



European Commission  
PROJECT  
2024-1-LV01-KA220-HED-000255G2G  
“Biomedical Innovations through Digital  
Transformation of Additive Technologies and  
Knowledge Exchange”

## **Innovative Hackathon on 3D Printing and Bioprinting Technologies for Medical Applications Held at Riga Technical University – Latvia, April 28-29, 2025.**

On April 28-29, 2025, Riga Technical University – Latvia hosted an international hackathon titled “Human Health Served with CAD-Assisted 3D Printing” bringing together students from six countries to tackle healthcare challenges using CAD design and 3D printing technologies. This event, part of the ERASMUS KA220 BIOMEDIX project, was an important step in advancing biomedical engineering through collaboration between universities, industry, and research institutions.

The main objective of this hackathon was to identify and develop innovative solutions in the field of CAD design, 3D printing and bioprinting for medical products, such as orthotics, prosthetics, and orthopedic implants. Innovative ideas were proposed to develop new types of materials and structures for cranio-maxillofacial implants, as well as for the use of 3D bioprinting technologies in bone and soft tissue regeneration, the development of new drugs, and research solutions for treating various types of cancer (bone, colon, skin, etc.).

The hackathon also featured insightful lectures on the latest biomedical innovations, focusing on advancements in 3D printing, bioprinting technologies, and AI-driven methodologies for medical applications. Additionally, participants had the opportunity to explore RTU’s cutting-edge research facilities, including the Biomedical and Nanoengineering Laboratory, the 3D Concrete Printing Laboratory, and the Baltic Biomaterials Centre of Excellence. These tours provided valuable exposure to state-of-the-art equipment and research environments, sparking creativity and inspiration for the hackathon projects.

The event concluded with presentations at the RTU Student Scientific and Technical Conference, where teams showcased their solutions. The best projects were awarded for their potential impact on the future of healthcare and biomedical technology.

The results obtained from this hackathon will be further developed through the ERASMUS KA220 BIOMEDIX project, involving the execution of bachelor’s / master's / PhD theses and the publication of scientific articles in prestigious journals, in partnership with the institutions involved, throughout the project implementation period (2025-2027).

The event was attended by 20 representatives of the consortium partners: Technical University of Cluj Napoca (Romania), Poznan University of Technology (Poland), Technical University of Cartagena (Spain), University of Nis (Serbia), Juraj Dobrila University of Pula (Croatia), ViscoTEC (Germany) and other representatives from the Riga Technical University (Latvia).





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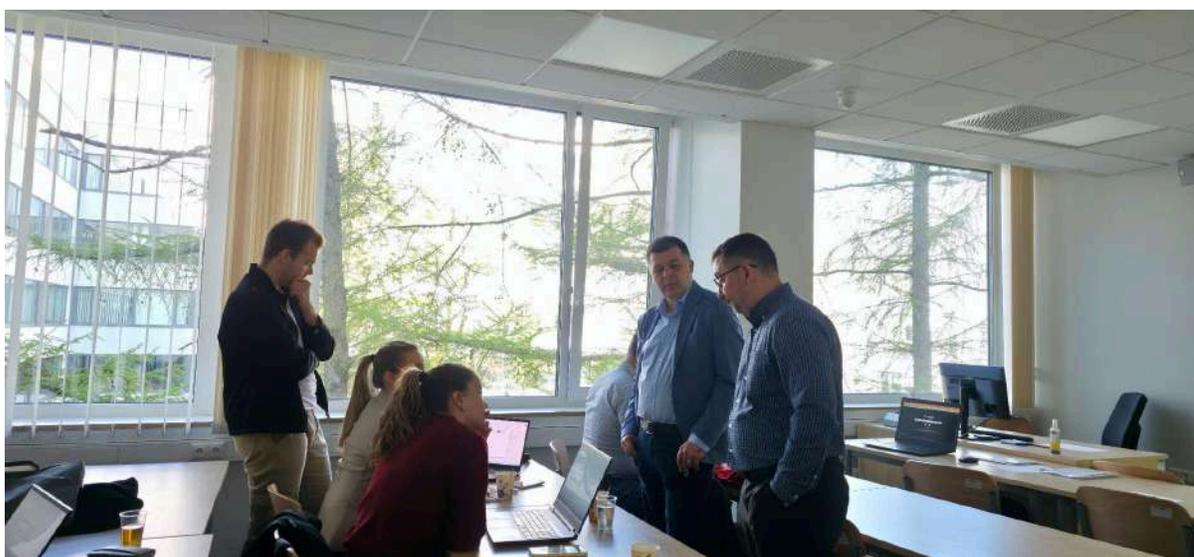


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