Welcoming remarks

Peter Palvolgyi
COO of All Digital

Who we are

Programme: Horizon Europe

Topic:
CL2. Culture, creativity and inclusive society

Duration: 36 months
(January 2023 - January 2026)

Maximum grant: € 2.435.145

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ENHANCING
DIGITAL SKILLS
ACROSS EUROPE
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Associated partner:

University of
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MEGASKILLS

01 MEGASKILLS' Goals

- Help bridge these gaps between education and the labour market through the research and design of an innovative and affordable methodology for training and evaluating soft skills through 3 main research tasks to figure out how to:

  1) Reach a consensus **pact for soft skills taxonomy and normalization** based on the manifest needs of industry and education;

  2) **Training and evaluation techniques** through the use of the massive amount of data from the interactions of players with their favourite **video games** (considering the very high penetration of video games among working-age citizens in Europe) and the use of AI and machine learning algorithms;

  3) Implement **methodologies and educational designs** that will build an **affordable strategy** for the new educational labour paradigm at a **European level.**

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MEthodology of Psycho-pedagogical,
Big Data and Commercial Video GAmes procedures
for the European SKILLS Agenda Implementation

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🏆 🥇 🥈 🥉 There is a contest!!!

If you pay attention...

...you might win A PRIZE 🙈

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WP2

Key Soft Skills Taxonomy and Models

02

WP2 |Soft skills for the 21st century taxonomy and model
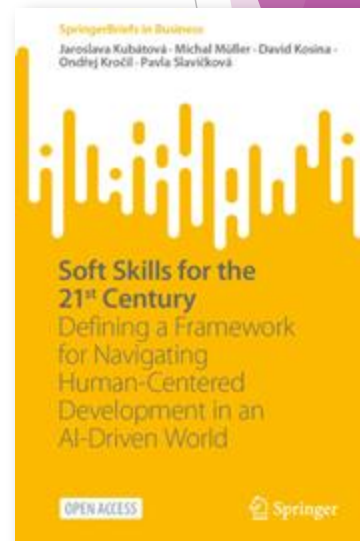
- Main objective:
    - **To develop unified definitions, taxonomy, and model of key soft skills for the 21st-century society and economy,**
    - usable as a basis for the development of soft skills in school education as well as in professional development including training of soft skills through video games.

02 Main outputs

- A new, unambiguous definition of the concept of soft skills
- A **set of the 30 most important soft skills** for the 21st century
- New, **unambiguous definitions** of these soft skills
- A new categorization of soft skills
- A new Tree Model of Soft Skills
- **Assessment rubrics** for each soft skill
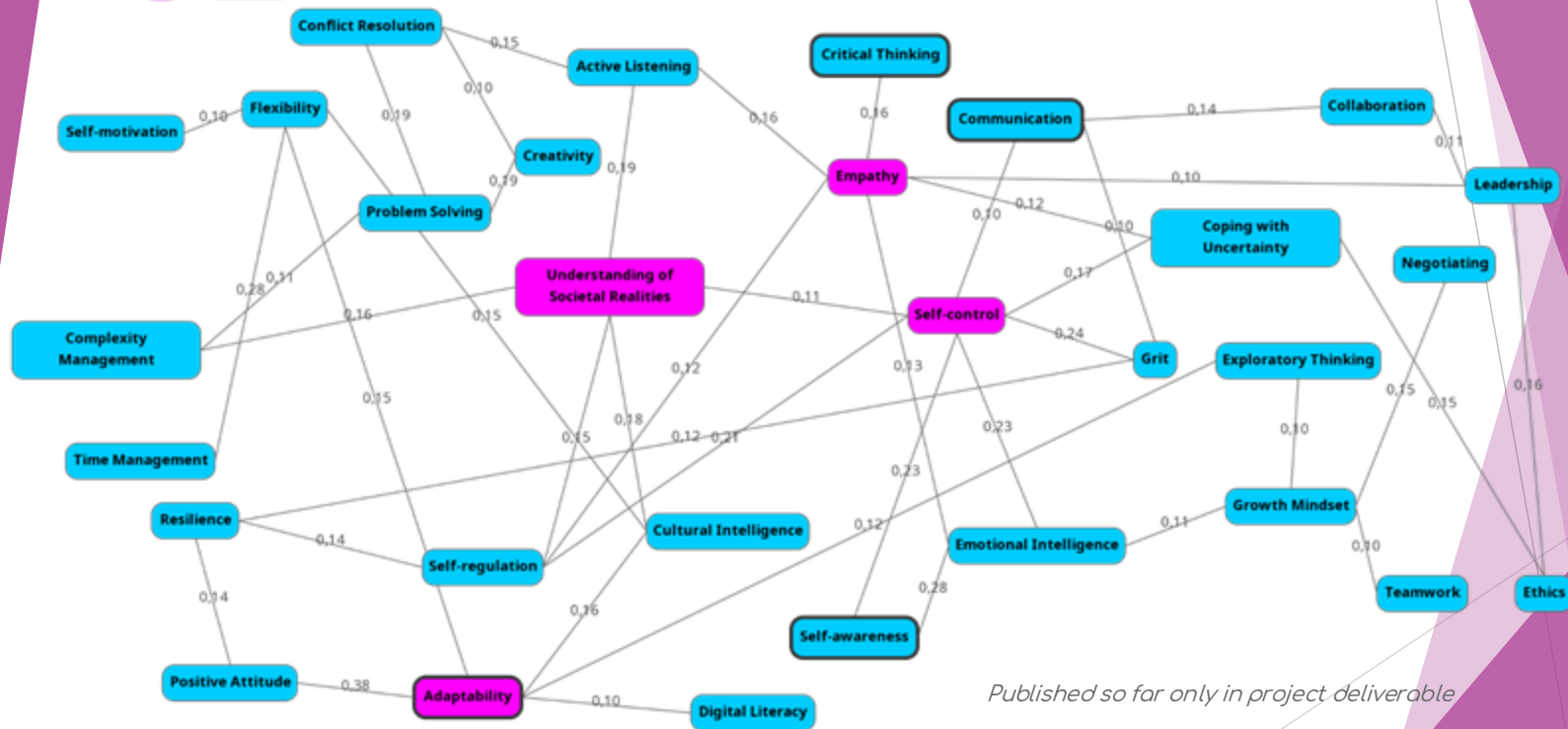- All available in [open-access book](#)

