Regional Centre of Expertise on Education for Sustainable Development

RCEs in europe

Exploring the potential of…

Using Digital Tools in Education for Sustainable Development (ESD)

31 March 2026
17:00 – 18:05 CET
online

Welcome!

Please…

- Introduce yourself in the ‘chat’
- Mute your audio when not speaking
- Put any comments and questions into the ‘chat’
- **Please ‘vote’ for your favourite questions posed by other participants by ‘liking’ them.**
- **We will be recording the meeting.**

Welcome

- **Betsy King,** RCE Scotland

UN University-acknowledged Regional Centres of Expertise (RCEs) in Education for Sustainable Development

https://unu.edu/ias/global-rce-network

UN University-acknowledged Regional Centres of Expertise (RCEs) in Education for Sustainable Development: Purpose

‘Towards creating a just, tolerant and sustainable world, RCEs aspire to use Education for Sustainable Development as a mechanism for implementing/ enabling sustainable development, translating global sustainable development goals and issues into local actions in the regions in which they operate’.

‘A network of existing formal and non-formal education organisations mobilised to deliver ESD in the region or locality where it is situated’

UNU-IAS Roadmap for the RCE Community 2021–2030

Context: A global vision for people, planet and prosperity 2015-2030

Education for Sustainable Development empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity.

It is about lifelong learning, and is an integral part of quality education. ESD is holistic and transformational education which addresses learning content and outcomes, pedagogy and the learning environment. It achieves its purpose by transforming society.

UNESCO 2025

Agenda

17:00 **Welcome and introduction**

17:15 **Digital Tools and ESD – in practice:**

- **Pioneer's Pathfinder: an AI powered platform to inspire projects and empower change makers.**

Adam Greene, RCE Vienna

- **The Self-SDG app: using apps for advancing collective progress towards a sustainable world.**

Detlev Lindau-Bank and Lukas Scherak, RCE Oldenburger- Münsterland

17:45 **Panel discussion and Participants's Q&A**

Chaired by Detlev Lindau-Bank

18:00 **Summary and sharing resources**

18:05 **Close**

Panel discussion questions

- Put any comments and questions into the ‘chat’
- **Please ‘vote’ for your favourite questions posed by other participants by ‘liking’ them.**

Starter questions:

How can educators be encouraged to use digital tools effectively for ESD?

Is there an elephant in the room? What are the benefits and challenges of using digital tools to engage learners with ESD?

Introducing Digital Tools in Education for Sustainable Development

- **Detlev Lindau-Bank,** RCE Oldenburger- Münsterland and

Adam Greene, RCE Vienna

Digitainability

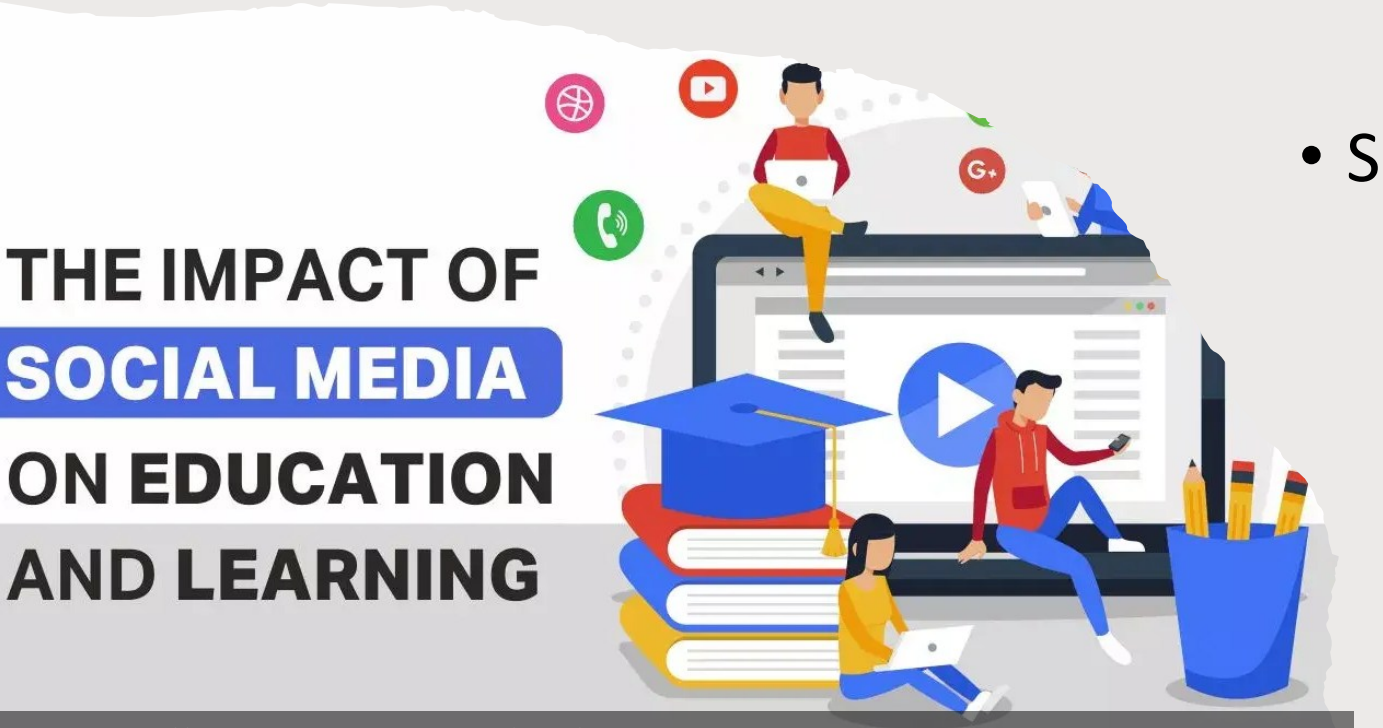
Detlev Lindau Bank

Lukas Scherak

2026

Co-funded by
the European Union

Difference between social media and digital tools



https://www.krmangalam.edu.in/blog/the-impact-of-social-media-on-education-and-learning

- Digital tools:
  Structured, educational (e.g., learning apps)

- Social media:
  Connecting, user-generated (e.g., Instagram)

The International Debate – Risks of Social Media

- Mental Health/Addiction
- Hate/Radicalization
- Disinformation/Democracy
- Algorithms/Polarization/
- Filter bubble/Echo chamber
- Data Protection

The European Debate – Risks of Social Media

- Regulation and Fundamental Rights
- Democracy and the digital public sphere
- Responsibility of social media platform providers
- Transparency of algorithms

- Censorship and freedom of expression vs. regulation to protect democracy and freedom of expression
- Market orientation and promotion of innovation vs. data protection and combating disinformation

The European Debate – Pedagogical Recommendations

- Teacher Education and Professional Development
- Reflective Teaching and Media Literacy Promotion
- 1:1 Equipment
- Curriculum integration
- EU-Funds and Networking
- Investments in education

