



fit4internet

The citizen`s AI Challenge

AI and the „human skills factor“

Standardizing – Evaluating – Qualifying – Certifying - Profiling

October 2021

EU's Digital Education Plan

ACTION 8

Update the European Digital Competence Framework to include AI and data-related skills

An initiative of the Digital Education Action Plan

DEAP
EUDigitalEducation

https://ec.europa.eu/education/education-in-the-eu/digital-education-action-plan/action-8_en

Requirements for citizens' use of AI systems



KNOWLEDGE

- To be aware of the benefits, limitations and challenges of AI systems
- To understand what AI systems do and what they do not do



SKILLS

- To use, interact and give feedback to AI systems as an end-user
- To configure, supervise and adapt AI systems (e.g. overwrite, tweak)



ATTITUDES

- Human agency and control
- Considering trustworthiness of AI
- Ethical considerations of usage



What knowledge, skills and attitudes do citizens need to engage with AI systems in a confident, critical and responsible way for learning, at work, and for participation in society?

EU DigComp in Austria – building the future on one European standard



General guidelines for DigComp based implementation (Report des Joint Research Centers (JRC) „DigComp@work“)

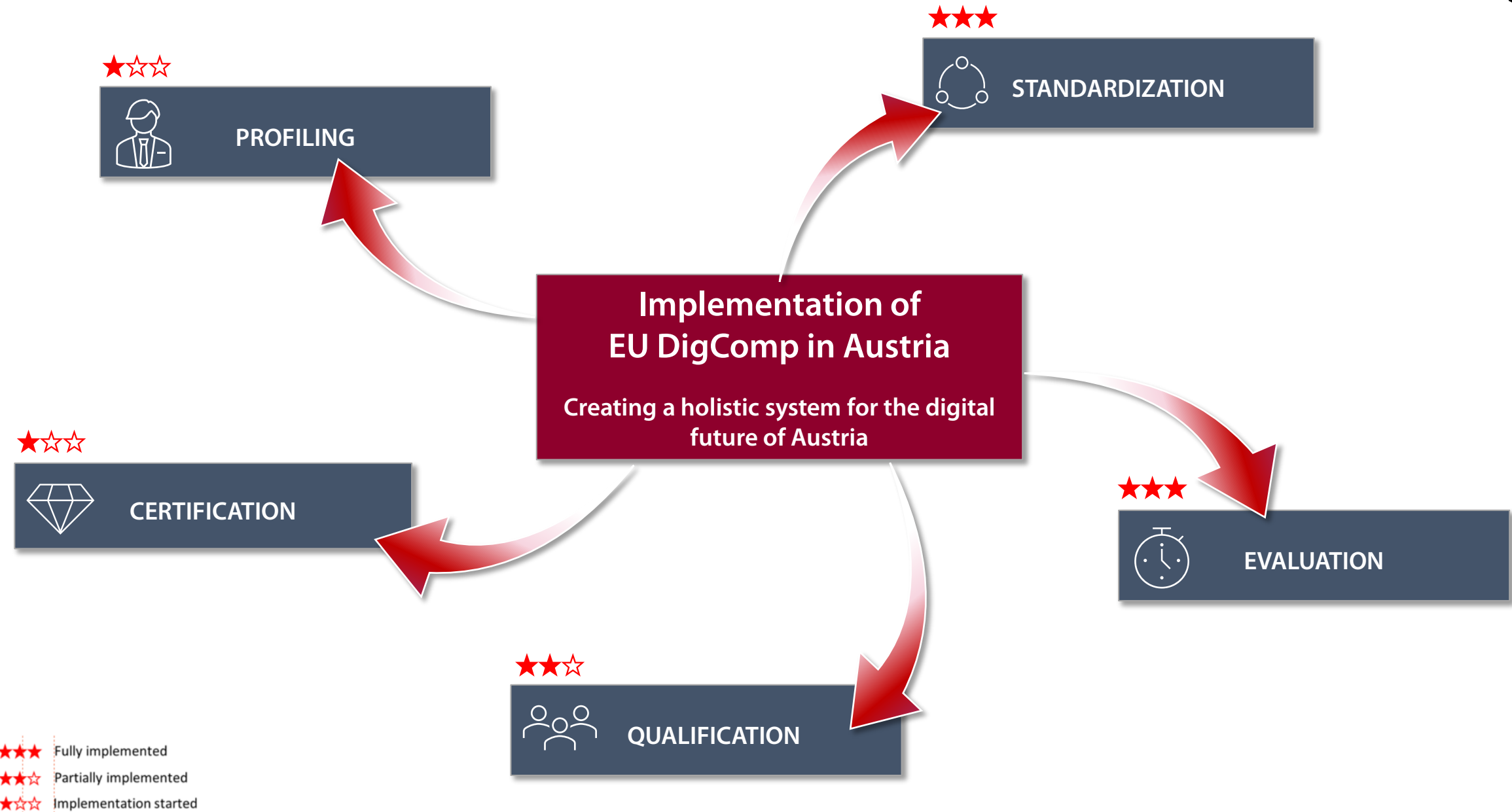
<p>G1 Getting started with your DigComp based project</p> <ol style="list-style-type: none"> Using DigComp in your language Internalise DigComp's view of digital competence Learn from others Re-use existing resources <p>P.12</p>	<p>G2 During your DigComp based project</p> <ol style="list-style-type: none"> Invite all relevant stakeholders Identify the suitable stakeholders' strategic cooperation model Adopt the DigComp naming convention Adapt DigComp to your needs and context Consider implementing monitoring tools <p>P.13</p>	<p>G3 After your DigComp based project finishes</p> <ol style="list-style-type: none"> Share your own resources and lessons learnt Continue learning from each other Revisit your outputs <p>P.13</p>										
<p>G4 Additional strategic considerations</p> <table border="0"> <tr> <td>1. DigComp needs clear communication</td> <td>2. Communicate "compliance" with DigComp of learning resources and programmes</td> <td>3. Adopting DigComp's holistic view of digital competence in learning and teaching methods</td> <td>4. Developing new learning resources and methods in line with DigComp and Training Teachers</td> <td>5. Certification</td> </tr> <tr> <td>P.14</td> <td>P.14</td> <td>P.15</td> <td>P.15</td> <td>P.15</td> </tr> </table>			1. DigComp needs clear communication	2. Communicate "compliance" with DigComp of learning resources and programmes	3. Adopting DigComp's holistic view of digital competence in learning and teaching methods	4. Developing new learning resources and methods in line with DigComp and Training Teachers	5. Certification	P.14	P.14	P.15	P.15	P.15
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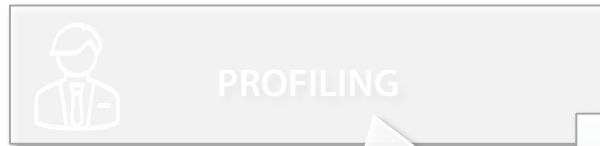