SpringerBriefs in Business

Jaroslava Kubátová · Michal Müller · David Kosina · Ondřej Kročil · Pavla Slavíčková

Soft Skills for the 21st Century
Defining a Framework for Navigating Human-Centered Development in an AI-Driven World

OPEN ACCESS

Springer

Image source: Pixabay

Plus: 21st-Century Soft Skills Relationship Map

Published so far only in project deliverable

02 21st-Century Soft Skills Relationship Map

- Includes the key soft skills for the 21st century
- Depicts the links between those with the highest conceptual proximity
  - They tend to support each other's development, as they share underlying cognitive, emotional, or behavioral elements
- Highlights **Hub Soft Skills**
  - Those with the potential to contribute to the development of the greatest number of other soft skills
- Shows the soft skills identified as most important by EU SME representatives

02 21st-Century Soft Skills Relationship Map

- **Hub Soft Skills**
  - Adaptability
  - Empathy
  - Self-control
  - Understanding of Societal Realities

- **Soft Skills identified as most important by EU SMEs:**
  - Adaptability
  - Communication
  - Critical thinking
  - Self-awareness

02

21st-Century Soft Skills-full set

- Active Listening
- Adaptability
- Collaboration
- Communication
- Complexity Management
- Conflict Resolution
- Coping with Uncertainty, Ambiguity, and Risk
- Creativity
- Critical Thinking
- Cultural Intelligence

- Digital Literacy
- Emotional Intelligence
- Empathy
- Ethics
- Exploratory Thinking
- Flexibility
- Grit
- Growth Mindset
- Leadership
- Negotiating

- Positive Attitude towards Challenges and Problems
- Problem Solving
- Resilience
- Self-awareness
- Self-control
- Self-motivation
- Self-regulation
- Teamwork
- Time Management
- Understanding of Societal Realities

Questions?

