



# The update of ESCO: reflecting skill trends in the EU labour market

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# European Classification of Skills, Occupations and Qualifications (ESCO)

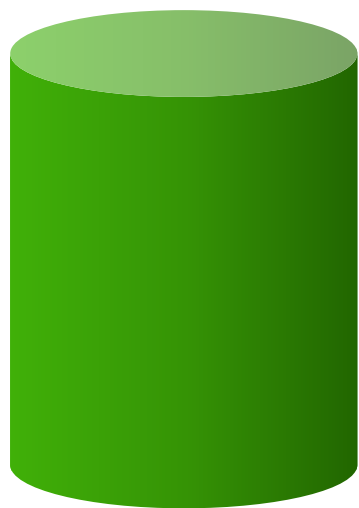


# Closing the skills gap

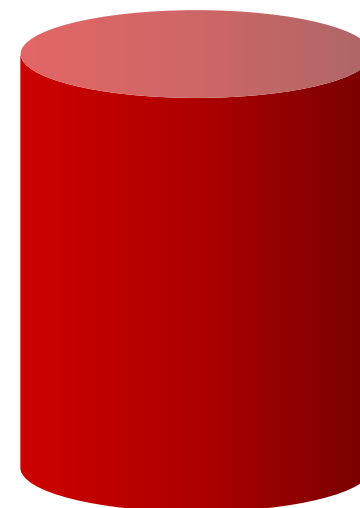
- Encourage intra-European mobility
  - ➔ *Common language for information exchange*
- Align people's skills with industry needs
  - ➔ *Bridge the world of education and employment*
- Skills-based jobmatching
  - ➔ *Need for a common skills-language*

**ESCO**

# ESCO pillars



2942  
Occupations



13 500  
Skills + Knowledge

## 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

# 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 knowledge, skills and competences that experts considered relevant terminology for this occupation on a European scale.



 **OCCUPATIONS**

food analyst  
food safety specialist  
food biotechnologist  
street food vendor  
food production operator  
food production planner  
food technologist  
food technician  
airline food service worker  
food science lecturer  
food service vocational teacher  
food regulatory advisor  
food and beverage packaging technolo...  
food grader  
food safety inspector

# food production planner

[Discuss this topic in the Online Forum](#) 

## Code

3122.2

## Description

Food production planners prepare production plans, evaluate all the variables in the process and strive to ensure that production objectives be achieved.

## Alternative label

food production planning specialist

food manufacturing planner

food production planning expert

## 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:

<http://ec.europa.eu/growth/single-market/services/free-movement->



Essential skills and competences

adapt production levels

analyse production processes for improvement

apply GMP

apply HACCP

apply control process statistical methods

apply requirements concerning manufacturing of food and beverages

communicate production plan

control of expenses

create food production plan

detect bottlenecks

disaggregate the production plan

enhance production workflow

ensure cost efficiency in food manufacturing

give instructions to staff

implement short term objectives

keep up with innovations in food manufacturing

maintain updated professional knowledge

manage backlogs

meet productivity targets

monitor ingredient storage

schedule regular machine maintenance





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European Skills/Competences, qualifications and Occupations