- ★★★★ Fully implemented
- ★★★☆☆ Partially implemented
- ★★☆☆☆ Implementation started

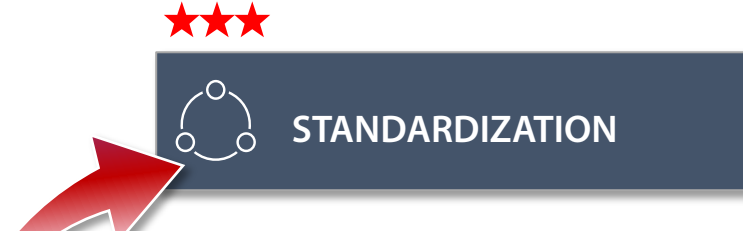
<p>★★★★</p> <p>1. STANDARDIZATION</p> <p>DigComp 2.2 AT Taskforce DigComp www.fit4internet.at</p>	<p>★★★★</p> <p>2. EVALUATION</p> <p>20 DigComp Personal DigComp profile Data Cockpit</p>	<p>★★★☆☆</p> <p>3. QUALIFICATION</p> <p>DigComp Course database DigComp Monitoring Board Projects Youth, Gen 60+</p>
<p>★★★☆☆</p> <p>4. National DSJC</p> <p>Allianz für Digitale Skills und Berufe (BMDW, BMAFJ, BMBWF) + stakeholders</p>	<p>★★★★</p> <p>5. CERTIFICATION</p> <p>National Certification System for Digital Competences (DigComp.CERT)</p>	<p>★★★☆☆</p> <p>6. DIGCOMP HUB</p> <p>Professional Digital Profiles focusing on apprentices, SMEs, employees</p>