WP3

Psycho-pedagogical methodology for detection and training of soft skills with commercial video games
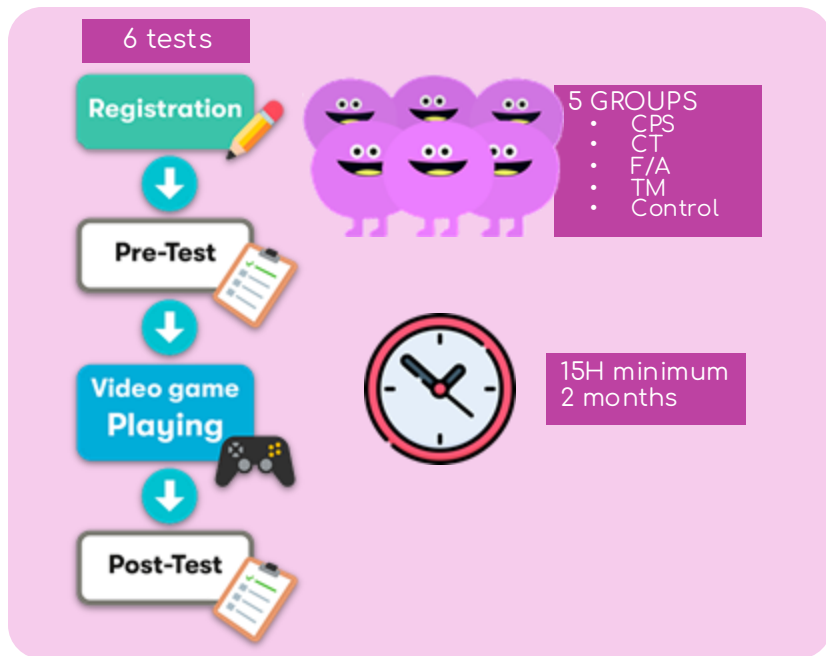
WP3

Stage 1: THE EXPERIMENT

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The Experiment | MAIN HYPOTHESIS

- **H1.** Video games = +soft skills ?

- **H2.** Previous video game exp = +soft skills?

- **H3, 4 & 5.** Sociodemographic var = +soft skills?

(more than 20 hypothesis in total)

6 tests

Registration

Pre-Test

Video game Playing

Post-Test

5 GROUPS
- CPS
- CT
- F/A
- TM
- Control

15H minimum
2 months

The Experiment | RESULTS

H1. Video games = + soft skills
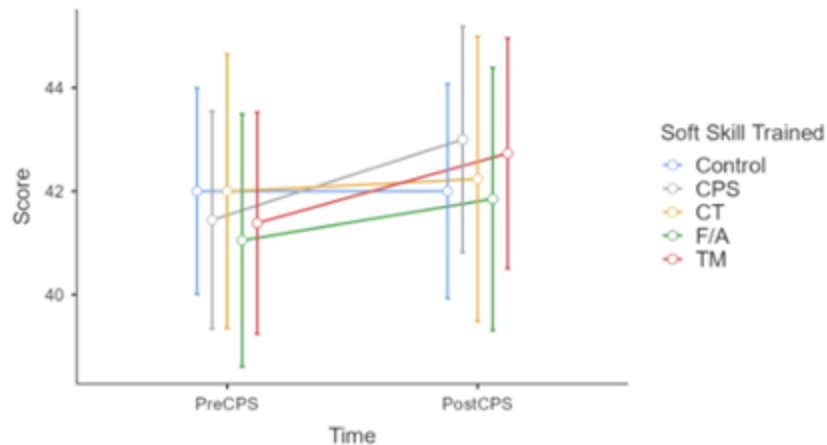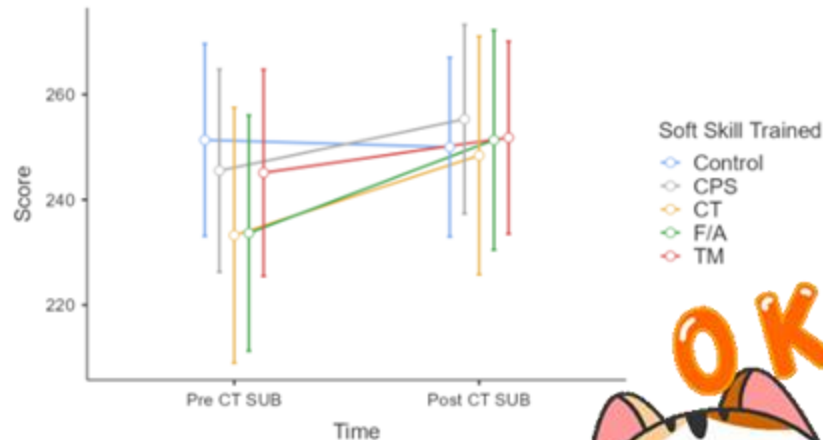

