



# Circular economy for biodiversity

## Unlocking the green potential

*Skills for sustainable, resilient, and socially fair communities*

**EUROPEAN  
YEAR OF  
SKILLS**



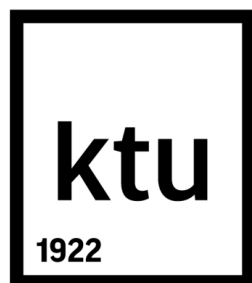
Date

June

5

3-11 June 2023

**#EUGreenWeek**  
**PARTNER EVENT**



# Kaunas University of Technology (KTU)



*KTU "Santaka" Valley - Integrated Centre of Science, Studies and Entrepreneurship*

# REGIONAL CONTEXT

ktu

## \* NUMBERS (KAUNAS REGION)

TERRITORY, km<sup>2</sup>:

**157**

GDP per capita, Eur

**20 400**

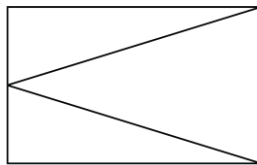
**102 % OF TOTAL GDP**

POPULATION:

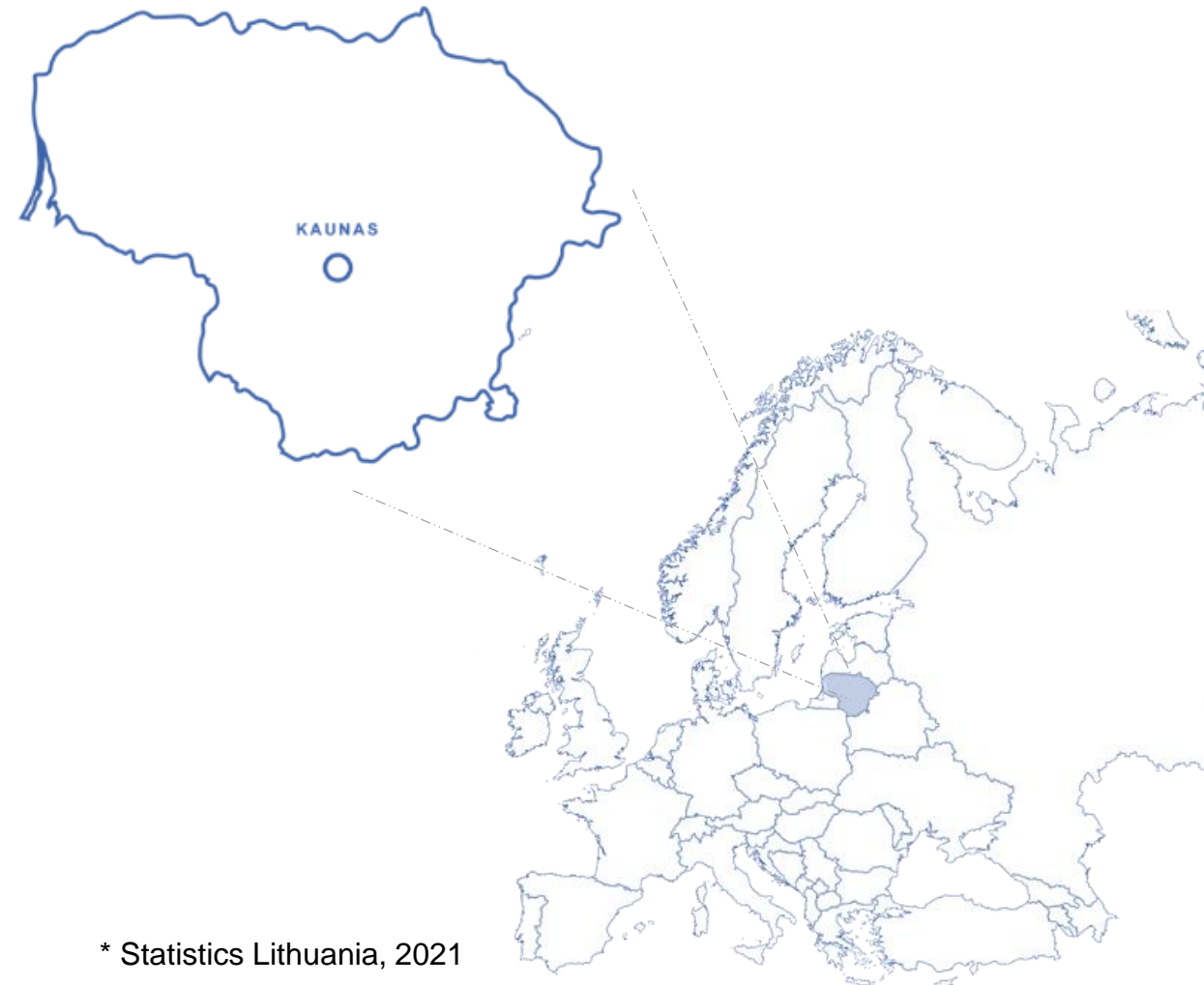