European Commission > ESCO > Skills/competences



ABOUT ESCO

CLASSIFICATION

TOOLS & RESOURCES

FORUM



Occupations

Skills/competences

Qualifications

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



European Commission



# 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

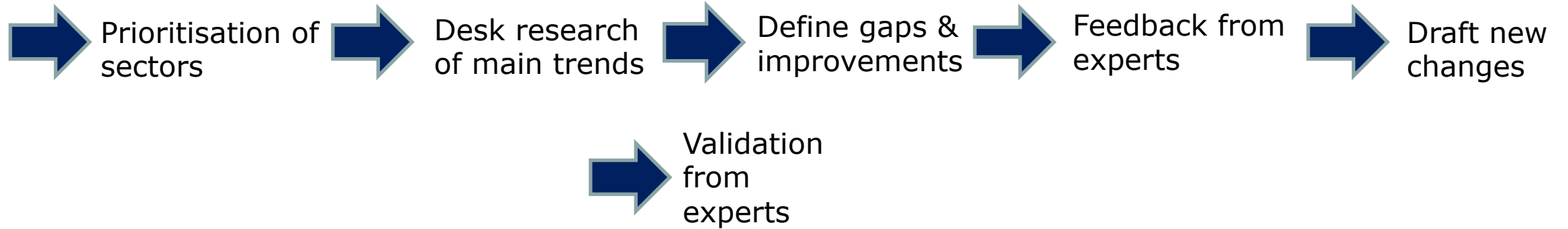
# ESCO version 1.1: drivers

- ❑ **Digitization** : new skills related to digital technologies (AI, blockchain, cloud computing) and new occupations emerging in the ICT industry (cybersecurity, personal data)
- ❑ **Greening of the economy**: green skills and competences, greening of traditional occupations and sectors, green jobs (renewable energies, circular economy)
- ❑ **COVID-19**: growing importance of digital literacy and digital skills in different occupations (e-learning, health care professionals), new occupations emerged during the COVID-19 crisis (eg contact tracer, temperature screener)

# Information sources

- **Desk research** (Publications from international organisations, industry reports, online JVs)
- **Targeted feedback** (Domain experts, PES, ESCO implementers) through the online fora or bilateral contacts.
- **Blueprints** for sectoral cooperation on skills
- Contacts with **Commission services**
- **Targeted webinars** (METIS project, REGIO CoP, FLIP project)
- **Competence frameworks** (ECF for public procurement, PM2 methodology guide)
- **Expert groups** (skills hierarchy, transversal skills)
- **KPIs**

# ESCO version 1.1: process for the content update



441 new skills and knowledge concepts

66 new occupations

75 revised occupations

<b>Ecosystem</b>	<b>Definition</b>
<b>Tourism</b>	Hotels, short-term accommodation, restaurants and catering, events, theme parks, passenger transport and travel.
<b>Creative and cultural industries</b>	Audio-visual, music, books and press, heritage and libraries, arts and entertainment.
<b>Aerospace and defence</b>	Aeronautics, space and defence manufacturing and space-enabled services and applications.
<b>Textiles</b>	Production of natural and synthetic fibres into yarns and fabrics for the further production of technical textile, carpets, clothes, footwear and leather.
<b>Electronics</b>	Design and manufacturing of electronic components; includes raw materials (semiconductor wafers) and manufacturing tools.
<b>Transport</b>	Production of motor vehicles, ships and trains, accessories, their repair and maintenance, freight transport.
<b>Energy-intensive industries</b>	The main industrial users of energy and raw materials, suppliers of intermediate products and innovation to most ecosystems.
<b>Renewable energy</b>	Manufacturers of equipment (e.g. wind turbines, solar modules, electrolysers), key components, biofuel producers, utilities and maintenance and engineering services.
<b>Agri-food</b>	Food production, including agriculture and food processing.
<b>Health</b>	Pharmaceuticals and their ingredients, medical and protective equipment, health services, residential care, HealthTech.
<b>Digital</b>	Covers part of the ICT sector (manufacturing, services and telecommunication industries) and encompasses a number of mature and emerging technologies (e.g. AI, blockchain, quantum, cloud).
<b>Construction</b>	Comprises activities during the whole lifecycle of buildings and infrastructures. Contractors, construction product manufacturers, architects, engineers and others are part of the ecosystem.
<b>Retail</b>	Grocery, non-grocery retail including e-commerce, and relevant wholesale; also suppliers, transportation, logistics, relevant real estate and consumers.
<b>Proximity and social economy</b>	Social Economy: mainly locally anchored economic activity (production, financial or non-financial services) aiming at boosting social impact and inclusive growth in a redistributive manner.
<b>Business and finance</b>	Business administration, legal and accounting, financial services.
<b>Education and science</b>	Educational and scientific activities including research.
<b>Public sector</b>	Includes public policy, law enforcement and security services.