The European Debate: A Call to Action for Education Stakeholders

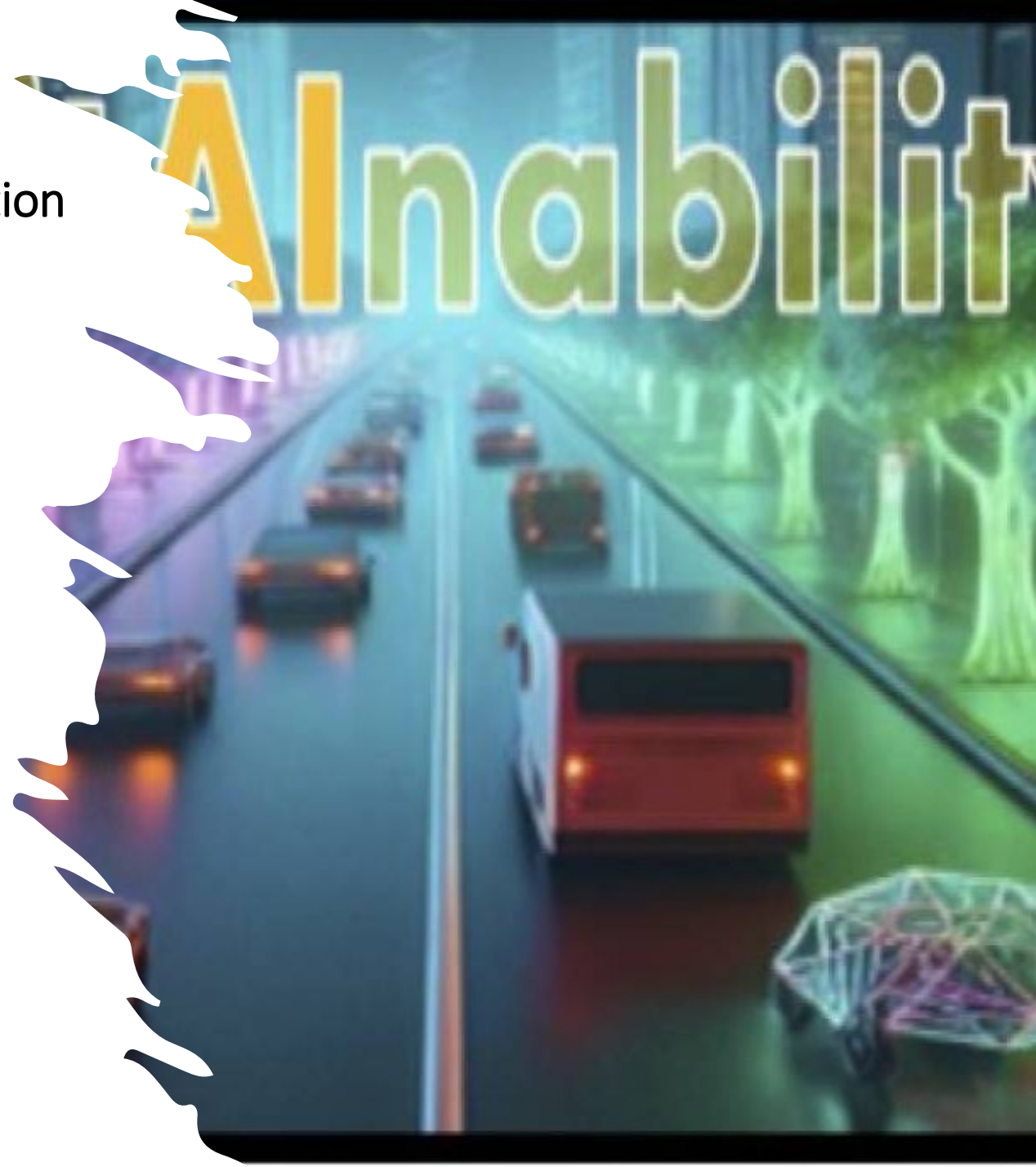
- **Educational institutions:**
  - Workshops
  - (Further-)Training
  - Awareness-raising
- **Schools:**
  - Media literacy
  - Reflective use
  - Monitoring and guidelines
- **Providers:**
  - Protection of minors
  - Transparent algorithms
  - Educational responsibility
- **Policy:**
  - Platform regulation via DSA funding
  - Funding
  - Networking

Digitainability –
The Connection Between ESD and Digital Education

- Thinking about the two pillars of transformation together
  - Digitalization
  - Sustainable Development

- Further development of digital technologies
  - Application in companies to generate (ecologically) sustainable digital solutions
  - Deepening a productive relationship between economic incentives and ecological sustainability

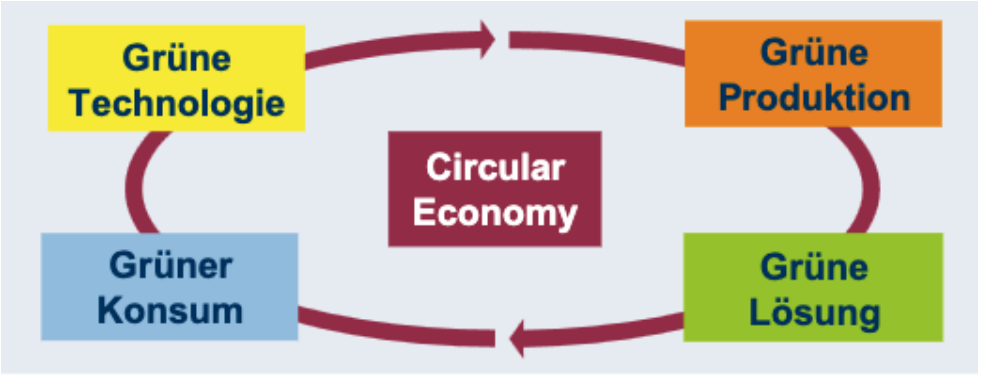
- Education for sustainable development
  - Design competence
  - Digital literacy



Synergy - Digitainability

Stakeholders of the Digitainability approach

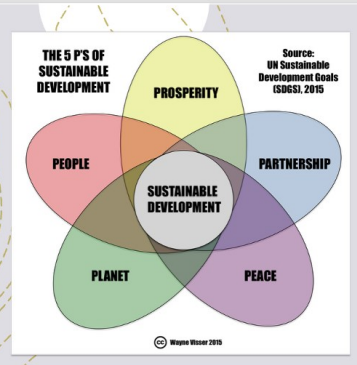
- Technical University of Munich Lab:
  - Urban Digitainability
  - Sustainable Smart Cities,
  - Responsible E-Participation,
  - Industry 4.0, and
  - Digital Literacy

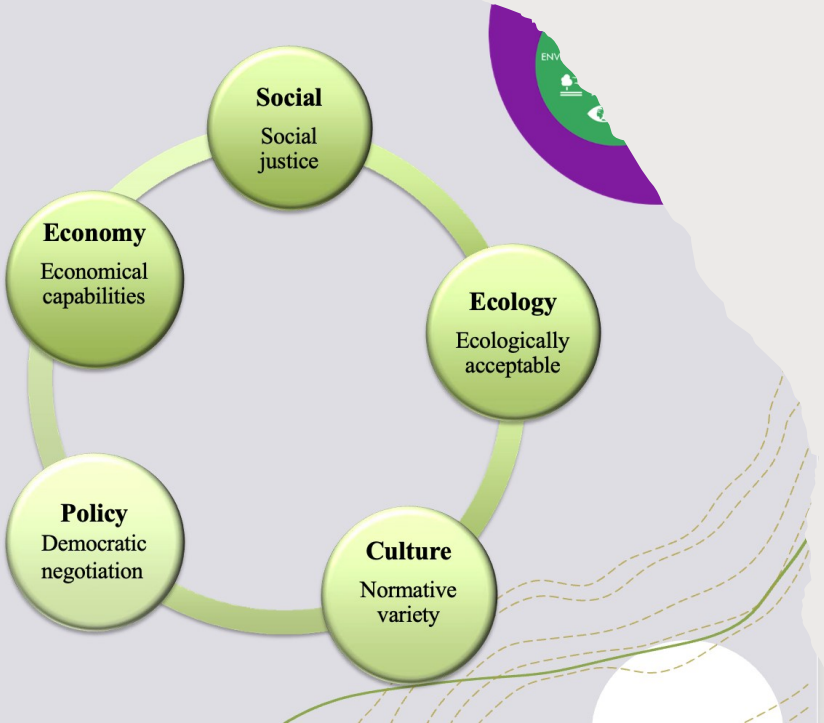


- Acatech;
  - Wuppertal Institute for Climate, Environment, and Energy gGmbH;
    - RWI – Leibniz Institute for Economic Research e. V.
- Salzburg University of Education Stefan Zweig
  - IBiB | Institute for Educational Innovation: Professor of Digitainability R. Böhme

https://phsalzburg.at/wp-content/uploads/Boehme_CV_ENG_2510.pdf https://phsalzburg.at/person/prof-dr-richard-boehme/