**385 787**

**14 % OF ALL LITHUANIAN RESIDENTS**

Kaunas 2022  
European Capital of Culture



<https://kaunas2022.eu>



\* Statistics Lithuania, 2021

# KAUNAS KEY SECTORS FOR FDI



Life Sciences



ICT



MRO



Automotive components



GBS

# KTU - THE UNIVERSITY

- 9** faculties
- 8** institutes
- 2** integrated centers of research, studies and business
- 4** campuses in 3 cities
- 23** student organizations

**Kaunas University of Technology (KTU)**  
is one the largest technological  
universities in the Baltics

Academic Staff:

**>1 100**

Number of students:

**~ 8 000**

Alumni:

**~150 000**

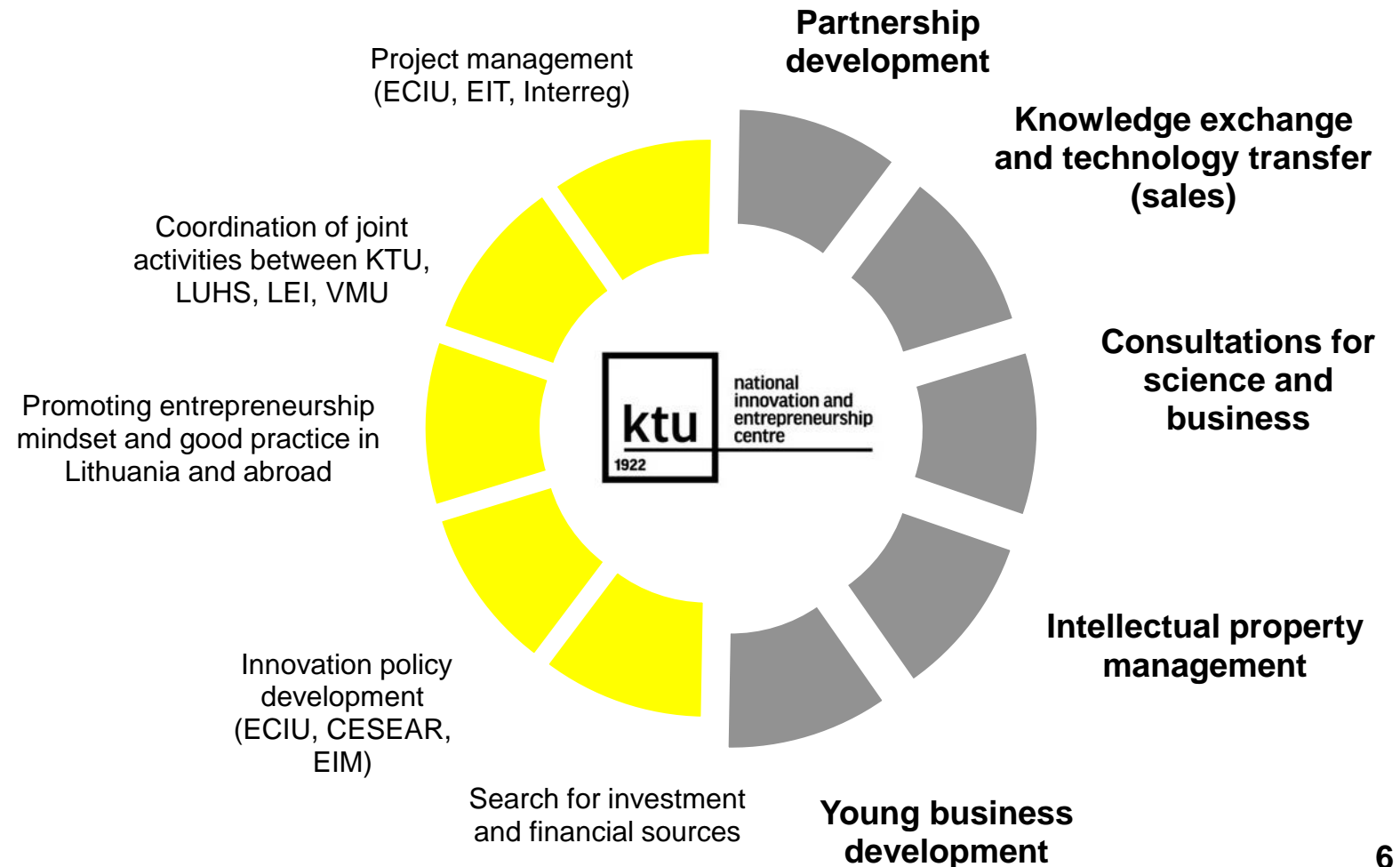
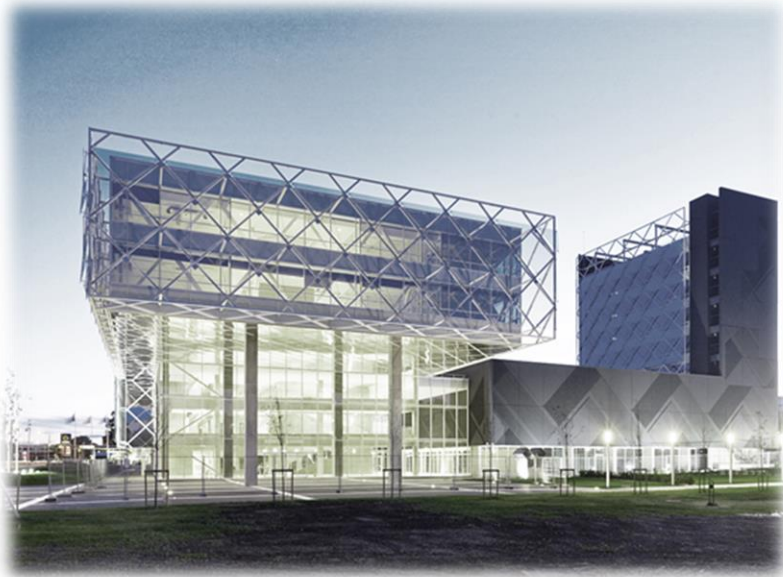
**82 %**

