology**: changes in terms referring to occupations and skills

**Changes in requirements** by implementers and technological development

**Opportunity to correct identified mistakes**: misspellings or wrong metadata

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ESCO version 1.1 analysis

- Duplication and overlap of concepts
- New and obsolete skills & occupations
- Relevance of skills for occupations
- Mistakes in translations

# ESCO update process

1. Preparatory phase: collection and analysis of feedback
2. Creation of new content and quality-assured translation in all ESCO languages
3. Release on ESCO portal

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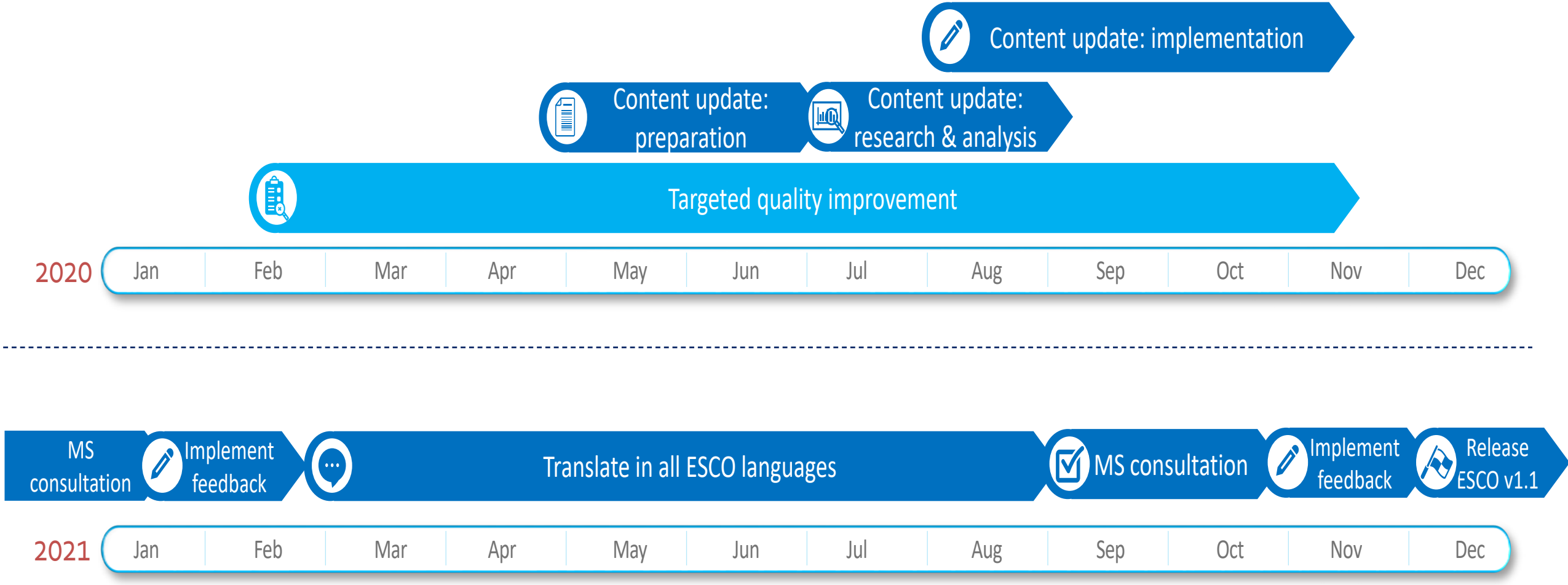


Consultation with the ESCO Member States Working Group on the ENG draft version and on the language versions

MS reply with amendments, comments or agreement

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# FIELDS to ESCO

Identification of existing occupations with skills-knowledge and gaps

Definition of new occupational profiles with skills-knowledge

Support to the Commission on profiles' terminology and descriptions based on ESCO guidelines and experience

Update of ESCO – quality review and content update

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# ESCO to FIELDS

Improve employability via complete and updated profiles

Improve employability across languages, systems and borders

Enable provision of education-training programs – reflecting current needs, online and tailor-made

Statistical data for employers, workers, jobseekers, education-training providers, learners, policy makers

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#ESCO_EU

empl-esco-secretariat@ec.europa.eu

THANK YOU