Figure 1. Post-Pre CPS Differences per Group
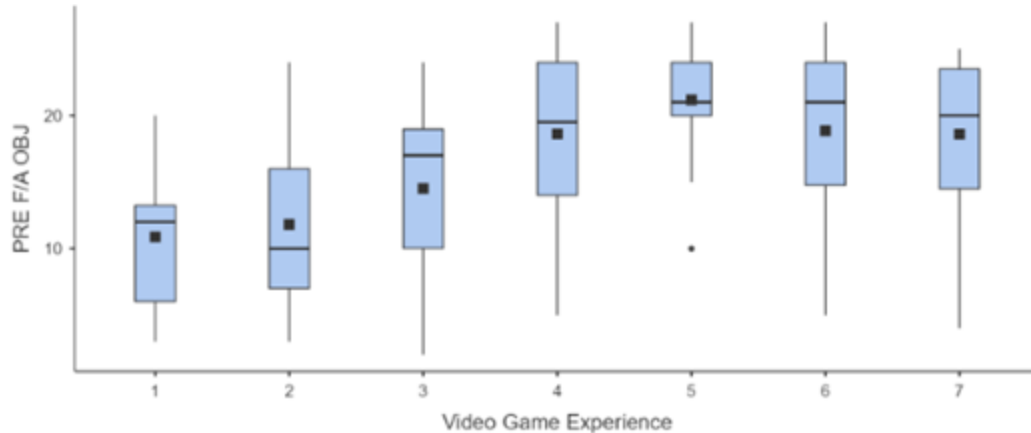
Figure 2. Post-Pre CT Differences per Group

The Experiment | RESULTS

H2. Previous video game exp = + soft skills

Figure 7. Pre F/A OBJ means by Experience

H3, 4 & 5. Sociodemographic var = +soft **skills?**

- Age do NOT generally influence on skills <u>except F (+age = -Flexibility)</u>

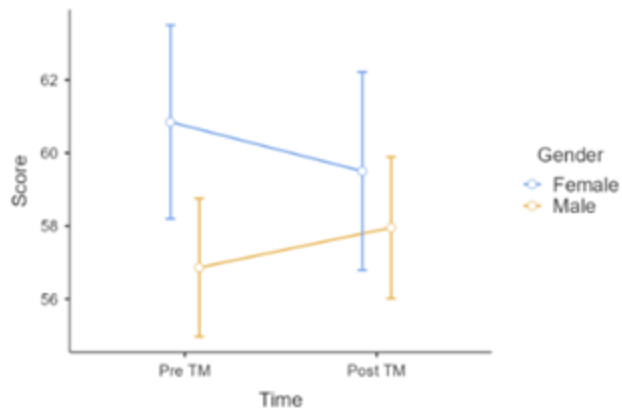- Educational level does NOT influence skills level

emmm···

The Experiment | RESULTS

H3, 4 & 5. Sociodemographic var = +soft skills?
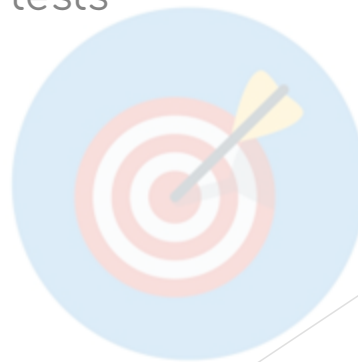