The Big Five of Education for Digitainability





ESD framework

- guiding principles
- fields of action
- related topics

Ecological Dimension

Resource Orientation

Economic Dimension

Green IT

Social Dimension

Inclusion

Political Dimension

Participation

Cultural Dimension

Diversity

Key competencies related to the 5 dimensions of ESD

Dimension Competence	Knowledge	Skills	Attitude
Issue competence	About topics and challenges related to (E)SD	Working with methods and tools	Global learning Green economy and environmental conservation
Social competence	Communication, teamwork	Conflict resolution Facilitating dialogue	Open-mindedness Empathy Solidarity
Self-competence	Personality, emotional behavior	Designing one's own life and career path	Courage and authenticity
Design competence, practical competence, competence to perform	About process design and structure building	Designing processes and products	Dealing with variety and difference

Thank you very much

RCE OM
Kompetenzzentrum für
Nachhaltige Bildung

List of tools

- Environmental:

eTwinning (citizen science)

- Economic:

Moodle

- Social:

SELFIE

- Political:

Europe=We

- Cultural:

find-my-tool.io

Introduction to the use of digital tools in ESD

Exploring the potential of using digital tools in ESD
31.04.2026

WIRTSCHAFTS UNIVERSITÄT WIEN VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS

RCE Vienna
Regional Centre of Expertise on Education for Sustainable Development

EFMD EQUIS ACCREDITED · AACSB ACCREDITED · ASSOCIATION OF MBAS ACCREDITED

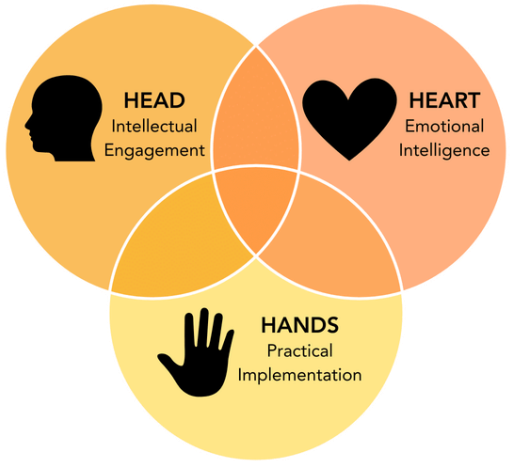
Why Digital Tools? The ESD Context

ESD Reminds Us…

- Transfer of knowledge is not enough
- Learners must be active agents, not passive recipients
- ESD requires a Head, Heart & Hands approach
- Second-order learning: questioning assumptions, not just absorbing facts
- Competencies > content: systems thinking, futures literacy, values reflection

So What Can Digital Tools Do?

- Extend learning spaces beyond classrooms
- Enable participation and co-creation at scale
- Bring in real-world complexity and live data
- Support reflection, feedback and iteration
- Connect diverse perspectives across geographies



The Promise: What Digital Tools Offer ESD

Global Reach

Connect learners with communities, data and perspectives worldwide- bringing the 'global' into the classroom

Participation & Co-Creation

Collaborative tools support joint knowledge-building, student voice, and co-designed learning processes

Systems & Simulation

Visualise complex systems, model future scenarios, and explore interdependencies interactively

Reflection & Feedback

Digital diaries, polls, peer reviews and AI assistants support iterative, reflective learning cycles

Action & Real-World Impact

Service-learning platforms, citizen science apps and data tools connect learning to tangible change

Accessibility & Inclusion

Asynchronous access, translation tools and flexible formats widen participation across diverse learners

The Tension: Digital Tools ≠ ESD by Default

Risk: First-Order Use of Digital Tools

- Connect learners with communities, data and perspectives worldwide- bringing the 'global' into the classroom
- Using a quiz app to replace a paper test is still first order learning
- AI-generated essays without reflection reproduce the transmission model
- Powerpoint > Prezi > Slides: different tool, same pedagogy
- Tech adoption that skips the 'why' fails ESD's transformative purpose

What Makes it ESD?

- Intentional design around ESD competencies and principles
- Tools that enable participation, reflection, and co-creation, not just knowledge consumption
- Learners use digital tools to investigate real complexity, not to simplify it
- The learning environment is transformed, not just the medium of delivery

Thinking About Digital ESD: Three Questions

1

WHAT do I teach?

Content level

Does the digital tool introduce or deepen engagement with sustainability content in its environmental, social and economic dimensions?

e.g. Using live climate dashboards or SDG tracking data as course material

2

HOW do I teach?

Pedagogical level

Does the digital tool shift learners from passive receivers to active agents? Does it enable participation, reflection, collaboration or systems thinking?

e.g. Collaborative mapping tools, simulation games, peer feedback platforms

3

WHERE do I teach?

Learning environment level

Does the digital tool help create transdisciplinary, real-world learning spaces that transcend the institutional classroom?

e.g. Citizen science apps, community consultation tools, virtual transdisciplinary labs

Why This Matters for the University Context

Traditional higher education imparts knowledge.

ESD-oriented higher education empowers active and sustainable action in a complex world.

Whole Institution Approach

Digital infrastructure, learning management systems and institutional platforms can embed ESD principles institution-wide, not just in individual courses

Scale & Reach

Universities serve large, diverse student bodies. Digital tools allow ESD approaches, e.g. participation, collaboration, reflection, to scale without losing depth

Research Training

Digital tools enable live connections between sustainability research, real-world data and teaching, making the research-teaching nexus an ESD asset

Future-Ready Graduates

Digital ESD competencies, including critical data literacy, collaborative sense-making, and systemic future thinking, are exactly what sustainability challenges demand

Looking forward to today's webinar:

Don't ask 'Which Tool?' Ask 'How can Digital Tools deepen ESD in my practice?'

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Pioneer’s Pathfinder: an AI powered platform to inspire projects and empower change makers

Adam Greene

RCE Vienna

PIONEER'S PATHFINDER

Home Pathfinder About

RCE Vienna
Regional Centre of Expertise on Education for Sustainable Development

WU Wirtschaftsuniversität Wien Vienna University of Economics and Business

Kickstart your project and empower change makers with the right tools

Building a sustainable future begins with bold ideas and the drive to make a difference. Turning these aspirations into actionable projects requires the right tools, clarity of purpose, and practical support. We are here to guide and inspire organizations to create learning environments that empower local change makers.

What are you looking for?

Tool Finder

I have a **specific project idea** in mind or am thinking to enrich an ongoing project. I am looking for tools & resources to support the participating change makers.

Project Kickstarter

I have a **project idea** and am looking for support to kickstart the project.

With funding from
Austrian Development Cooperation

Sustainability Challenge

SUSTAINABILITY CHALLENGE

The Sustainability Challenge, a project of RCE Vienna, enables universities to integrate sustainability and the SDGs into their curricula as key topics for the future and to build bridges with society in line with the Third Mission.

