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Empowering the Transition to Green and Digital Laboratories: The Role of the GREENVERSITY Project in Sustainable Higher Education

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The transition towards "Green, Safe & Digital Laboratories" requires more than just technological advancements in lab infrastructures and automation; it demands a profound shift in the skills, mindset, and ethical responsibility of the professionals designing and managing these environments. As the complexity of digital transitions and risk management increases, there is an urgent need for professionals equipped with comprehensive sustainability competencies. This presentation explores how the European Erasmus+ GREENVERSITY project addresses this critical gap by systematically integrating the European Green Competence Framework (GreenComp) into higher education curricula.

The GREENVERSITY project aims to empower universities, educators, and future graduates with the essential knowledge, skills, and attitudes required to lead sustainable transformations. By developing the GREENVERSITY CORE framework, the project translates the high-level GreenComp competencies—such as systems thinking, problem framing, adaptability, and exploratory thinking—into clear, measurable learning outcomes tailored for university students. These specific competencies are highly relevant to the conference theme, as they provide the cognitive tools necessary for understanding complex interconnected systems, managing risks in digital automated environments, and ensuring that technological transitions do not exceed planetary boundaries.

Furthermore, the presentation will highlight the GREENVERSITY PATHWAY, a structured model for standardizing assessment and accreditation. By embedding these sustainability competencies across diverse academic disciplines, including engineering and natural sciences, the project ensures that future lab managers, researchers, and engineers are not only technically proficient but also socially and environmentally conscious. Ultimately, the GREENVERSITY model demonstrates how higher education can act as a catalyst, equipping the workforce with the transversal green skills needed to design and operate the safe, resilient, and sustainable laboratory infrastructures of the future.

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