Figure 12. TM means by genre

INTERESTING

WP3

Stage 2: THE PEDAGOGICAL DESIGN

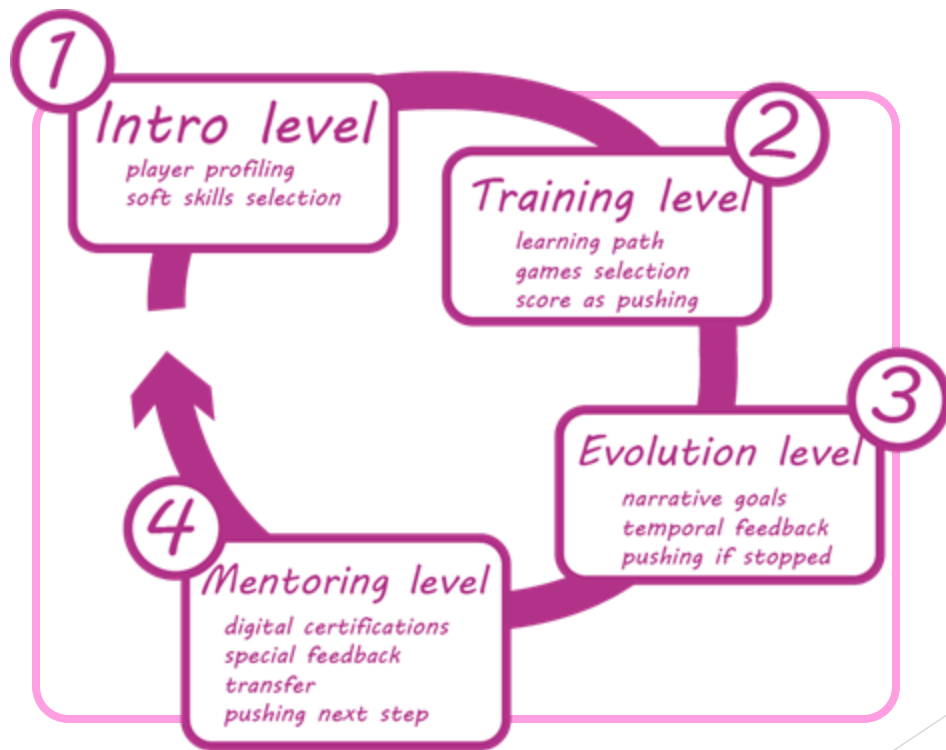# 03 The Pedagogical Design | GOAL

To **provide guidelines** for the design and development of a platform that allows testing previous research results in a pedagogical context and **evaluate the result** of such tests

1 Intro level
player profiling
soft skills selection

2 Training level
learning path
games selection
score as pushing

3 Evolution level
narrative goals
temporal feedback
pushing if stopped

4 Mentoring level
digital certifications
special feedback
transfer
pushing next step

03

The Pedagogical Design | RESULTS

- 📊 **Time & Progression Metrics**
  - The minimum 15-hour threshold for results should be adapted, as significant engagement and skill improvements were seen with only 5 or more hours of gameplay (5-15 achievements)
  - Most significant skill development occurs during the first week, followed by stabilization in weeks 2-4.
  - Realistic retention expectations should be set at 40-50%, with increased frequency of re-engagement strategies (push notifications) during weeks 2-4

The Pedagogical Design | RESULTS

- 🎮 User Engagement & Gamer Profiles
  - **Users with prior gaming experience** show higher engagement and more playtime.
  - *Fallout Shelter* achieved the highest engagement per user (720 accumulated hours), making it ideal for casual/non-gamers
  - *Paladins* produced the highest sustained skill development (2.1 out of 3 points), recommended for hardcore/pro gamers through intense, synchronous sessions
  - Paid games (e.g., *Anomaly series*) created a phenomenon of exclusive users with extremely high gameplay hours.

03
The Pedagogical Design | RESULTS

- 🔁 **User Profiles & Transfer**
  - **Students** showed the greatest consistency (frequent, shorter sessions).
  Managers favored less frequent (intensive sessions).
  - Minimal gender differences in achievement were confirmed, though male participants had slightly higher average playtime.
  - Users showed high appreciation for the research value (86% considered it "interesting") but lower valuation of Europass accreditations ("only" 45% requested certification).

Questions?

WP4

Intelligent soft skills assessment and certification platform

04 MEGASKILLS Intelligent soft skills assessment and certification platform

An **Artificial Intelligence based solution** that:

- Automatically evaluates and trains soft skills using commercial video games, by carrying out a stealthy assessment.
- Supports evidence-based decision-making for both learners and employers.
- Offers adaptive learning paths based on user performance and gameplay data, enabling personalized skill development.

04

How it works

Register on Platform

Users register with Steam ID and public profile.

Select Game

Users choose a game to develop soft skills.

Issue Credentials

Micro credentials are issued via EDCI.

europass
Unión Europea

Launch Game

Steam client launches the selected game.

Recommend Games

AI recommends tailored games.

Update User Profile

User profile is updated with skill metrics.

Collect Game Data

Game data is collected via API.

Analyze Data

AI model analyzes data for skill improvement.

Questions?

WP5

Uses Cases and Demonstrators

05

Use cases

- WP5 ensures that real experiences using the platform, across different target groups, achieve the expected results in terms of training practice and skills development, preventing potential issues related to the user experience identified in WP4.