Through both the service-learning and start-up tracks, students and faculty become change-makers and make a valuable contribution to the transformation of society.

SUSTAINABILITY CHALLENGE IN NUMBERS

16th Sustainability Challenge

71 Students

8 Universities

9 Partners

Sustainability Challenge

Change Maker Network from 16 Rounds

1186 Students from 22 Universities

130 Partners & Start-ups

206 Projects

In the academic year 25/26, the Sustainability Challenge entered its 16th round. Selected, highly-motivated students from a wide range of disciplines and universities took up the challenge.

Sustainability Challenge

TRANSDISCIPLINARY COOPERATION

The innovative project setting opens up learning and meeting opportunities for students, teachers and practice partners that promote critical debate, strengthen self-efficacy and maximise the impact on society by learning with and from each other.

THIRD MISSION

Opportunities to bridge science and society

CROSS-UNIVERSITY

Interdisciplinary exchange between teachers & students

PRACTICE PARTNERSHIPS

Partnerships with companies, ministries & NGOs

CHANGE MAKERS

Students, lecturers and partners become change makers

Sustainability Challenge

ENTRE PRENEURS

INTRA PRENEURS

INNOVATION

MOTIVATION

TEAM PLAYERS

CHANGE MAKERS

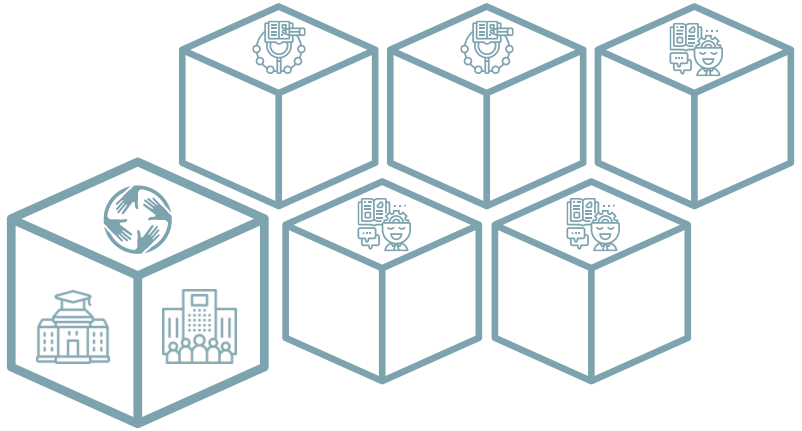
NEW PERSPECTIVES

Sustainability Challenge

SUSTAINABILITY CHALLENGE BLUEPRINT

PROCESS DESCRIPTION, GUIDELINES & MODULES

- Setting up transdisciplinary cooperations
- Designing learning environments
- Providing tools & methods
- Creating societal impact



Sustainability Challenge

Sustainability Challenge

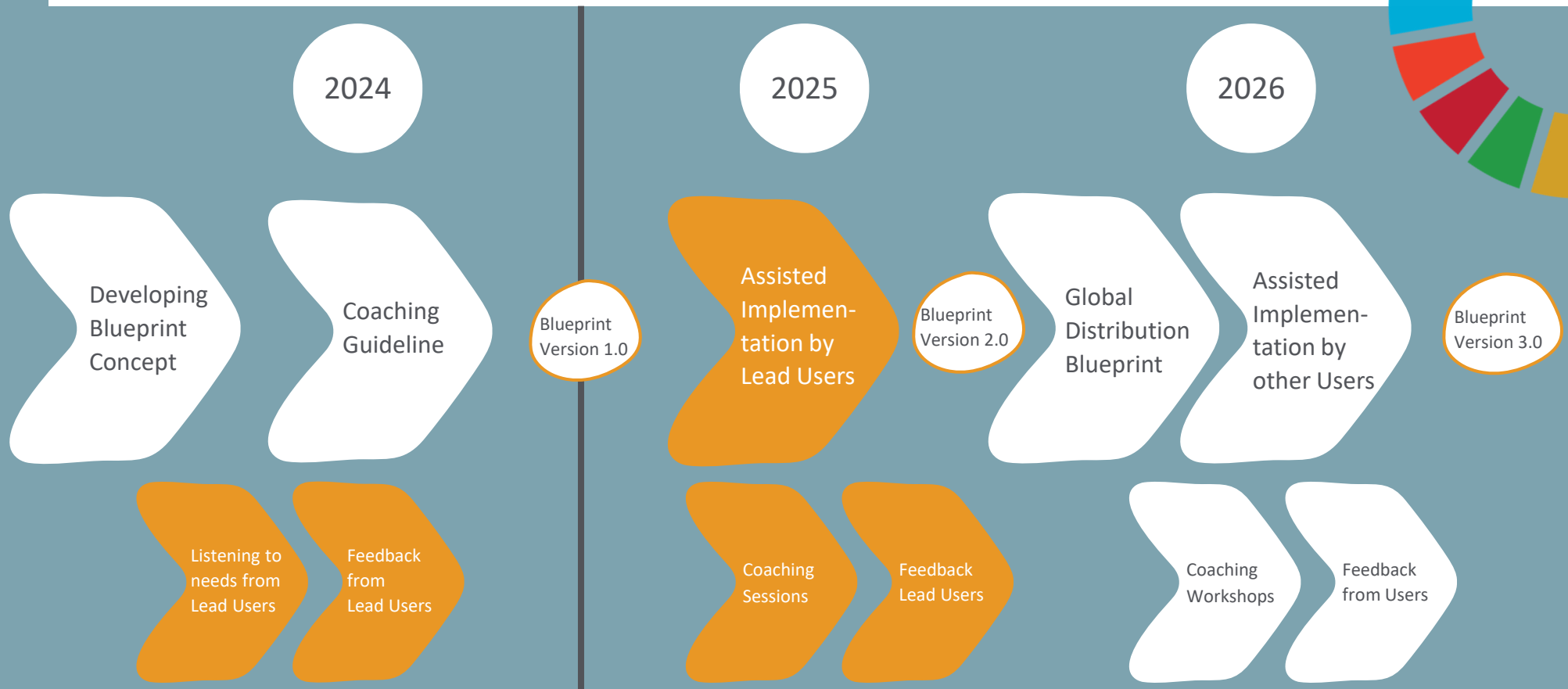
BLUEPRINT ROADMAP

2024

- Listening to Lead Users (Needs, local context, individual challenges, ..) and developing Blueprint Concept
- Consider Feedback from Lead Users for Blueprint first draft

2025

- Assisted Implementation of Blueprint-Modules by Lead Users, accomapnied by Coaching Sessions
- Consider Feedback from Lead Users for Blueprint Version 2.0