DigComp in Austria – 5 pillars to the DigComp Implementation



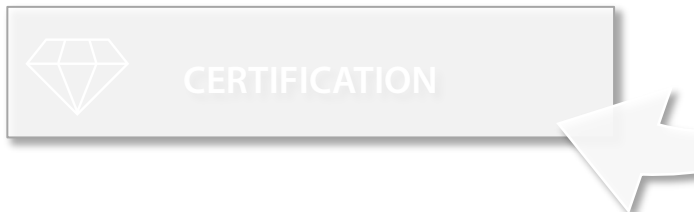
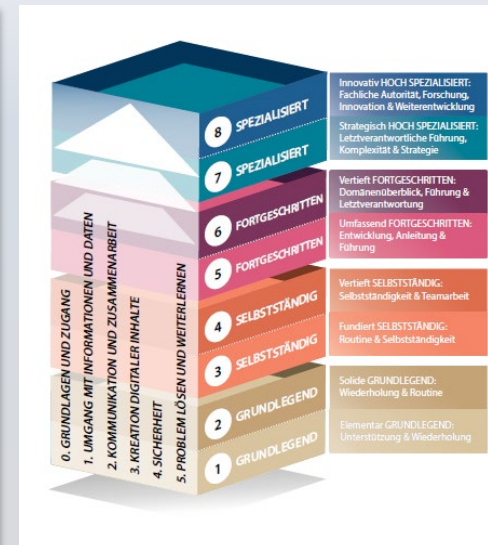


PROFILING



STANDARDIZATION

- EU DigComp 2.1 > **DigComp 2.2 AT**
- **6 Areas, 25 single competences, 8 competence levels**
- **Taskforce Digital Competences** (interdisciplinary)



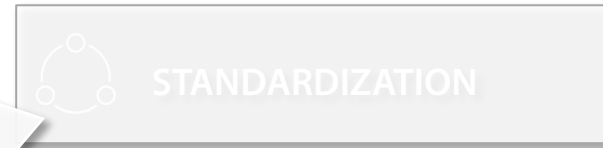
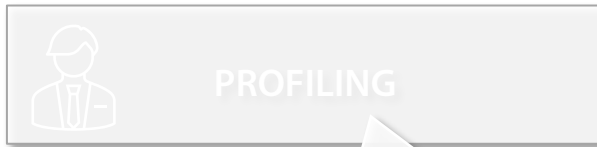
CERTIFICATION

Competence areas:

0. Access and Foundation
1. Information and Data Literacy
2. Communication and Collaboration
3. Digital Content Creation
4. Safety
5. Problem solving and learning

→ Due to its structure, the DigComp Framework correlates with the European Qualification Framework (EQF), which also outlines eight levels

DigComp in Austria – EVALUATION



- **2019: 1 single tool to evaluate Digital Skills based on DigComp**
- **2021: 24 tools** (self-evaluation and knowledge-based Qs)
- **Data Cockpit for analysis** (age, region, gender etc.)

Subject areas

Quickstart

Source: shutterstock.com, Halfpoint

Everyday Life

Source: shutterstock.com, iwanitoy

The workplace

Source: shutterstock.com, TerdyRawpixel

Safety

Source: shutterstock.com, Mikko Lemola

Artificial Intelligence

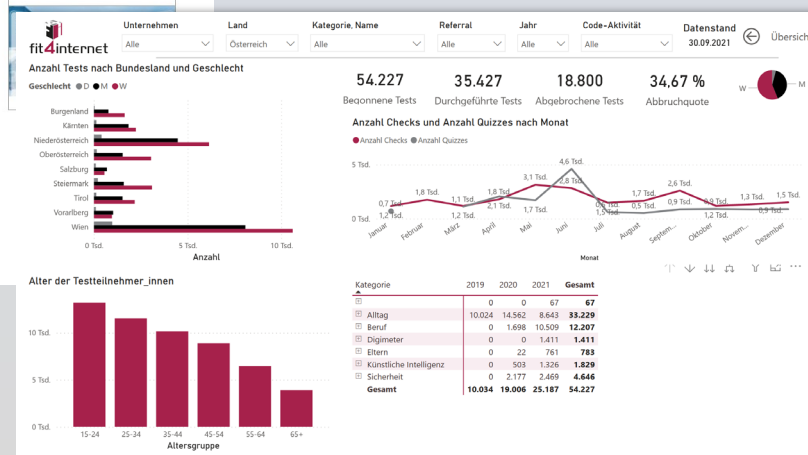
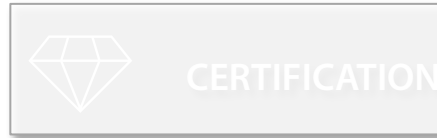
Source: shutterstock.com, gromdenkoff

