



European Digital Competence Framework for Citizens:

Why, What and Where Next?

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In this workshop

- Context and rationale for frameworks
- Overview of DigComp
- Implementation guides and resources
- Next steps in DigComp development

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The Joint Research Centre provides **independent, evidence-based knowledge and science, supporting EU policies** to positively impact society.



Context and Rationale

Why a competence framework, what are they used for?

Shift towards competence-oriented education which recognises that competences are dynamic, changing throughout life, and in need of continual development.

This approach:

- supports the European Pillar of Social Rights which emphasises the right to quality and inclusive education, training and lifelong learning
- is consistent with [SDG4 – Education 2030](#) – *ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*

Council of the EU's [Recommendation on Key Competences for Lifelong Learning](#) (2006, revised 2018), emphasises that competences are needed by all for personal fulfilment and development, employability, social inclusion and active citizenship.

Eight key competences:

- literacy, multilingual, numeric/scientific/engineering, **digital**, interpersonal, social and learning to learn, citizenship, entrepreneurship, cultural awareness and expression.

Why a competence framework, what are they used for?

In an **EU context**, competence frameworks:

- are supporting measures to help Member States in implementing the Recommendation on Competences, and related Recommendations (such as [Improving the Provision of Digital Skills and Competences](#), November 2023)
- are aimed at supporting a **common language and terminology** across actors, and provide a **coherent overarching structure** to achieve a range of goals.





What are the benefits and uses of DigComp?

Benefits

- DigComp is based on a **scientific** approach and **validated** with experts and broad stakeholder consultation
- It is accompanied by self-assessment **tools**, implementation **resources** and a **Community of Practice** for mutual exchange and inspiration

<https://www.digcomphub.eu/european-digcomp-community-of-practice/>

Uses

- Design and implementation of digital skills **policies and strategies**
- Monitoring and evaluation of digital skills policies and strategies
- **Curriculum** design, revision (formal education)
- Categorisation, design and implementation of **education and training**
- Initiatives for **matching** digital skills **demand** with **supply** through education and training
- **Profiling** digital competence requirements for specific occupations or occupational areas
- **Assessment and certification**

Skills or Competences...?

In discussions on education and training we frequently see 'competences' and 'skills' used interchangeably... however:

Skills may be defined as the ability to apply knowledge and use know-how to complete tasks and solve problems, typically in the workplace.

Competences can be defined as the ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development.

... This is why we refer to **competence frameworks**, rather than skills frameworks





A quick tour of DigComp 2.2 (2022)



DigComp:

the European framework for digital competences for citizens

Supports Europe's Digital Decade target: 80% of adults with at least basic digital skills by 2030 – currently 54%

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

The combination of **knowledge**, **skills** and **attitudes** is reflected in the DigComp framework

(Council Recommendation on Key Competences for Life-long Learning, 22 May 2018)