FROM BLUEPRINT TO PIONEER'S PATHFINDER

KEY INSIGHTS

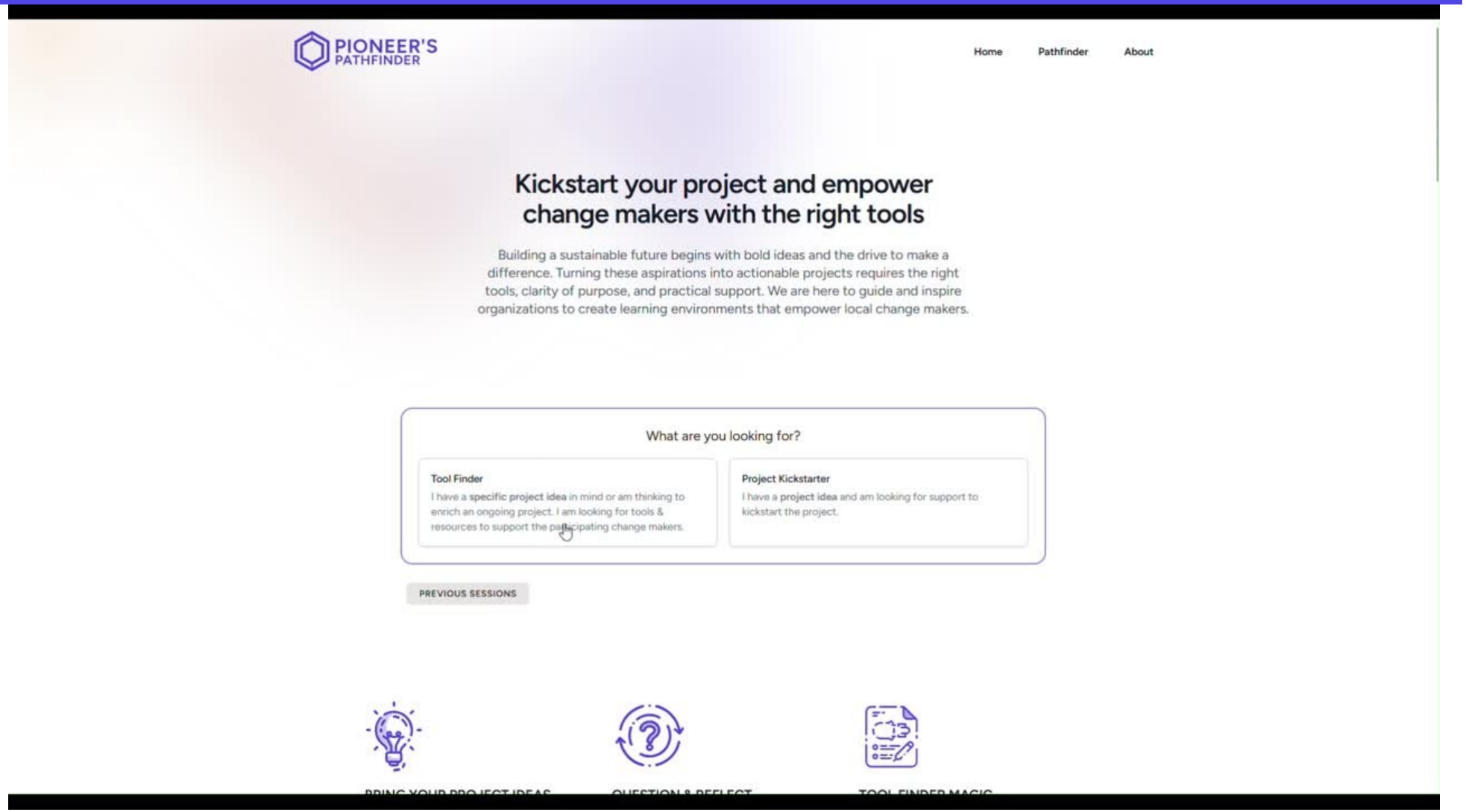
Context matters: RCEs are highly diverse, each with unique local realities, there's no one-size-fits-all solution.

Flexibility by design: Must adapt to different needs, leading to the decision tree strcuture paired with a practical toolbox.

More than a toolkit: User feedback revealed demand for services beyond the original scope, shaping a split between core services (the blueprint) and supplementary extensions to be rolled out over time.

Modular, scalable framework: The modular structure lets us tailor support to each user's needs and unlocks the broader potential of the RCE community and beyond.

PIONEER'S PATHFINDER



Sustainability Challenge

PIONEER'S PATHFINDER

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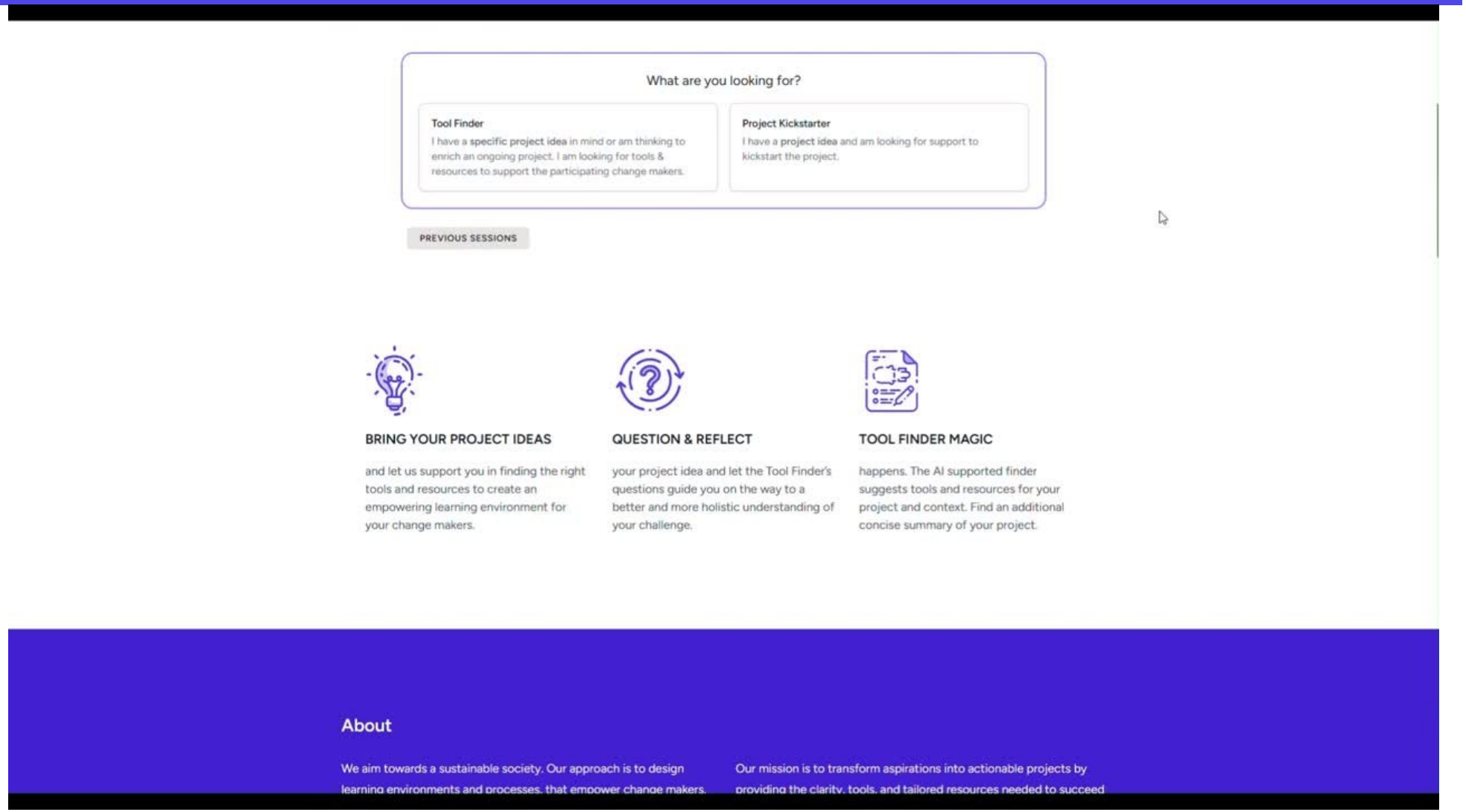
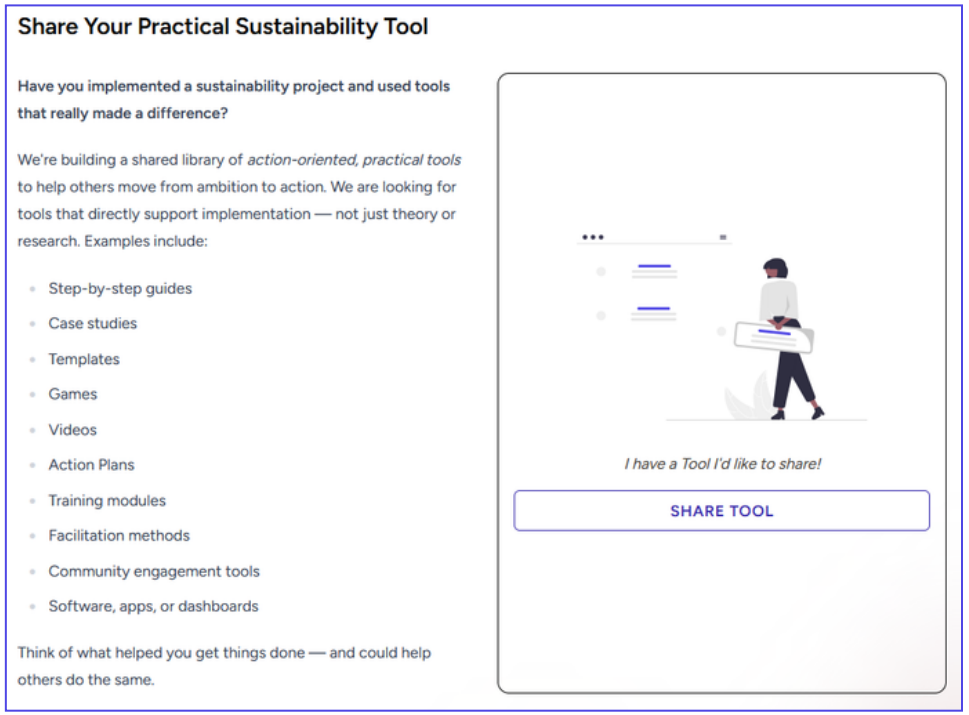