of alumni are in  
employment within 12  
months.

# NATIONAL INNOVATION AND ENTREPRENEURSHIP CENTER

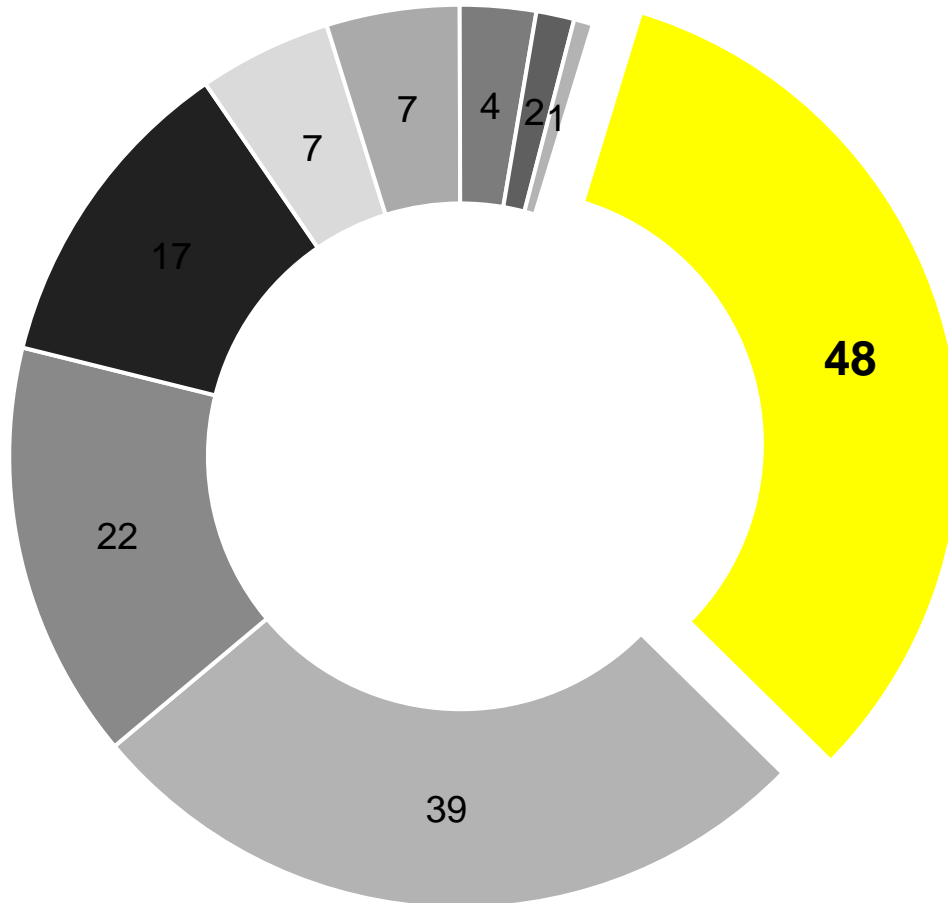
ktu

@ „Santaka“ Valley –  
science, technology center  
and technological business  
incubator



