

Assessment of Digital Competences: Necessity and Role in the Modern Workplace

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About us

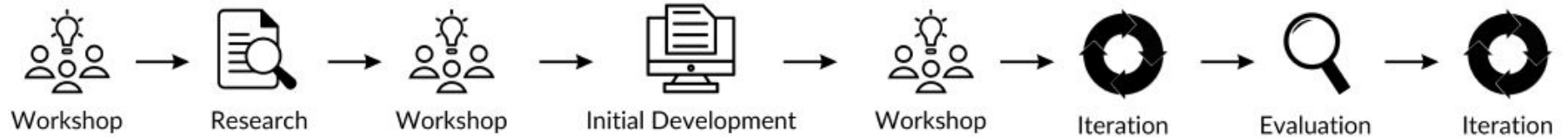
August-Wilhelm
Scheer **Institut**
Digital Research 

- Independent, non-profit research institute
- Founded in 2014
- Focus on innovative technologies and digitalization
- Over 50 research projects with 150+ partners
- Interdisciplinary, international team

Competence assessment is important to...

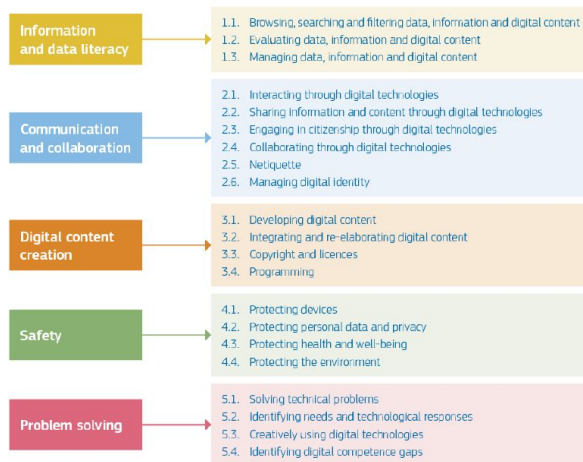
- **Keep up with digital transformation:**
 - New technology changes processes at the workplace
 - New technology and new processes change required employee competences
- **Identify and close skill gaps:**
 - Individual development and organizational development
- **Stay competitive:**
 - Enhance efficiency by matching each employee to the best fitting job profile
 - Best use of human capital

We developed a digital competence assessment instrument



We based the instrument on 3 frameworks

DigComp 2.2



EntreComp



DELTAS

Cognitive		Interpersonal	
Critical thinking <ul style="list-style-type: none"> Structured problem solving Logical reasoning Understanding biases Seeking relevant information 	Planning and ways of working <ul style="list-style-type: none"> Work-plan development Time management and prioritization Agile thinking 	Mobilizing systems <ul style="list-style-type: none"> Role modeling Win-win negotiations Crafting an inspiring vision Organizational awareness 	Developing relationships <ul style="list-style-type: none"> Empathy Inspiring trust Humility Sociability
Communication <ul style="list-style-type: none"> Storytelling and public speaking Asking the right questions Synthesizing messages Active listening 	Mental flexibility <ul style="list-style-type: none"> Creativity and imagination Translating knowledge to different contexts Adopting a different perspective Adaptability Ability to learn 	Teamwork effectiveness <ul style="list-style-type: none"> Fostering inclusiveness Motivating different personalities Resolving conflicts 	<ul style="list-style-type: none"> Collaboration Coaching Empowering
Self-leadership		Digital	
Self-awareness and self-management <ul style="list-style-type: none"> Understanding own emotions and triggers Self-control and regulation Understanding own strengths 		Digital fluency and citizenship <ul style="list-style-type: none"> Digital literacy Digital learning Digital collaboration Digital ethics 	
Entrepreneurship <ul style="list-style-type: none"> Courage and risk-taking Driving change and innovation 		Software use and development <ul style="list-style-type: none"> Programming literacy Data analysis and statistics Computational and algorithmic thinking 	
Goals achievement <ul style="list-style-type: none"> Ownership and decisiveness Achievement orientation 		Understanding digital systems <ul style="list-style-type: none"> Data literacy Smart systems Cybersecurity literacy Tech translation and enablement 	

The instrument covers 5 competence levels

- **Foundation:**
 - Partially solve simple tasks independently, with guidance as needed.
- **Intermediate:**
 - Independently solve well-defined and routine tasks as needed.
- **Advanced**
 - Independently solve various tasks and problems, select optimal solutions, and guide others.
- **Highly specialized:**
 - Independently solve complex, multifactor problems, guide others, contribute to professional practice, and propose innovative ideas and processes.
- **Zero:**
 - Meets no requirements of any other level.