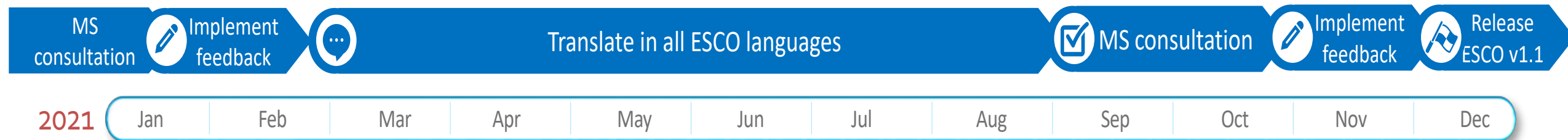
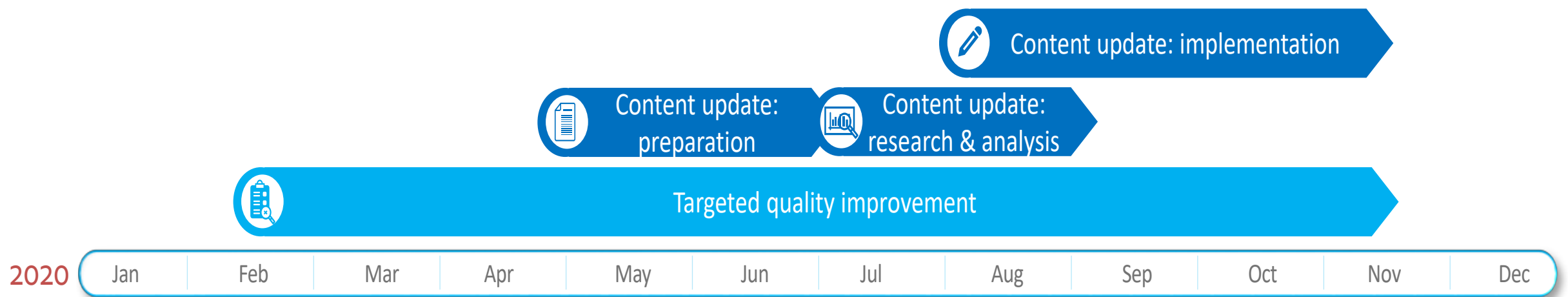
# Examples of new content

**contact tracing agent:** Contact tracing agents assess the exposure of individuals to infectious diseases, advise them and their contacts about measures to contain the spread of the illnesses and follow up with them on a regular basis. They use texting, emailing or calling people who test positive to inquire about the persons with whom they have had contact with. Contact tracing agents can also do field visits, to check physically if people are respecting the measures of self-isolation or quarantine, as recommended by the authorities.

**e-learning architect:** E-learning architects establish goals and procedures for the application of learning technologies within an organisation and the creation of an infrastructure that supports these goals and procedures. They review the existing curriculum of courses and verify the online delivery capability, advising changes to the curriculum to adapt to online delivery.

**agroecology:** The study and application of ecological and agronomic concepts and principles to agricultural production systems.

**develop food scanner devices:** Design and develop food scanning technologies that provide information on the level of allergens, chemicals, nutrients, calories and on ingredients in food.



- Distribution of draft new EN content to MAI (files exchange)
- Distribution of draft new EN content to MSWG (files exchange)
- Member States reply with amendments/comments/agreement
- Commission translates new content in all ESCO languages
- Distribution of new language versions to MSWG (files exchange)
- Member States reply with amendments/comments/agreement



# COVID-19 skills watcher

- [An interactive pie chart](#) that connects the impact of COVID-19 on the labour market with the distribution of skills among occupations as defined by ESCO
- ESCO dataset used to read data published by the International Labour Organization (ILO), results summarized in an interactive 3-levels pie chart.
- The first level describes 4 different degrees of negative impact of the Coronavirus crisis in the output of global economic sectors.
- The second level lists 14 economic sectors, sized by the global share of employees within each sector.
- The third level lists 70 skills, which represent the 5 skills defined as essential for the higher number of occupations within every sector. Skills in the third level are sized by their frequency rate, which defines the frequency of one skill within one sector.

# COVID-19 skills watcher

## Use cases

Public Employment Services	E-learning platforms	International institutions	Research bodies
 <p>Have an overview of current skill trends in the LM and foresee future patterns</p> <p>Receive support to understand intersectoral labour mobility opportunities</p>	 <p>Respond to basic needs of workers and education and training institutions</p> <p>Define investment strategies towards the creation of targeted content</p>	 <p>Learn about a successful combination of projects results from international institutions</p> <p>Look at the combination of a real-time dataset with ESCO to investigate the LM</p>	 <p>Provide information useful for further investigations on the role of skills in the LM</p> <p>Demonstrate the flexibility and richness of the ESCO dataset to respond to research needs</p>



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THANK YOU