- Across more than 500 users in two iterations, the platform shows that games can effectively support competency development when embedded in a structured learning path.

05 Engagement factors in game-based learning

- Users consistently like:
  - Strategic decision-making, real-time problem solving, and planning as meaningful learning drivers.
  - Enjoyment of progression, achievements, character management, and teamwork.

- High accessibility of games like Fallout Shelter and Gravitas, which provide clear goals and intuitive mechanics.

- 86 percent of users affirm the platform is a useful tool for soft skills development.

- Engagement increases when game choice aligns with person preferences and when instructions are clear.

05

Key insights from 521 users across two iterations

- Onboarding friction: Users struggle with Steam integration, and understanding how gameplay relates to learning specific outcomes.

- Accessibility issues: organisations' networks prevent employee for installing necessary software.

- Feedback gaps: Users want real-time dashboards, clearer visualisation of progress, and actionable insights in reports.

- Game catalogue requires for broader genres, more inclusive game types, and more different types of games.

- Iteration 2 already improved satisfaction (NPS 3.76/5 vs. 3.48/5).

05 Target groups

STUDENTS

- Promote skill-building through fun, relatable varied gameplay.

- Include non-violent, cooperative games to boost engagement.

- Provide tutorials and progress indicators for motivation.

- Look to continuation.

MANAGERS

- Show measurable skill outcomes linked to professional growth.

- Tailor onboarding to highlight strategic value.

- Optimise the experience linked to their companies' reality.

SMEs

- Position platform as a scalable and integrable development solution.

- Highlight data-driven soft skill reports for HR use.

- Optimise the experience and applications.

What MEGASKILLS teaches about using games to develop skills

- Videogames can be valid learning tools when paired with pedagogical structure.

- Early gameplay generates the largest skill improvements; sustained challenge is essential.

- Platforms must provide:
  - Simple onboarding and clear user journeys
  - Inclusive, diverse game catalogues
  - Real-time analytics and actionable feedback

- Strong potential for education, employability, and HR development.

LEVEL UP!

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Questions?

WP6

Communication, dissemination, exploitation, standardisation & certification

Motto:
If not disseminated, it does not exist

06 Rationale of the consortium

Academia

Univerzita Palackého v Olomouci

University of Southampton

Pyschological/pedagodical background

gecon.es

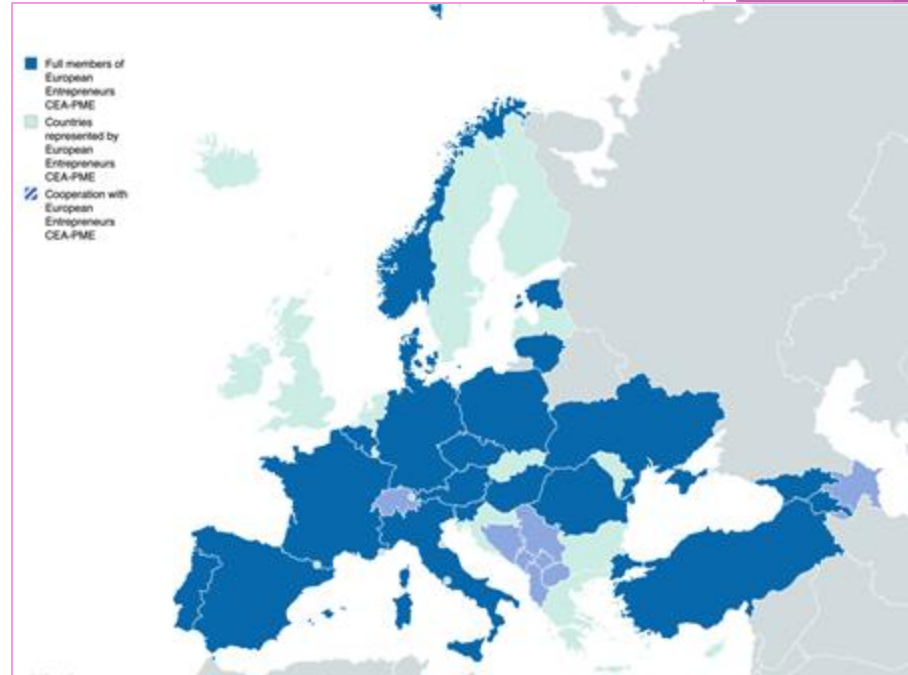**Coaching world**

cegos Beyond knowledge

Technical team

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Connection to the SME ecosystem

