



European
Commission

DigComp: The European Digital Competence Framework



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What is DigComp?

We live in a digital society and it is essential that everyone is 'digitally competent' to access the new opportunities to learn, work, create and engage in a society which is shaped by digital technology. The European Commission has developed **DigComp: the European Digital Competence Framework** as a reference framework to explain what it means to be 'digitally competent'.

Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society.

DigComp is about people. The framework does not focus on devices or software but seeks to support confident, critical and responsible use of, and engagement with, digital technology by people. The framework offers a comprehensive description of **the knowledge, skills and attitudes that people need in 5 key areas.**

DigComp is a free, flexible reference framework that can be adapted to support the development and understanding of digital competence in any setting. DigComp can be used by employers, trainers, educators, policy-makers and any other actors **interested in the development and understanding of digital competences by people.** This brochure sets out the key building blocks to DigComp and highlights how DigComp can be used in variety of ways.

Many people living in Europe lack necessary digital competence. The European Pillar of Social Rights highlights the importance of lifelong learning by all to ensure equal opportunities, access to the labour market, and inclusion. We need to develop digital competences throughout life in order to empower people and create opportunities.

DigComp has the potential to support the development of digital competence for all and can be tailored and targeted to support different skills levels, needs and goals.

Digital competence includes:
(1) information and data literacy,
(2) communication and collaboration,
(3) digital content creation,
(4) safety, and
(5) problem solving



DigComp is a framework of 21 competences, clearly defined through learning outcomes – **what a learner knows, understands and is able to do** – that describe what it means to be digitally competent. The learning outcomes are mapped across 8 different levels of progression, from beginner to highly specialised.

There are 3 key building blocks to understanding DigComp: **areas, competences and proficiency levels**. Read on to find out more.

1. Areas

DigComp outlines the 5 key areas of digital competence:



- INFORMATION AND DATA LITERACY** → Identify, locate, filter, retrieve, store, organise, analyse, and manage digital information and data, judging its relevance and purpose.
- COMMUNICATION AND COLLABORATION** → Communicate in digital environments, share resources through online tools, link with others and collaborate through digital tools, interact with and participate in communities and networks, cross-cultural awareness, digital citizenship.
- DIGITAL CONTENT CREATION** → Create and edit digital and multimedia content; integrate and re-elaborate digital content; produce creative expressions and media outputs; program and code; deal with and apply intellectual property rights and licences.
- SAFETY** → Personal protection and well-being, data protection, digital identity protection, security measures, safe and sustainable use.
- PROBLEM SOLVING** → Solve technical problems, identify digital needs and resources, solve conceptual problems through digital means, creatively use technologies, update one's own and others' competences.

2. Competences

The DigComp areas are expanded into **21 competences that make up digital competence.**

Each competence is explained through a brief descriptor (**see p. 6 and 7**).



Competence Descriptors

1. INFORMATION AND DATA LITERACY

1.1 Browsing, searching and filtering data, information and digital content

To articulate information needs, to search for data, information and content in digital environments, to access them and to navigate between them. To create and update personal search strategies.

1.2 Evaluating data, information and digital content

To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.

1.3 Managing data, information and digital content

To organise, store and retrieve data, information and content in digital environments. To organise and process them in a structured environment.

2. COMMUNICATION AND COLLABORATION

2.1 Interacting through digital technologies

To interact through a variety of digital technologies and to understand appropriate digital communication means for a given context.

2.2 Sharing information and content through digital technologies

To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices.

2.3 Engaging in citizenship through digital technologies

To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies.

2.4 Collaborating through digital technologies

To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of resources and knowledge.

2.5 Netiquette

To be aware of behavioural norms and knowhow while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments.

2.6 Managing digital identity

To create and manage one or multiple digital identities, to be able to protect one's reputation, to deal with the data that one produces through several digital tools, environments and services.



3. DIGITAL CONTENT CREATION

3.1 Developing digital content

To create content in different formats (e.g. data, text, multimedia), to edit and improve existing content, to express oneself through digital means.

3.2 Integrating and re-elaborating digital content

To modify, refine and integrate new information and content into an existing body of knowledge and resources to create new, original and relevant content and knowledge.

3.3 Copyright and licences

To understand how copyright and licences apply to digital information and content.