Sustainability Challenge

BE PART OF THE CHANGE

PIONEER'S PATHFINDER

- **Try out the Pioneer's Pathfinder and provide feedback and improvement suggestions**
- **Share your practical sustainability tools to support other projects**
- **Reach out for a one-to-one ideation workshop to support your project:** adam.greene@wu.ac.at



Sustainability Challenge

FROM NATIONAL SUCCESS TO GLOBAL COMMUNITY

Global Sustainability Challenge

The SC success and growing international interest have made the next step possible: launching the **Global Sustainability Challenge** in Autumn 2026, starting with South-Eastern Europe (Albania and Kosovo).

The GSC will:

- Connect regional challenges with global knowledge
- Scale proven service-learning formats internationally
- Unite students, academia, and organisations across borders
- Strengthen development cooperation
- Develop a **digital service-learning platform** for optimal collaboration

Please **reach out** if your educational institution would be interested in participating!

Global Sustainability Challenge

WHO IS BEHIND IT?

RCE VIENNA

REGIONAL CENTRE OF EXPERTISE ON EDUCATION FOR SUSTAINABLE DEVELOPMENT

Expert network for research, education and knowledge transfer

- Issues of regional and transregional sustainable development
- Conception & implementation of projects for a socio-ecological transformation with a focus on the 17 Sustainable Development Goals (SDGs)

RCE Vienna
Regional Centre of Expertise on Education for Sustainable Development

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With funding from
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The Self-SDG app: using apps for advancing collective progress towards a sustainable world

Detlev Lindau-Bank and Lukas Scherak

RCE Oldenburger- Münsterland

Self-SDG

Detlev Lindau Bank

Lukas Scherak

2026

Co-funded by
the European Union

Introduction

Our basic assumptions

- Young people are highly willing to get involved.
- Different countries have different conditions for support.
- Education systems and policy strategies are crucial for successful sustainability education.

Different requirements in EU countries

Germany and the Netherlands

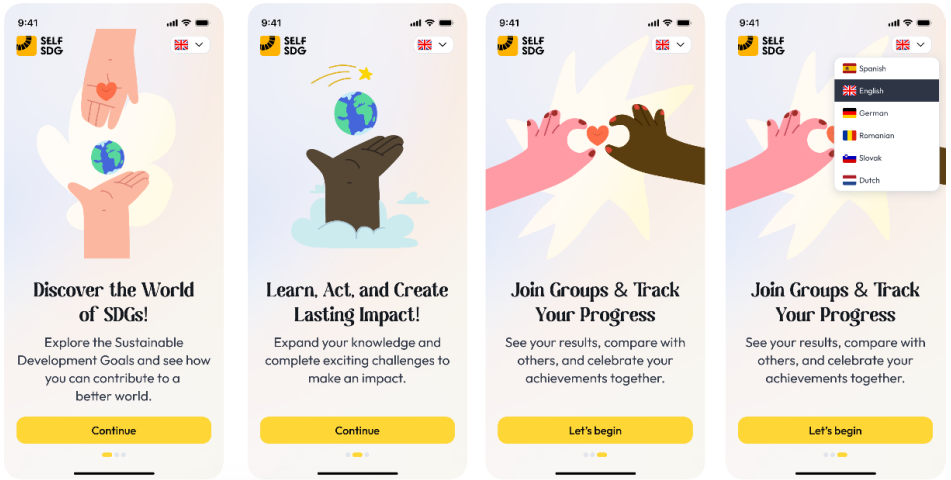
- Critical discussion of politics and education.

Romania and Slovakia

- Greater challenges due to educational gaps and less supportive structures.

Spain:

- Clear youth strategy with a focus on sustainability.



The Self-SDG App as a resource

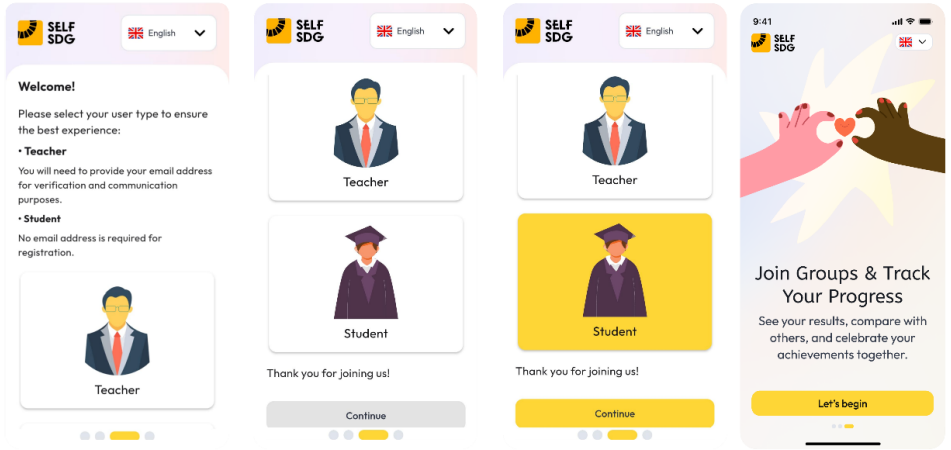
A digital app to support SDG learning and everyday actions.

Goal:

To combine knowledge, reflection, and concrete action.

Particularly important:

Ease of use, motivation, and relevance to everyday life.