Dimensions of DigComp

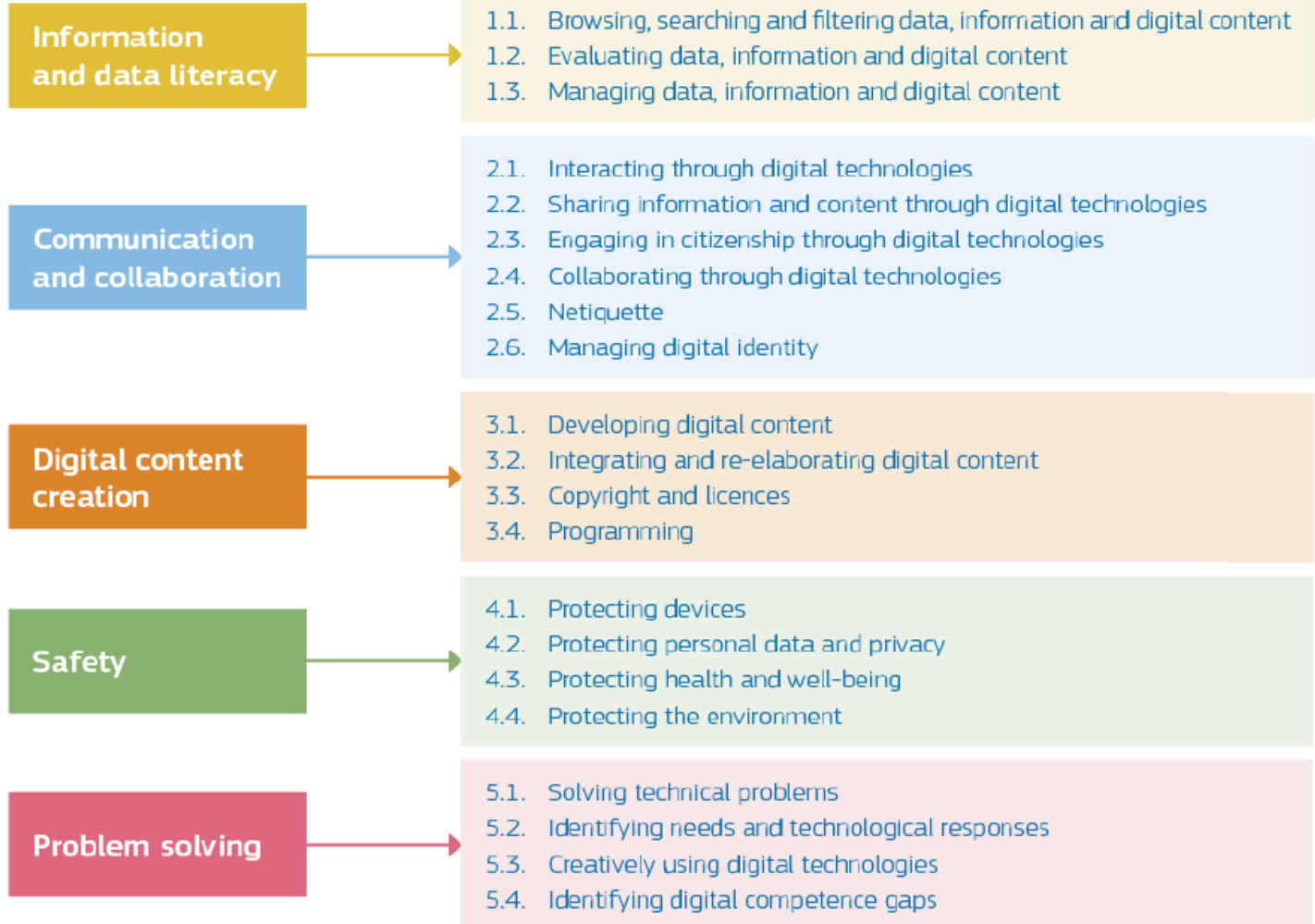
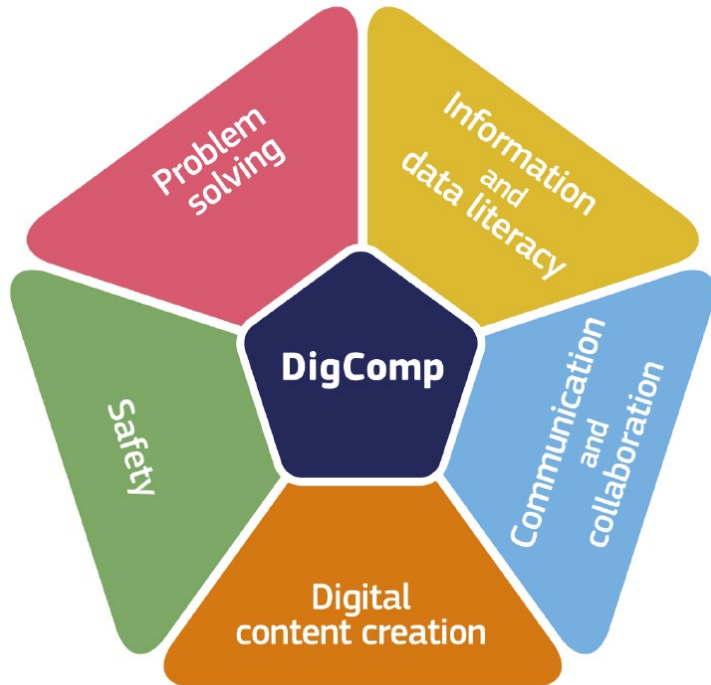
DigComp was updated in 2022 under [Action 8](#) of the Digital Education Action Plan 2021-2027 to include AI and the use of data

| Dimension | Name | Number of components | What it is |
|-----------|---|----------------------|--|
| 1 | Competence areas | 5 | Broad content areas of the framework |
| 2 | Competences | 21 | Sub-content areas of the framework: for example, Information and data literacy competence area has three competences |
| 3 | Proficiency levels | 4 or 8 | Descriptions of the level of proficiency with which competences can be executed, a combination of task complexity, autonomy and cognitive domain |
| 4 | Examples of knowledge, skills and attitudes | 260 | Short statements illustrating each competence - new to DigComp 2.2 |
| 5 | Examples of use in education and employment | 42 | Examples of each competence in education and work scenarios |



