EU4Dual

The European Dual Studies University

LIGHTHOUSE RESEARCH INITIATIVES (LRIs)

EUROPEAN UNIVERSITIES

Business & Management for Green Transition

Description

Climate change and environmental degradation pose existential threats to both the European Union and the world at large. To tackle these challenges, the European Green Deal has been established as Europe's new growth strategy. This initiative aims to transform the Union into a modern, resource-efficient, and competitive economy. The European Green Deal sets an ambitious goal for Europe to become climate neutral by 2050, stimulate the economy through green technologies, create sustainable industries and transport systems, and reduce pollution. By turning climate and environmental challenges into opportunities, the Green Deal aims to ensure a just and inclusive transition for all. This Lighthouse Research Initiative supports the objectives of the European Green Deal by accelerating the adoption of environmentally responsible business practices and fostering green entrepreneurship by offering evidence-based innovative models.

Subtopics

Green Business Transformation in Sustainable Tourism and Logistics
Dedicated to advancing eco-friendly practices and technologies within these sectors. It aims to develop and implement innovative solutions that minimize environmental impact while enhancing economic efficiency and social responsibility. By fostering collaboration between academia, industry, and government, the initiative seeks to promote sustainable travel, green supply chain management, and waste reduction strategies, serving as a model for other industries and contributing to global sustainability goals.

Local Governments in Green Transition
Focused on empowering municipal authorities to lead the shift towards sustainable development. This initiative aims to develop, test, and implement innovative green policies and practices at the local level, fostering environmental stewardship, economic resilience, and social equity. By leveraging research, technology, and collaborative partnerships, it seeks to provide local governments with the tools and knowledge necessary to effectively manage resources, reduce carbon footprints, and engage communities in the green transition, serving as a model for scalable and replicable sustainability efforts globally.

Recycling, design in fashion/textile industry
This initiative focuses on developing innovative recycling methods and sustainable design practices to minimize waste and environmental impact. By fostering collaboration between designers, manufacturers, researchers, and policymakers, it aims to create a circular economy in fashion and textiles, promoting the use of eco-friendly materials, efficient production processes, and responsible consumption patterns. The initiative seeks to set new industry standards, demonstrating the feasibility and benefits of sustainable transformation in fashion and textiles on a global scale.

Engineering for Sustainable and Digital Industry

Description

European industry plays a pivotal role in the economic and societal transformations. To remain a cornerstone of prosperity, it must spearhead both the digital and green transitions. This forward-looking approach envisions an industry that transcends mere efficiency and productivity, emphasizing its broader contributions to society. By centering the wellbeing of workers in the production process and leveraging new technologies, it aims to generate prosperity that extends beyond jobs and economic growth, all while respecting the planet's ecological boundaries. This strategy enhances the existing "Industry 4.0" framework by prioritizing research and innovation, thereby facilitating the transition to a sustainable, human-centric, and resilient European industry.

Subtopics

Human machine interactions

Aims to enhance revolutionize the way humans and machines collaborate across various sectors. As technology advances, the integration of intelligent systems into daily activities, industrial processes, and service delivery becomes increasingly vital. This initiative focuses on creating seamless, intuitive, and efficient interactions between humans and machines, enhancing both productivity and user experience.

Artificial intelligence

Is dedicated to advancing the development, deployment, and integration of AI technologies across various domains to address critical challenges and drive innovation. This initiative seeks to harness the transformative potential of AI to improve efficiency, enhance decision-making, and create new opportunities for economic and societal growth.

Additive manufacturing

Aims to drive advancements in 3D printing and related technologies, positioning them as key enablers of innovation and sustainability in manufacturing. This initiative seeks to enhance the capabilities, applications, and adoption of additive manufacturing (AM) across various industries, promoting efficiency, customization, and environmental responsibility.

Circularity

Is dedicated to advancing circular economy principles across industries to enhance sustainability, resource efficiency, and economic resilience. This initiative focuses on developing innovative technologies, processes, and business models that enable the transition from a linear to a circular economy, where products, materials, and resources are reused, refurbished, remanufactured, and recycled to create a closed-loop system.

Health and Welfare Transition

Description

For many reasons, such as demographic changes, technological progress, fiscal constraints, and public health emergencies, European health and care systems are expected to face significant stress. To address these challenges, there is an urgent need to accelerate the transition towards more efficient, sustainable, resilient, innovative, and accessible health and care systems in Europe.