Data Science

Parents

Quelle: shutterstock.com, gpointstudio

CHECKs = self-assessment
QUIZZes = knowledge based questions




Evaluation Tools for digital skills Information modules

Artificial Intelligence

As far as A.I. is addressed we are covering topics in our fit4internet **CHECKs (self-assessment)** and **QUIZ (knowledge-based questions)** and **learning modules** such as:

- Outlining what **AI as a sub-area** of computer science means and **cite useful as well as risky examples.**
- **Using AI applications** in (private and professional) everyday life.
- Naming and applying the **principles of an ethical use of AI**
- Forming an opinion about **current legal, economic, social and political aspects of AI**
- Describing the **difference between human intelligence and AI** based on the current technological state of the art

Artificial Intelligence



Artificial intelligence (a sub-area of computer science) is developing dynamically and can already be seen as a fixed part of our everyday life. With the CHECKs and the QUIZ, you have the chance to find out more about your digital skills on the subject of artificial intelligence (AI). All six competence areas categorised by the [Digital Competence Framework for Austria](#) (DigComp 2.2 AT) and ranging from competence levels 1 (foundation) to 5 (advanced) are covered here. The evaluation gives you insights into your digital strengths and identifies areas of improvement.

Choose between two CHECKs:

- select the **light version** if the subject of digital skills is rather new to you.
- select the **advanced version** if you believe you have a higher level of digital skills.

By the way: Would you like to know in how far artificial intelligence (AI) influences our everyday lives and how it will affect our future? The [online learning module 'The Power of AI'](#) (in German only) provides insights on this topic.

3 available f4i-tools

CHECK Artificial Intelligence - light
The CHECK Artificial Intelligence - light provides an insight into your everyday skills on the topic.


Postcode * Year of birth *

Gender * female male other

CHECK Artificial Intelligence - advanced
The CHECK Artificial Intelligence - advanced provides an

Postcode * Year of birth *

fit4internet in Austria – Raising Digital Competences

DE | EN 

Home Understanding ▾ Checking Learning Keep going Join us ▾ About us ▾

The Power of A.I.

Das Online-Lernmodul „Die Power von K.I.“ gibt Einblicke, wie Künstliche Intelligenz (K.I.) unseren Alltag schon jetzt beeinflusst und wie sie ihn weiterhin verändern wird. Die in „Die Power von K.I.“ dargestellten Inhalte orientieren sich am Digitalen Kompetenzmodell für Österreich – DigComp 2.2 AT und umfassen die Kompetenzbereiche o. Grundlagen und Zugang, 1. Umgang mit Information und Daten und 4. Sicherheit.

1 Modul present

Online learning module
Get to know the power of A.I. with simple experiments in five learning units.

Postcode * Year of birth *


Gender * female male other

DigComp in Austria – QUALIFICATION




- **Course catalogue based on DigComp** www.fit4internet.at
- **Online Referencing Process** with instructions for action and explanatory videos
- **DigComp Monitoring Board** (3 ministries) for governance

The screenshot displays the DigComp course catalogue interface. On the left, there are filters for 'Kompetenzbereich DigComp 2.2 AT' (0 Grundlagen und Zugang, 1 Umgang mit Informationen und Daten, 2 Kommunikation und Zusammenarbeit, 3 Kreation digitaler Inhalte, 4 Sicherheit, 5 Problemlösen und Weiterlernen) and 'Kompetenzstufe DigComp 2.2 AT' (Stufe 1 Grundlegend, Stufe 2 Grundlegend, Stufe 3 Selbstständig, Stufe 4 Selbstständig, Stufe 5 Fortgeschritten, Stufe 6 Fortgeschritten, Stufe 7 Hoch spezialisiert, Stufe 8 Hoch spezialisiert). The main content area shows a grid of course cards. One card is highlighted, showing details for 'Einführung in die Cybersicherheit' (Introduction to Cybersecurity) by Cisco Academy. The card includes a description of the course, its objectives, and a 'DIREKT ZUM ANBIETER' button.