What the Self-SDG App Does

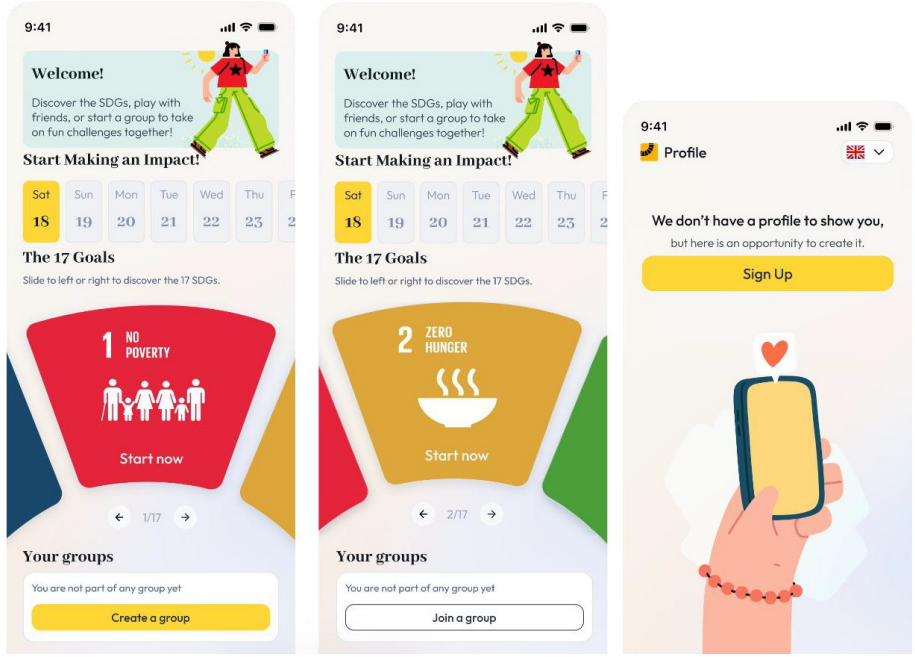
- Learn, reflect on, and put the SDGs into practice digitally
- Informative, educational, intuitive, and motivating
- Gamification, reward system, and social networking
- Multilingualism and relevance to real life.

What we avoid!

- Overly complicated usage.
- Pure knowledge transfer without practical application.
- Over-reliance on technology or internet access.

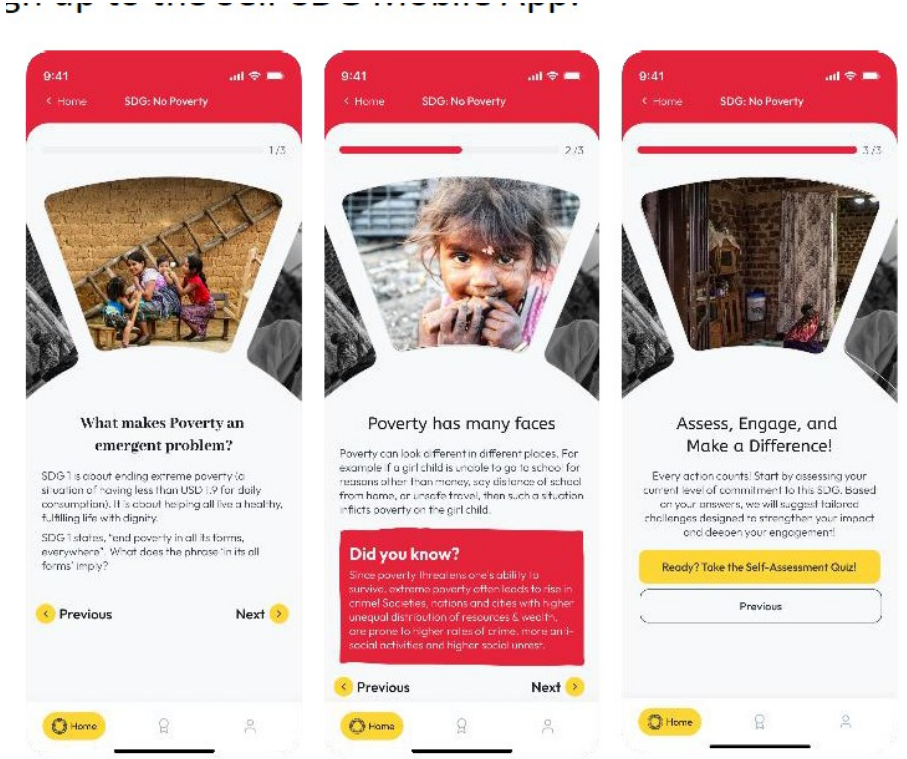
Onboarding

- Limited use is possible even without registration.
  - You can read the SDG information.
  - No access to groups, quizzes, challenges, or progress.
  - No active participation without registration.
- Simple and motivating start
- Separation between student and teacher accounts



SDG Challenges and Self-Assessment

- Select SDG cards on the home page.
- There is information and a quiz for each SDG.
- Your self-assessment determines your level.
- Without a self-assessment, you cannot access further challenges or higher levels



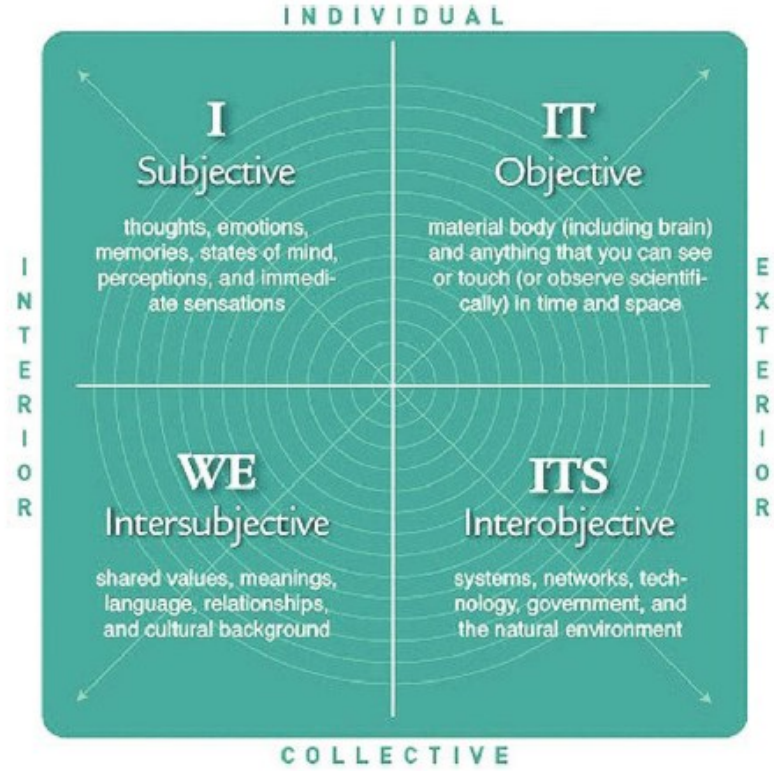
SDG Challenges and Self-Assessment

- Challenges are adapted to the SDG level.
- Points are awarded upon completion.
- Progress is visualized this way.
- Completed SDGs are marked.
- Personalized invitations to additional challenges.

Self-Assessment Matrix for Commitment to SDG 1: No Poverty

Level	Self-Assessment Criteria
Basic	– I know about SDG 1 and its main objective. – I can identify some issues related to poverty in my surroundings. – I occasionally share information about poverty on social media or in conversations.
Intermediate	– I actively inform myself about poverty and its causes. – I participate in awareness campaigns or make small donations to organizations working on poverty reduction. – I try to reduce economic inequalities in my daily life, for example, by purchasing fair trade products.
Advanced	– I engage in volunteer work or projects that combat poverty. – I actively promote awareness of poverty in my community or social circle. – I consistently support humanitarian initiatives or social enterprises working to eradicate poverty.
Ambassador	– I lead or drive projects, campaigns, or initiatives to fight poverty locally or globally. – I collaborate with governments, NGOs or businesses to design sustainable solutions. – I inspire others to get involved in actions against poverty and share my knowledge and experiences in forums, events, or publications.