The Lighthouse Initiative "Health and Welfare Transition" aims to bridge knowledge gaps, generate evidence, and develop guidance and tools in key areas critical to transforming health and care systems. Focus areas include water safety, hydration, healthy food and food processing, cognitive health preservation, holistic health and education platforms, and medical device development. This initiative pays particular attention to the needs of the elderly, ensuring inclusivity and comprehensive care for all Europeans.

By contributing to these areas, the "Health and Welfare Transition" initiative enhances the capability of health and care actors to adopt and implement innovative solutions, ultimately fostering a more robust and adaptable health and care infrastructure across Europe.

Subtopics

Food, dietetics, nutrition, diabetes
Is dedicated to advancing research and innovation in the field of nutrition and its impact on health, with a particular focus on preventing and managing diabetes. This initiative brings together multidisciplinary expertise to address the complex interplay between diet, lifestyle, genetics, and metabolic health.

Ageing and Virtual Reality (VR)
Is dedicated to exploring the intersection of virtual reality technology and ageing to improve the well-being, cognitive health, and quality of life of older adults. This initiative leverages the immersive and interactive nature of VR to address the unique challenges and opportunities associated with ageing.

Social aspects, people with special need, vulnerability
Focuses on understanding and addressing the societal implications of transitioning towards more efficient, sustainable, and equitable health and welfare systems. This initiative recognizes that successful transitions require a deep understanding of social dynamics, inequalities, and cultural factors that shape health and well-being outcomes.

Health and green economy

Is dedicated to exploring the intersection of public health and environmental sustainability to promote well-being, mitigate climate change, and foster economic growth. This initiative recognizes the interconnectedness of human health and the environment and aims to harness synergies between health promotion and green economy initiatives.

Mental health

Dedicated to advancing research, innovation, and advocacy to address the complex challenges associated with mental health disorders and promote psychological well-being for all individuals. This initiative recognizes the significant impact of mental health on individuals, families, communities, and societies, and aims to foster a holistic approach to mental health promotion, prevention, and treatment.

Health and future of work and working conditions

Focuses on understanding the evolving landscape of work and its impact on the health and well-being of individuals, organizations, and societies. This initiative aims to anticipate and address emerging challenges and opportunities associated with changes in work patterns, employment structures, and working conditions in the digital age.

Motor skills and inclusion

Dedicated to advancing research, innovation, and advocacy to promote motor skill development and inclusion for individuals of all abilities. This initiative recognizes the importance of motor skills in facilitating participation, autonomy, and well-being across the lifespan and seeks to create inclusive environments that support the diverse needs and capabilities of individuals.

Interdisciplinarity in Social Sciences: A European Way of Life

Description

This interdisciplinary research initiative aligns closely with the European Strategy for Universities (2022), which prioritizes interdisciplinarity as a cornerstone of academic excellence and societal progress. By embracing a multifaceted approach, the vision of this initiative integrates key pillars of societal advancement, including healthcare, social justice, ethical and social aspects of technology, workforce development, and skills enhancement.

Recognizing the transformative potential of interdisciplinary collaboration, this initiative aims to harness insights from diverse fields to drive comprehensive progress. It emphasizes the integration of various disciplines to address complex societal challenges effectively.

Central to the vision is the acknowledgment of the critical role of a knowledgeable and adaptable workforce in navigating the evolving landscape of technological advancements. To bridge the global skills gap, the initiative advocates for strategies such as upskilling, reskilling, dual education, and industry-aligned curricula. By aligning emerging technologies with the competencies of a skilled workforce, the initiative underscores the importance of mutual motivation and collaboration between students and employers.

Ultimately, this European lighthouse vision converges critical elements - healthcare, social justice, new technologies, workforce development, skills enhancement, dual higher education, and vocational green innovation - under the overarching principle of interdisciplinarity. It envisions a future where these components synergize to propel Europe towards a more inclusive, sustainable, and advanced society.

Subtopics

Workforce development and education
Is dedicated to advancing research, innovation, and policy solutions to meet the evolving needs of the workforce and education systems in the 21st century. This initiative aims to address critical challenges and opportunities related to skills development, lifelong learning, and the future of work in a rapidly changing global economy.

Technology and future skills
Is at the forefront of exploring the intersection between emerging technologies and the evolving landscape of skill requirements in the 21st century. This initiative aims to anticipate and address the transformative impact of technology on the future of work, education, and society, while equipping individuals with the skills and competencies needed to thrive in a digital world.

Social and ethical dimensions

Is dedicated to exploring the complex interplay between technological advancements, societal values, and ethical considerations. This initiative seeks to address pressing social and ethical challenges arising from the rapid pace of technological innovation, while fostering responsible development and deployment of technology for the benefit of individuals and communities.

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