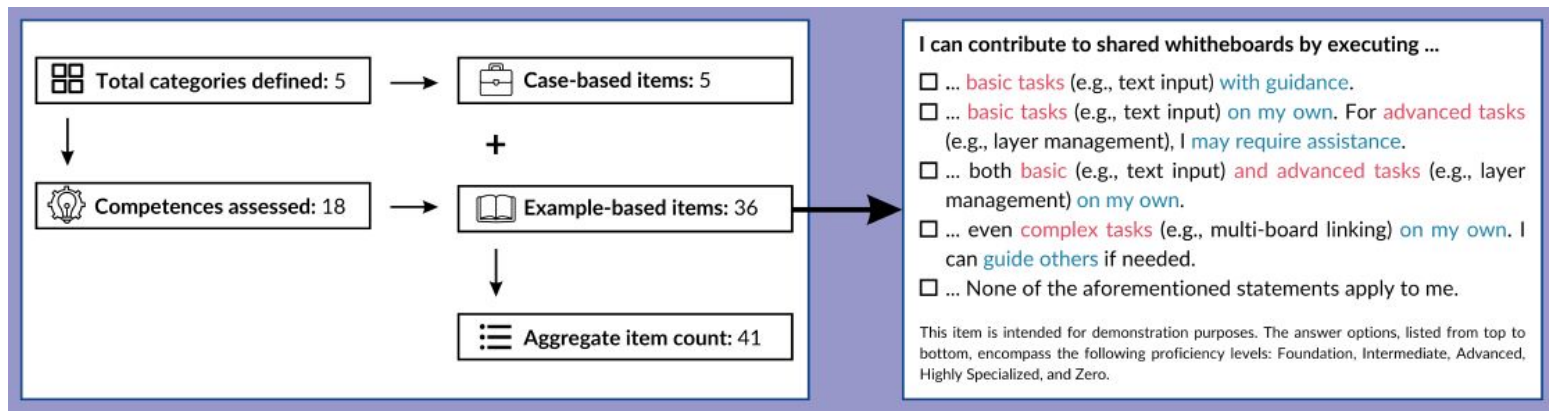
The items are based on 2 question formats

- **Example-based questions:**

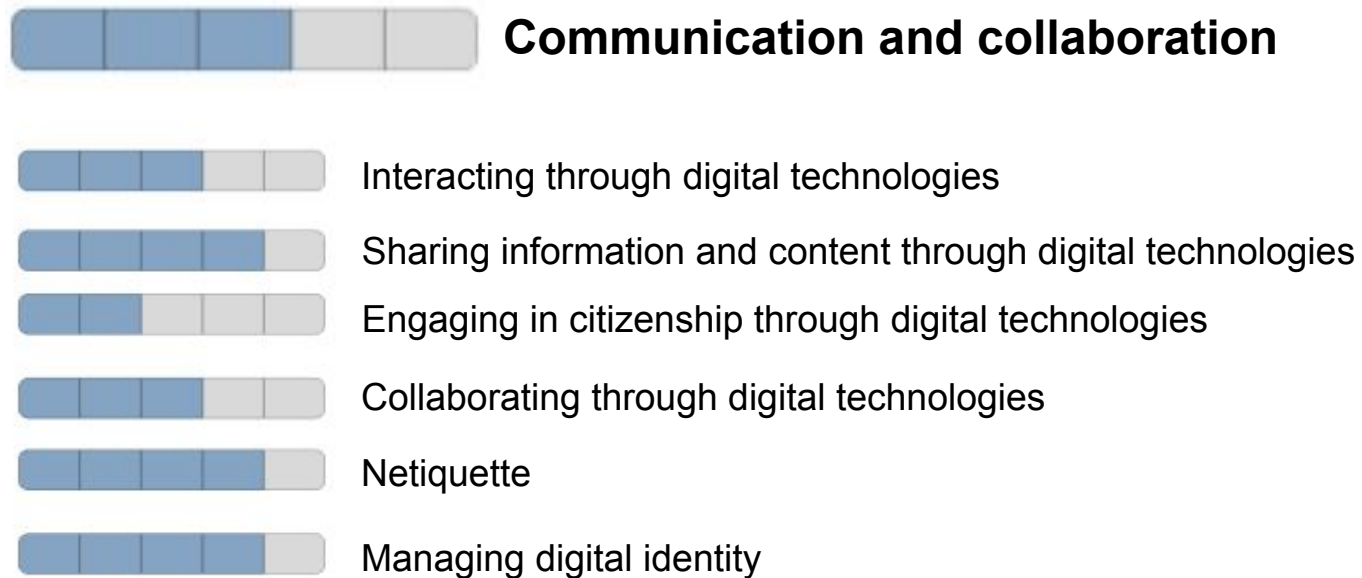
- Target competences on a general level but are enriched with company-specific examples to promote understanding and relatedness.

- **Scenario-based questions:**

- Describe company-specific scenarios requiring each competence in the category.



The outcome is a competence profile



There are several use cases for companies

- **Recruitment:**

- Jobseekers' self-assessment
- Identify the most suitable candidates

- **Performance management:**

- Iterative assessment to track employees' competence development
- Identify company-intern hidden champions

- **Further education:**

- Identify further development needs
- Identify targeted further education offers
- Personalize learning paths

Further research is needed to...

- Validate the instrument
- To scale the instrument
- To extend the instrument to other languages

Any questions?

Thank you for your attention!