 STANDARDIZATION

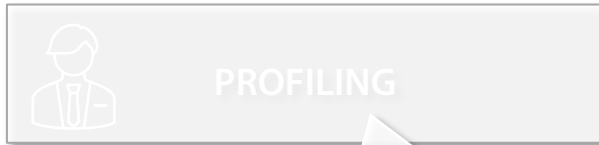
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 EVALUATION

 QUALIFICATION



DigComp in Austria – CERTIFICATION

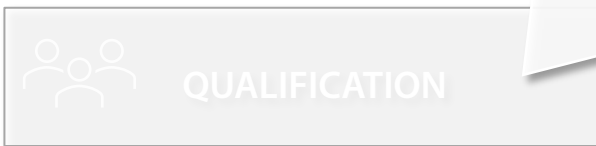
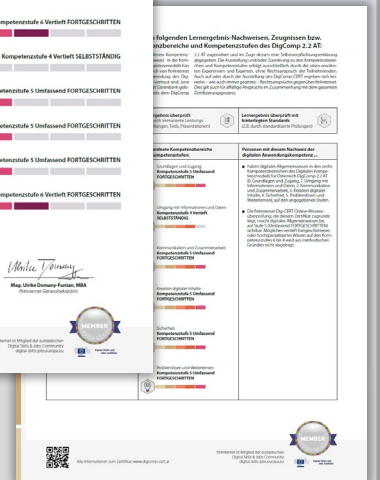
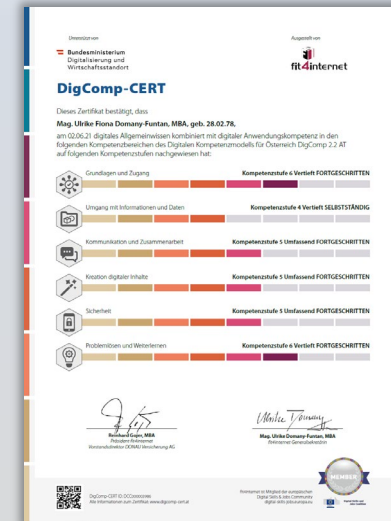
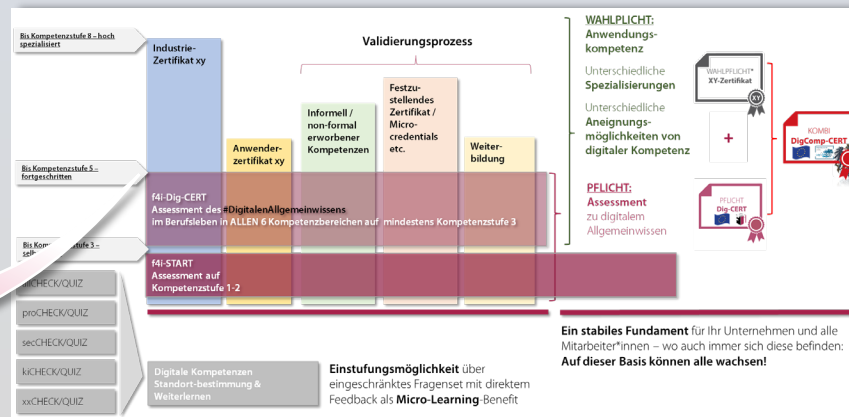


PROFILING

- **National Certification System**
= structuring the different ways to **proof digital skills** in the professional context
- **DigComp-CERT = Combination Certificate** for recognition of Digital Competences consisting of
 - a **mandatory online exam (General Digital Knowledge)** and
 - an **individual Proof of Competences** (referenced according to DigComp 2.2 AT)



CERTIFICATION



QUALIFICATION

f4i Dig-CERT & DigComp-CERT | Combination Certificate



(1) KNOWLEDGE
= mandatory

(2) COMPETENCE
= individual
(self-selected)

DigComp-CERT
(Combination Certificate)