DigComp: Dimensions 1 and 2

DigComp is much broader than technical or workplace IT skills – also includes data privacy, security, wellbeing, sustainability and problem solving





DigComp: Dimension 3

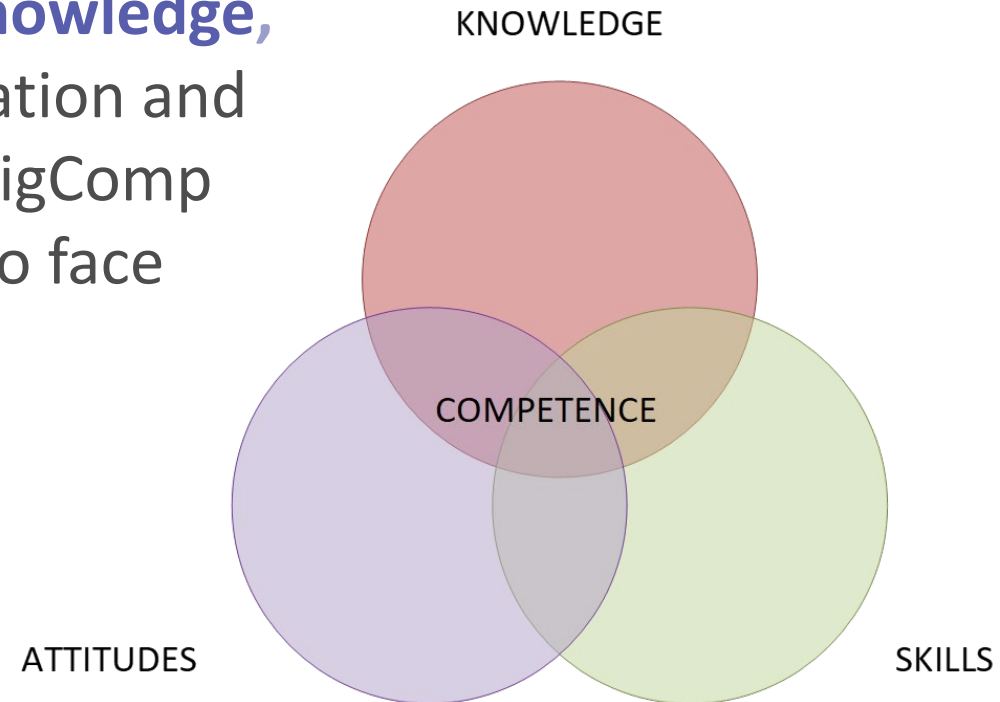
Proficiency levels are related to task complexity, level of autonomy in task execution, and cognitive domain (process)

| 4 OVERALL LEVELS | Foundation | | Intermediate | | Advanced | | Highly specialised | |
|---------------------|---------------|--|--|--|------------------------------|--|--|--|
| 8 GRANULAR LEVELS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| COMPLEXITY OF TASKS | Simple task | Simple task | Well-defined and routine tasks, and straightforward problems | Tasks, and well-defined and non-routine problems | Different tasks and problems | Most appropriate tasks | Resolve complex problems with limited solutions | Resolve complex problems with many interacting factors |
| AUTONOMY | With guidance | Autonomy and with guidance when needed | On my own | Independent and according to my needs | Guiding others | Able to adapt to others in a complex context | Integrate to contribute to the professional practice and to guide others | Propose new ideas and processes to the field |
| COGNITIVE DOMAIN | Remembering | Remembering | Understanding | Understanding | Applying | Evaluating | Creating | Creating |



DigComp 2.2 update in a nutshell

- More than 250 examples of **knowledge**, **skills** and **attitudes** to help education and training providers update their DigComp curriculum and course material to face today's challenges (**Dimension 4**)





Key elements of DigComp 2.2 update

New examples on:

- Citizens interacting with **AI systems** and **data literacy**
- **Fact-checking** online content and its sources
- **Remote or hybrid** work context
- **Digital accessibility**
- **Green and sustainability** aspects of interacting with digital technologies
- **Well-being and safety**



DigComp: Dimension 4

DIMENSION 1 • COMPETENCE AREA

1. INFORMATION AND DATA LITERACY

DIMENSION 2 • COMPETENCE

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.

Knowledge:

Aware that search engines, social media and content platforms often use AI algorithms to generate responses that are adapted to the individual user

Skill:

Can make use of information presented as hyperlinks, in non-textual form (e.g. flowcharts, knowledge maps) and in dynamic representations (e.g. data).