# HORIZON 2020 PROJECTS (2014-2020, UNIVERSITIES OF LITHUANIA)

## Number of participations



- **Kaunas University of Technology** (10 529 269 €)
- Vilnius University (8 654 535 €)
- Vilnius Gediminas Technical University (1 695 204 €)
- Vytautas Magnus University (2 308 314 €)
- Lithuanian Health Sciences University (586 318 €)
- Klaipėda University (1 121 840 €)
- Mykolas Riomeris University (511 247 €)
- ISM Management and Economics School (396 625 €)
- European Humanities University (16 353 €)

# KTU Expertise <sup>1</sup>

## **Technological and process innovation for food systems**

Research can focus on:

- developing and improving technologies and processes that promote sustainable bio-based products, circular economy practices, and resource efficiency.
- this can include innovations in biomass conversion, biorefinery processes, waste management, and sustainable production techniques



# KTU Expertise <sup>2</sup>

## **Life cycle assessment and environmental impact analysis**

Research can conduct:

- comprehensive life cycle assessments (LCAs) and environmental impact analyses of bioeconomy projects and processes.
- this research can evaluate the environmental benefits, potential trade-offs, and identify areas for improvement in terms of greenhouse gas emissions, land use, water consumption, and other environmental indicators

# KTU Expertise <sup>3</sup>

## **Socio-economic analysis and policy evaluation**

Research can assess:

- the socio-economic impacts of bioeconomy projects, including their effects on local communities, employment opportunities, value chain development, and rural and coastal areas.
- this research can also involve evaluating policy frameworks, incentives, and regulations to identify barriers and opportunities for the successful transition to bioeconomy-based systems

# KTU Expertise <sup>4</sup>

## Stakeholder engagement and collaboration

Research can focus:

- on understanding the perspectives, needs, and challenges of different stakeholders involved in the bioeconomy, such as primary producers, citizens, innovators, educators, SMEs, industry, and national authorities
- this can involve participatory approaches, stakeholder mapping, and collaborative initiatives to foster dialogue, build partnerships, and align goals towards bioeconomy projects

# KTU Expertise <sup>5</sup>

## Market analysis and business model development

Researchers can analyze:

- market trends, consumer preferences, and business opportunities in the bio-economy sector.
- this research can contribute to the development of viable business models, supply chain optimization, and market strategies for bio-based products and services
- it can also involve exploring financing mechanisms, investment strategies, and economic feasibility assessments for bio-economy projects

# KTU Expertise <sup>6</sup>

## **Social Innovation and behavior change**

Researchers can explore:

- social innovation approaches and behavior change strategies that facilitate the adoption and acceptance of bio-economy solutions.
- this can include understanding social norms, cultural factors, and policy interventions that influence consumer behavior, stakeholder engagement, and the transition toward more sustainable consumption and production patterns

# KTU Expertise <sup>7</sup>

## **Knowledge transfer and capacity building**

Researchers can contribute to:

- knowledge transfer and capacity building efforts by disseminating research findings, organizing workshops and training programs, and supporting the education and awareness-raising about bioeconomy concepts, opportunities, and best practices

# KTU Expertise <sup>8</sup>

## Digital solutions

Research can focus on:

- designing digital solutions for bio-based products and their value chains, improving societal readiness and accessibility of information, promoting harmonization and interoperability, facilitating participation in the European Dataspace, to enhance the sustainability and efficiency of bio-based sectors in line with EU policies and initiatives

# Topic and project idea

- Programmed biodegradation capability of bio-based materials and products, validated in specific environments
- Demonstrating the fair and just transition from GHG-intensive economies facing challenges towards circular bioeconomy model regions HORIZON-CL6-2024-CircBio-01-7
- Targeting aquatic extremophiles for sourcing novel enzymes, drugs, metabolites and chemicals HORIZON-CL6-2024-CircBio-01-10
- From silos to diversity – small-scale bio-based demonstration pilots HORIZON-CL6-2024-CircBio-02-6-two-stage
- New circular solutions and decentralised approaches for water and wastewater management HORIZON-CL6-2024-CircBio-02-4-two-stage
- Circular design of bio-based processes and products HORIZON-CL6-2024-CircBio-02-5-two-stage
- Transformative action of policy mixes, governance and digitalisation addressing biodiversity loss HORIZON-CL6-2024-BIODIV-01-5
- Digital for nature HORIZON-CL6-2024-BIODIV-01-2
- Invasive alien species HORIZON-CL6-2024-BIODIV-01-1
- Digital information systems for bio-based products



# Contact details

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