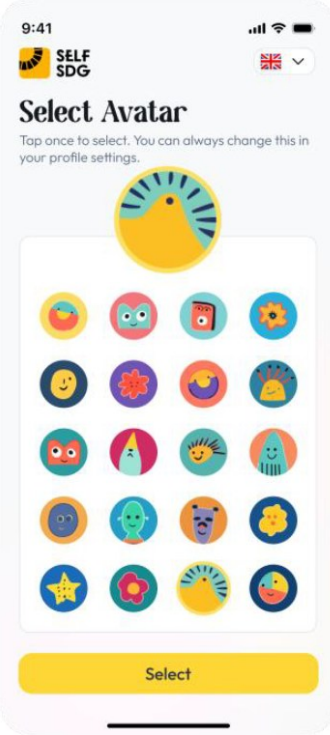
The instructional approach



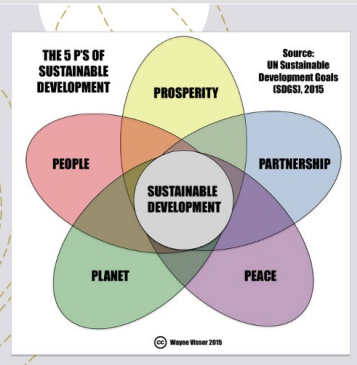
Ken Wilber's Four Quadrants Model – This integral framework illustrates four fundamental perspectives through which reality can be understood: subjective (I), objective (IT), intersubjective (WE), and interobjective (ITS). The model distinguishes between interior/exterior and individual/collective dimensions of experience and knowledge.

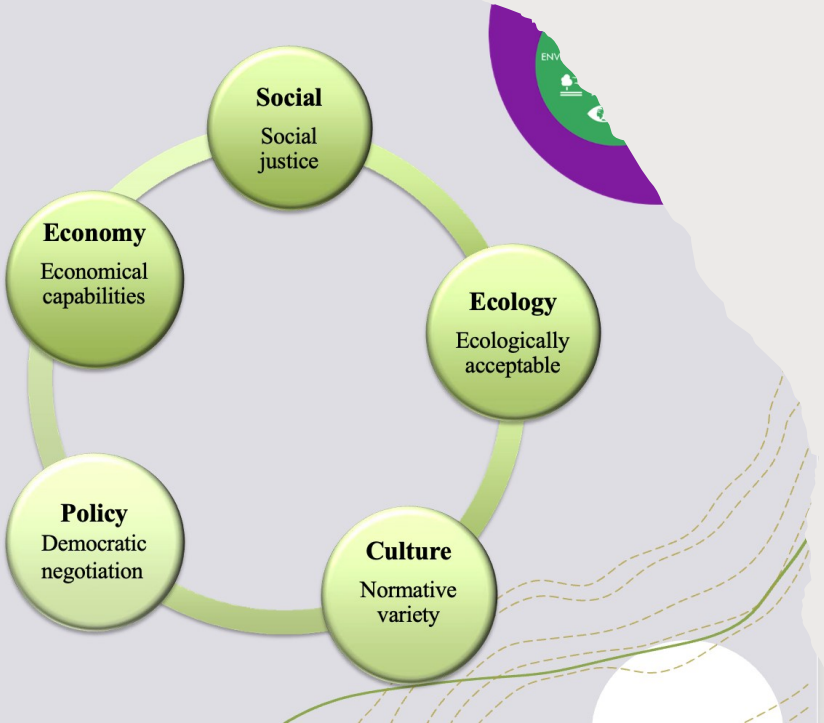
The Four A's

- Awareness
- Agency
- Association
- Action and Reflection



The Big Five of Education for Digitainability





ESD framework

- guiding principles
- fields of action
- related topics

Ecological Dimension

Resource Orientation

Economic Dimension

Green IT

Social Dimension

Inclusion

Political Dimension

Participation

Cultural Dimension

Diversity

competencies for sustainable development

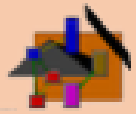
Dimensions Competence	Knowledge	skills	attitude
Issue competence	About vocational fields related to ESD	Working with methods and instruments	Global learning Green economy saving environment
Social competence	Communication, teamwork	Solving conflicts Steering dialogues	Open-mindness Empathy Solidarity
Self competence	Personality, emotion behavior	Designing own life- and carreer curriculum	Courage and heart authenticity
Design competence	About process designing structure building	Designing processes and products	Dealing with variety and difference entrepreneurship

Sustainability Competence Framework

Dimension of learning	Key abilities
Cognitive (Learning to learn)	Systems thinking Critical thinking **Innovative decision-making**
Social (Learning to live together)	Communication Collaboration **Solidarity**
Personal (Learning to be)	Reflexivity Value orientation **Responsibility**
Behavioral (Learning to do)	Future-oriented thinking Creativity **Transformative action**

→ **Innovative, socially significant, and responsible action based on transdisciplinary knowledge**

Quality of learning outcomes

SOLO levels: (house as a metaphor)	Characteristics of SOLO levels			
	Uni-structural	**Multi-structural**	**Relational (systemic)**	**Extended abstract**
				
Knowledge	Disciplinary, procedural	Multi-disciplinary	Inter-disciplinary, epistemic	Trans-disciplinary/ contextualised, epistemic
Performance/ action	According to instructions or examples	Self-directed, planned	Purposeful problem solving	Responsible, value oriented

SOLO levels					
Dimensions of learning	**Elements of competence**	**Uni-structural**	**Multi-structural**	**Relational (systemic)**	**Extended Abstract**
		Surface learning		**Deep learning**	
Cognitive	Knowledge and understanding (application)	Disciplinary, procedural	Multi-disciplinary, procedural	Inter-disciplinary, epistemic	Trans-disciplinary/ contextualised, epistemic
Behavioural	Performance	According to instruction/ example	Self-directed, planned	Purposeful, problem solving	Responsible, value oriented
Social and emotional	Attitude (as reflected in performance)	Accepted (given) attitude	Different attitudes, looking for arguments	Different attitudes, looking for inter-relationships	Authentic attitude, based on democratic/ humanistic values

The SOLO taxonomy (*System of Observed Learning Outcomes*) provides quality criteria for both learning and the assessment of action competencies, with a particular emphasis on complexities and broader perspectives.

5 Tips for Using the Self-SDG App

- Integration into project-based learning phases
- Interdisciplinary use
- Differentiation and individual support
- Support and reflection
- Collaborative learning

Thank you very much

RCE OM
Kompetenzzentrum für
Nachhaltige Bildung

Panel discussion and Q&A

Chaired by Detlev Lindau-Bank

RCE Oldenburger-Münsterland

Panel discussion questions

- How can educators be encouraged to use digital tools effectively for ESD?
- Is there an ‘elephant in the room’? What are the benefits and challenges of using digital tools to engage learners with ESD?

Other questions?

Summary and sharing resources

Betsy King

RCE Scotland

Resources

Pioneers Pathfinder

https://pioneers-pathfinder.sustainabilitychallenge.at/

Self-SDG App

https://selfsdg.eu/

Please share your resources in Chat

Have your say…and keep in touch.

Please complete our short feedback survey:

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