Attitude:

Intentionally avoids distractions and aims to avoid information overload when accessing and navigating information, data and content



Implementation Guides

- **DigComp into action** (2018): 38 inspiring practices of DigComp implementation, illustrated by case studies and tools
- **DigComp at work** (2020): an analysis of 9 inspiring practices in contexts of employability and employment
- **DigComp at work implementation guide** (2020): specific guidelines, examples, tips and useful resources for the use of DigComp in employment contexts
- All available at https://joint-research-centre.ec.europa.eu/digcomp/digcomp-implementation-guides_en

Used in at least 22 EU countries
Forms the basis of the [Digital Skills Indicator](#) (DSI) to monitor the Digital Decade target for digital skills

Informs international work, e.g. UNESCO's [Global Framework of Reference on Digital Literacy Skills](#)



Stefano Kluzer
Clara Centeno
William O'Keefe

DigComp at Work

The EU's digital competence framework
in action on the labour market:
a selection of case studies





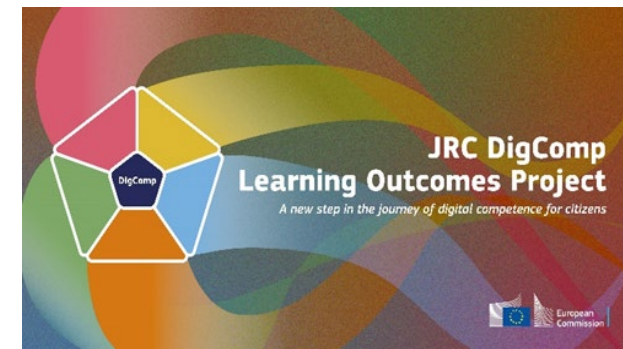
DigComp resources

- JRC email contact: JRC-DigComp@ec.europa.eu
- JRC's dedicated webspace for DigComp: https://joint-research-centre.ec.europa.eu/digcomp_en
 - Framework overview and all framework publications: https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en
 - Implementation guides and examples: https://joint-research-centre.ec.europa.eu/digcomp/digcomp-implementation-guides_en
 - Self-assessment and monitoring tools: https://joint-research-centre.ec.europa.eu/digcomp/digcomp-self-reflection-self-assessment-and-measurement-tools_en
- **DigComp Hub** – webinars, inspiring examples, training courses <https://www.digcomphub.eu/>
- **DigComp Community of Practice** <https://www.digcomphub.eu/european-digcomp-community-of-practice/>
- **Digital Skills and Jobs Platform**, inspiring examples: <https://digital-skills-jobs.europa.eu/en/inspiration>



Where next with DigComp?

Next phase of development: DigComp learning outcomes project

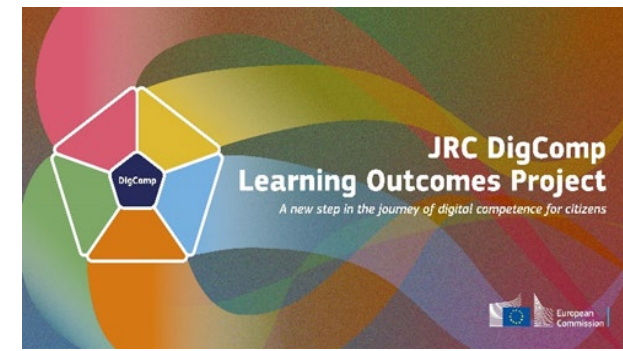


[Existing JRC research](#), [JRC analysis](#) of the structured dialogue on digital education and skills and stakeholder consultation (>400) on a [European Digital Skills Certificate \(EDSC\)](#) point to a **need for better operational alignment**

Desired features:

- **Indicative**, i.e. use is **optional** and may be **adapted**
- Describe both **competence** and **proficiency**
- Balanced between **clarity** and **granularity** (not overly burdensome)
- **Structured** in format, to facilitate **flexible** implementation at European, national and regional levels
- Act as a potential **bridge** between **supply, offer** and **demand**
- **Incorporate recent developments** in digital technologies such as generative AI.

DigComp learning outcomes project



- **50 submissions** have been received
 - From 16 countries (Austria, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Portugal, Spain and Ukraine) as well as three international or European-level submissions
 - To form a synthesis constructed by the JRC
- **Next steps:** DigComp expert meetings and review process (March-December 2024)
 - To consider draft synthesis and implications of recent and emerging trends for DigComp
- **Then:** Broader stakeholder consultation
- **Results** expected in late **2025**



Questions, Discussion

Thank you



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Image slide 7: www.peakpx.com

Image slide 9: <https://thisnessofathat.blogspot.com/2012/04/jigsaw-puzzle.html>



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