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06 European Entrepreneurs CEA-PME

- Largest confederation of only *voluntarily* associated SME organisations
- 30 member organisations
- Representing the interests of 1.4 million SMEs in Europe

Full members of European Entrepreneurs CEA-PME

Countries represented by European Entrepreneurs CEA-PME

Cooperation with European Entrepreneurs CEA-PME

All Digital

ALL DIGITAL AT A GLANCE

- **120+** Members Organisations
- **2.5 MLN** Trained by the network
- **58.000** Courses Offered
- **20.000** Trainers
- **250+** Summit Participants
- **70.000+** All Digital Weeks Participants
- **NL 3000+** subscribers
- **Website 7000+** visitors
- **30+** Projects
- **2+2** CoPs
- in **4900+** Subscribers
- X **3800+** Subscribers
- f **4700+** Subscribers

· A L L · D I G I T A L ·

06 MEGASKILLS WEBSITE

- Intuitive and visually appealing
- User friendly navigation of outputs
- Translation of scientific results --> approachable
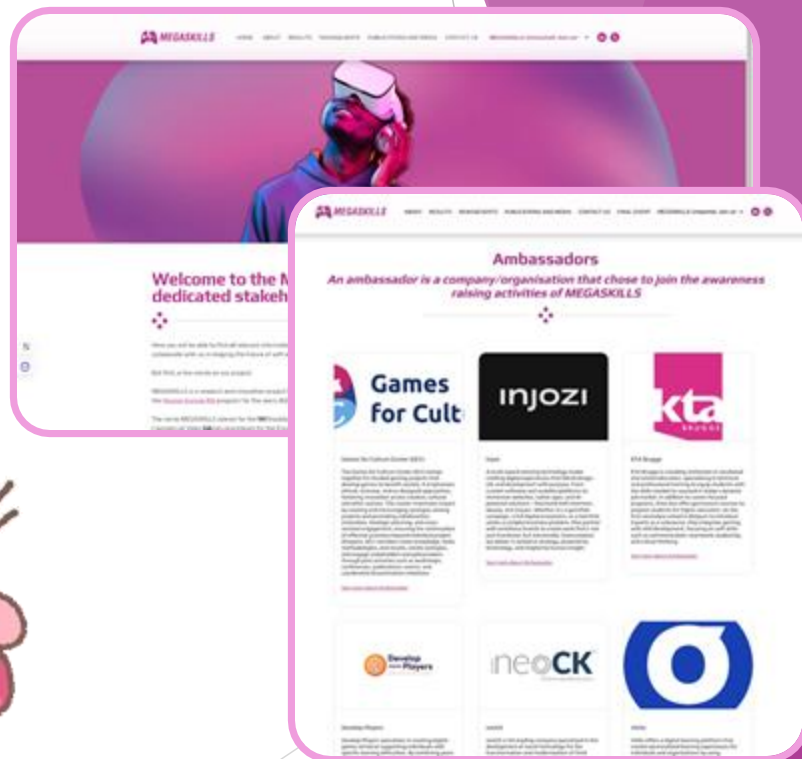
06 MEGASKILLS WEBSITE

Dissemination arsenal:

- Project newsletters

- Articles and academic publications

- Press releases on events and project milestones

- Animated videos (4) showcasing project phases and accomplishments

- Social media outreach (LinkedIn & X)

06 Stakeholders outreach: Ambassador Program

- Connecting like-minded entrepreneurs/projects
- Network for advancement in the skills development industry
- Best-practice-sharing space for professionals
- Building partnerships and the future of the MEGASKILLS project

06

Project's presence: events all over the EU

- Der Mittelstand Zukunftstag 2025 (DE)

- EU Social Forum (BE)

- All Digital Summit (MT)

- SME2B Business Forum (BE)

- Education and Skills – Horizon Europe Feedback to Policy event (BE)

- III Conference on Culture, Communication, and Video Games: Gamification and Virtual Reality in Educational Environments (ES)