fit4internet Dig-CERT

Digital General Knowledge
for Everyday Life & Work



Proof of Digital
Competence

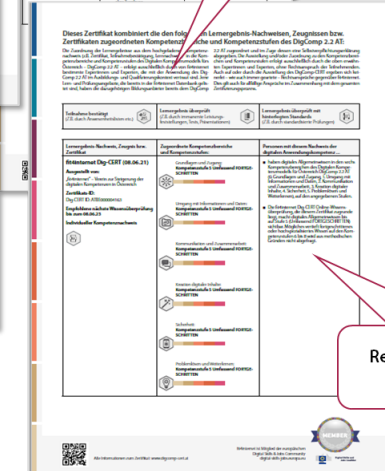
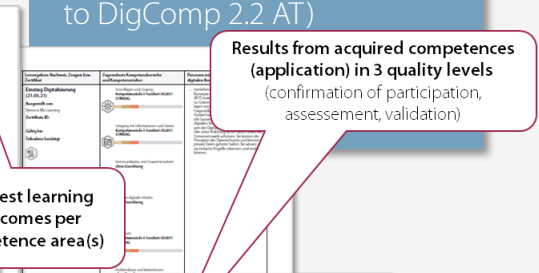
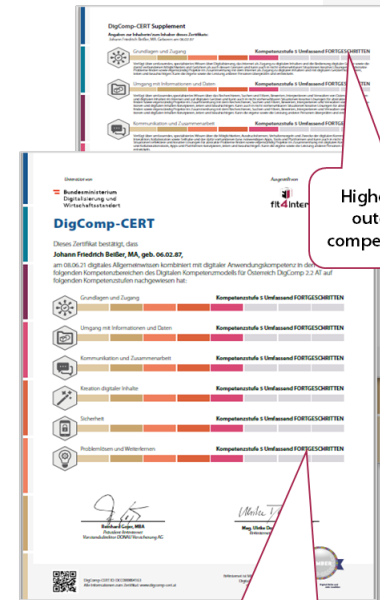
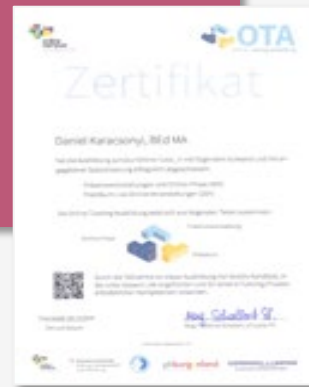
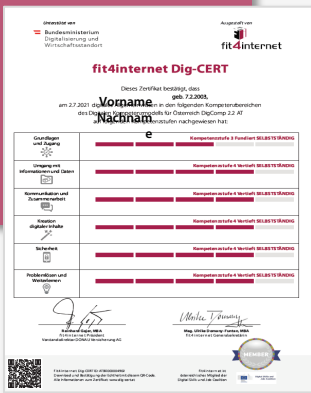
Confirmation of formal/
informal/ non-formal acquired
digital competences



DigComp-CERT (+)

recognition of Digital
Competences

Mandatory: f4i Dig-CERT
Choice: individual proof of
Digital Competence (referenced
to DigComp 2.2 AT)



Results from acquired competences
(application) in 3 quality levels
(confirmation of participation,
assessment, validation)

Highest learning
outcomes per
competence area(s)

Highest level of competence in **Digital
General Knowledge** and additionally
acquired digital competences
(application) per competence area(s)

Results of fit4internet Dig-CERT
(Digital General Knowledge)

Performed by:



Supported by:



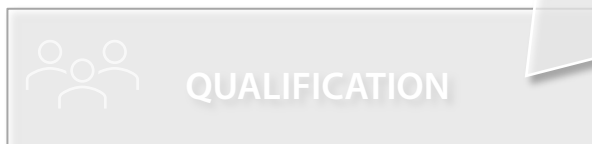
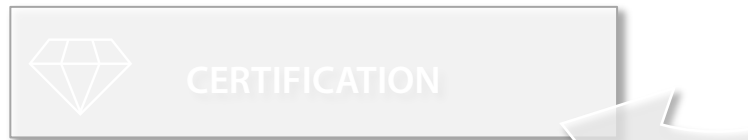
In the context of:





Professional Digital Profiling

- focusing on job profile/function-relevant digital competences
- transferring the Digcomp methodology into the everyday business of SMEs with a digital profiling toolkit to become/remain digitally innovative
- Target groups: SME employees, recruiters, apprentices, labour market intermediaries
- considering cross-country collaboration and applying for an **EDIC** with other countries if applicable



In a nutshell – it is about education, awareness and reflection



Article 22 GDPR:

Your rights in relation to automated decision-making, including profiling (Art. 22 GDPR) You have the right not to be subject to a decision based solely on automated processing. Processing is 'automated' if it is carried out without human intervention and produces legal effects or significantly affects you.

European Commission (2021) - COM/2021/206 final - Document 52021PC0206:

Regulation of the European Parliament and of the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain acts of Union law.



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