

# Interactive Workshop on STE 2026

March 11 - 13, 2026, „Transilvania” University of Brasov, Romania

## Workshop: Global Remote Lab Initiative (GRLI): From Concept to Execution – Approach, Status, and Next Steps

Remote laboratories have been discussed for more than three decades as a means to improve access to practice-oriented technical education. Despite their proven potential—especially in the context of SDG 4 (inclusive, equitable, and quality education)—their global adoption has remained fragmented, project-based, and largely unsustainable. The Global Remote Lab Initiative (GRLI) proposes a different approach: not another isolated platform, but a sustainable, open, and scalable ecosystem for engineering and TVET remote labs, based on a shared technical and organizational framework, a Remote Lab Engineering System (RLES), and a novel “Reverse Project Funding” model.

This interactive workshop presents the current GRLI approach and invites participants to jointly elaborate the concrete steps towards implementation. Instead of focusing on technology alone, the workshop addresses governance, organizational structures, technical architecture, funding logic, and long-term sustainability. The goal is to move from a conceptual framework to a realistic, community-driven execution roadmap.

### Workshop Objectives, Target Audience, and Required Equipment (if applicable)

The workshop aims to transform the GRLI from a strategic concept into a collectively supported and actionable roadmap. Specifically, participants will:

- Develop a shared understanding of the GRLI vision and mission (focus on Engineering Education and TVET, SDG 4, open and scalable infrastructure).
- Review and critically discuss the proposed implementation architecture, including the Remote Lab Engineering System (RLES), standardized IoT interfaces, no-code lab creation, and certification mechanisms.
- Analyze and refine the four implementation phases:
  - Initialization and governance framework
  - International call for proposals
  - Selection and “Reverse Project Funding”
  - Implementation, scaling, and global transfer
- Identify concrete next steps, critical success factors, risks, and responsibilities.
- Explore how different stakeholders can contribute (expertise, infrastructure, pilot projects, funding access, regional hubs).

By the end of the workshop, participants should have a clearer, prioritized action plan for initiating the first concrete GRLI implementation steps.

Target audience: This workshop is designed for stakeholders who are interested in actively shaping and implementing a global remote lab ecosystem, including:

- Representatives of universities and TVET institutions (decision-makers, lab managers, educators)
- Developers and operators of remote lab, IoT, and EdTech platforms
- Industry partners and technology providers
- Representatives of educational networks, NGOs, and foundations
- Policy, strategy, and program managers concerned with digital education, capacity building, and sustainable infrastructures

In short, the workshop addresses decision-makers, implementers, and multipliers rather than passive observers.

Required Equipment: none

### Workshop Facilitator(s)



Prof. Dr.-Ing. Reinhard Langmann

Edunet World Association e.V.



Klaus Hengsbach

Edunet World Association e.V.



Prof. Dr.-Ing. Dr. sc. Dr.hc. Michael E. Auer

International Association of Online Engineering



Prof. Dr.-Ing. Dominik May

International Association of Online Engineering