3.4 Programming

To plan and develop a sequence of understandable instructions for a computing system to solve a given problem or to perform a specific task.

4. SAFETY

4.1 Protecting devices

To protect devices and data, to understand risks and threats in digital environments, to know about safety and security measures and to have due regard to reliability and privacy.

4.2 Protecting personal data and privacy

To protect personal data and privacy in digital environments. To understand how to share personally identifiable information while protecting self and others from dangers (e.g. fraud). To understand that digital services use a "privacy policy" to declare how personal data is used.

4.3 Protecting health and well-being

To avoid health-risks related with the use of digital technologies in terms of threats to physical and psychological well-being. To be able to protect self and others from possible dangers in digital environments (e.g. cyber bullying). To be aware of digital technologies for social well-being and inclusion.

4.4 Protecting health and well-being

To be aware of the environmental impact of digital technologies and their use.

5. PROBLEM SOLVING

5.1 Solving technical problems

To identify technical problems when operating devices and using digital environments, and to solve them (from trouble-shooting to solving more complex problems).

5.2 Identifying needs and technological responses

To assess needs and to identify, evaluate, select and use digital tools and possible technological responses to solve them. To adjust and customise digital environments to personal needs (e.g. accessibility).

5.3 Creatively using digital technologies

To use digital tools and technologies to create knowledge and to innovate processes and products. To engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.

5.4 Identifying digital competence gaps

To understand where one's own digital competence needs to be improved or updated. To be able to support others with their digital competence development. To seek opportunities for self-development and to keep up to date with the digital evolution.



3. Proficiency levels

Each of the 21 competences in DigComp has associated learning outcomes. These learning outcomes are mapped across a number of progression levels.

Mapping progression can support the development of a learner over time, helping to understand the different starting points of learners and identify specific goals to improve digital competence.



DigComp progression levels can be understood in 2 ways:

- The learning outcomes are mapped across **4 overall progression levels** (foundation, intermediate, advanced and highly specialised).
- The learning outcomes can be further refined across **8 granular progression levels**.

The different types of progression levels can be applied for different uses e.g. overall levels can be used for setting goals, granular levels can be used for writing learning outcomes.



DigComp in Action

Supporting policy and practice

DigComp is adapted and applied to support policy or practice, to develop digital competence for a target population in a specific context.

Competence assessment

DigComp is used to assess digital competence level, strengths and weaknesses of an individual or target population.

Training trainers

DigComp is used to support the development of digital competences of educators, trainers and teachers.

Learning and competence development

DigComp is used to design teaching and learning experiences for individual learners to develop their digital competences.

Recognition and certification

DigComp is used to identify, assess and certify learning achievements and development of digital competence.



Get Inspired

Find out how others across Europe have used DigComp to support the development and understanding of digital skills, with the

[DigComp into Action user guide](#).

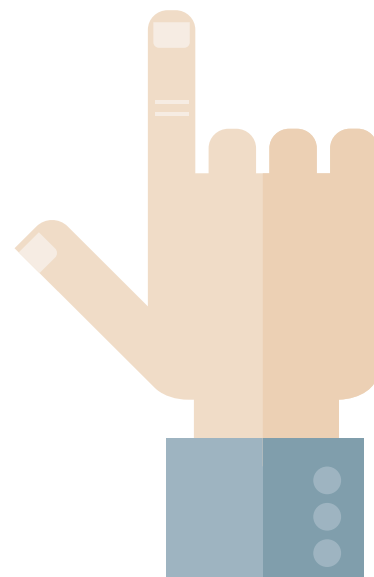
The guide contains over 30 examples to inspire, enable and equip you to use **DigComp** to meet your needs.

Want to know more?

For more information on DigComp and the work of the European Commission in the area of skills and qualifications, please see: <https://europa.eu/!QD36Yu>

The European Commission is committed to regularly updating DigComp to ensure the relevance and usefulness of the framework.

DigComp was developed by the EU's Joint Research Centre on behalf of the Directorate-General for Employment, Social Affairs and Inclusion.



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Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en>) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

The EU has developed the European Digital Competence Framework — known as DigComp — and a related self-assessment tool. These resources provide people with the opportunity to assess their digital competence and identify gaps in their knowledge, skills and attitudes. Using DigComp will help citizens to achieve goals related to work, employability, learning, leisure and participation in the digital society.

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