- Synergy events with Horizon Sister Projects
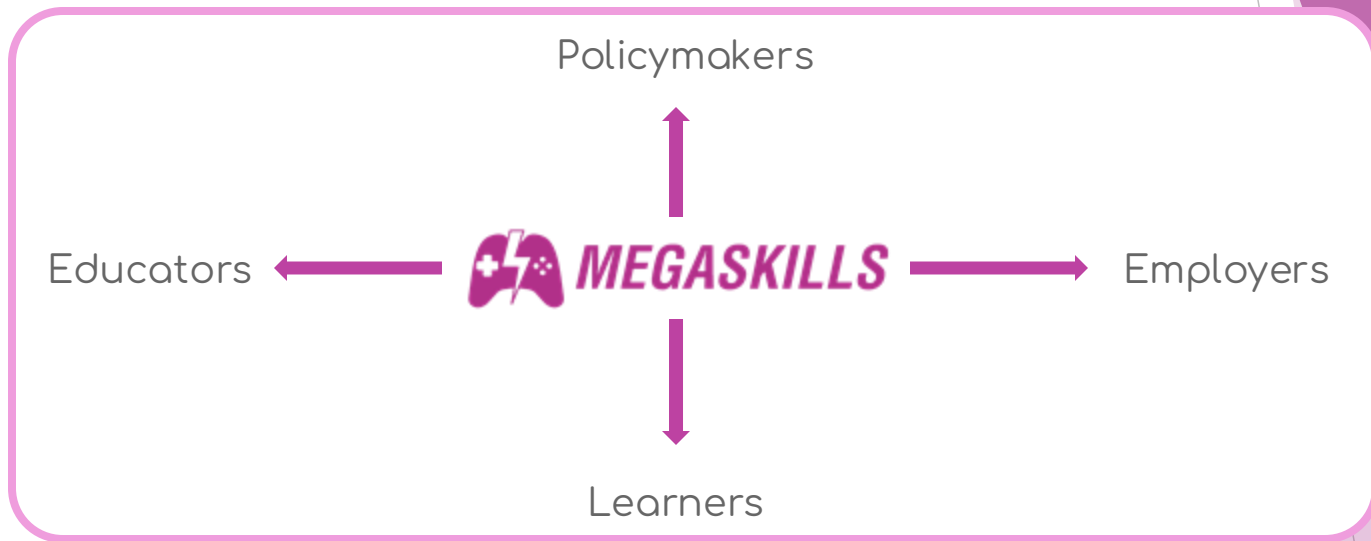
- KNOWCON 2023/2024/2025 (CZ)

- ..and more

Project Synergies

06
Policy recommendations

1. Policy Brief after Two Years of Research

Elevating soft skills as core competencies

Enhancing educational and workforce alignment

Leveraging technology for personalized learning

2. Final Policy Recommendations with

Three strategic scenarios to reduce skills gaps and guide the adoption of MEGASKILLS innovations across Europe.

06

Policy recommendations

⚠️Problem → 💡Innovation → 📊Outcomes → Recommendations

1. Positioning Soft Skills at the Core of Educational, Civic and Green Agendas
2. Harnessing Game-Based and Data-Driven Approaches to Modernise Soft Skills Development and Recognition
3. Strengthening Europe's Digital Infrastructure for Inclusive Soft Skills Innovation

06 Key Recommendations in details

1. Promote Targeted Hub Skill Training

2. Foster public-private partnerships to scale soft skills initiatives

3. Promote structured multi-stakeholder engagement platforms to accelerate awareness and adoption

4. Establish a "PEGI+" certification system tagging European commercial video games for their potential educational benefits

5. Establish a European Micro-Credential Framework based on scientifically validated behavioural data from video games

06

Communication really is a soft skill we've mastered

bye ☀️

We disseminated so much that even our dissemination had its own dissemination... 🤭

Stay tuned for more updates, insights, and positively outrageous levels of enthusiasm.

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Questions?

Panel Discussion – What's Next: Advancing Sustainability and Scaling Opportunities
moderated by Flavio Escribano

Panelists

Kris Vandevoorde
Innovation lead in STEM &
Esports, BESF Board Member and
European Esports ambassador

Ann Becker
SVP, Head of Policy and Public Affairs
at Video Games Association

Dayana Mejias Roman
Founder and CEO of Viblio

Konrad Adamczewski
Senior PR Manager of 11 bit studios

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💡 Final Insights and Way Forward

Closing remarks

Stefan Moritz
Secretary General of
European Entrepreneurs CEA-PME

The MEGASKILLS project @ EVSW Developing soft skills while gaming

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EUROPEAN VOCATIONAL SKILLS WEEK 2023

Thanks!

see you at the next level 🎮