

## **Next-generation Lasers from Czechia and Lithuania Leading the Way for Europe's Industrial Competitiveness**

Dolní Břežany, 5 December 2024

A consortium of 18 partners from Czechia, Lithuania, and Ukraine has embarked on a groundbreaking project to transform the European hi-tech industry through advanced laser technologies. Led by Czechia's HiLASE Centre and Lithuania's [FTMC](#), the **LASER-PRO project** ('Excellent Laser Technologies for the Sustainable Prosperity of Europe') stands out as a shining example of cross-border collaboration. Starting in January 2025 and lasting for four years, the project reflects a long-term commitment to innovation and sustainability. Ukraine's inclusion in the consortium highlights a dedication to fostering knowledge transfer and capacity-building, aiming to enhance its innovation ecosystem and drive regional technological advancement. LASER-PRO achieved success in a highly competitive environment, with only 11 out of 205 submitted proposals receiving funding.

### **New Lasers to Power Europe's Future Prosperity**

Lasers, often hailed as the "super-tools of the 21st century," are revolutionizing industries worldwide with their unparalleled precision, versatility, and sustainability. From manufacturing and healthcare to communication and aerospace, their applications are reshaping entire sectors. By embracing laser technologies, Europe has a unique opportunity to address key challenges like improving energy efficiency and staying competitive in the global marketplace.

### **Transforming Regions through the Excellence Hubs Initiative**

[Horizon Europe's Excellence Hubs](#) initiative aims to foster robust and sustainable research and innovation ecosystems across Europe, with a particular focus on connecting regions through advanced science and industrial applications. This initiative seeks to:

- Build world-class innovation ecosystems in emerging regions;
- Foster long-term collaboration between academia and industry;
- Develop cutting-edge competencies for researchers, entrepreneurs, and professionals;
- Promote green, digital, and smart solutions for sustainable industrial transformation.

*"The Excellence Hubs initiative is a unique opportunity to strengthen regional collaboration and innovation culture," said Tomáš Mocek, Head of the HiLASE Centre and Coordinator of the LASER-PRO project. "LASER-PRO embodies this visionary mission, uniting partners from Czechia, Lithuania, and Ukraine to accelerate the adoption of advanced laser technologies in Europe's high-tech industries."*

### **MEDIA CONTACT**

**Ing. Marie Thunová** | HiLASE Centre Leader of PR & Marketing  
marie.thunova@hilase.cz | +420 702 235 039



**Co-funded by  
the European Union**

## **LASER-PRO: A Blueprint for Innovation**

The LASER-PRO project focuses on developing a comprehensive laser innovation ecosystem, seamlessly connecting academia, industry, government, and society. With HiLASE and FTMC as lead institutions, the consortium represents a balanced mix of research organizations, SMEs, innovation agencies, and public institutions from the three countries.

The project focuses on several key research areas:

- **Sustainable Manufacturing:** Utilizing ultrashort-pulse lasers to optimize material processing and minimize waste;
- **Semiconductor Technology:** Advancing laser technologies for chip manufacturing and packaging, aligned with the EU Chips Act;
- **Biomedical Innovations:** Applying lasers to improve medical devices, including implants and microfluidics;
- **Digital and 3D Printing:** Incorporating digital tools and 3D printing in laser system development for improved design and performance.

The LASER-PRO project aims to develop joint research and innovation strategies to advance the laser industry, with pilot projects addressing regional and national industrial needs. It will focus on training the next generation of researchers, engineers, and entrepreneurs in laser technologies while supporting startups, spin-offs, and SMEs to harness laser innovations for increased market competitiveness. Additionally, the project will strengthen Ukraine's innovation ecosystem by mentoring local partners and integrating them into the broader European research landscape.

*"Our consortium demonstrates how international collaboration can drive impactful innovations,"* said Gediminas Raciukaitis, lead researcher at FTMC. *"Through LASER-PRO, we will not only accelerate laser technology adoption in Europe but also empower Ukrainian partners to thrive within the European innovation community."*

## **A Strong Impact on Europe and Beyond**

LASER-PRO is poised to reshape the European industrial landscape. The project will:

- Enable greener and more resource-efficient manufacturing;
- Foster knowledge transfer to SMEs and startups, creating new business opportunities;
- Strengthen Europe's position as a leader in photonics and laser technologies.

*"By harnessing our collective expertise, LASER-PRO aims to shape a sustainable and competitive future for Europe's industry,"* Mocek added. *"Our driving motivation is to lay a strong foundation for long-term economic prosperity by delivering tangible solutions to real-world challenges."*

## **MEDIA CONTACT**

**Ing. Marie Thunová** | HiLASE Centre Leader of PR & Marketing  
marie.thunova@hilase.cz | +420 702 235 039



**Co-funded by  
the European Union**

### **Collaboration with Impact for All Members**

*“By supporting cutting-edge projects like this, we aim to position Europe as a global leader in laser technologies, ensuring sustainable industrial transformation and strengthening regional ties,”* said Renata Liubinavice, Innovation Agency Lithuania project manager.

*“The SCIENTIFIC PARK OF LVIV POLYTECHNIC NATIONAL UNIVERSITY plays a pivotal role in fostering innovation, entrepreneurship, and technological advancement within the LASER-PRO Excellence Hub. Our organization is dedicated to bridging the gap between academia, industry, and government by facilitating knowledge transfer, supporting start-ups, and providing strategic mentorship. Through active participation in the LASER-PRO project, we aim to expand Ukraine’s collaboration in the cutting-edge domain of laser technologies, enhance our innovation ecosystem, and strengthen ties with leading European partners. We anticipate that this initiative will drive sustainable development, foster high-value-added production, and create new business opportunities in Ukraine, contributing to the growth of a robust, international R&I network,”* said Mykhailo Zuiev, Project manager of the Science Park of the Lviv Polytechnic.

#### *Consortium Members and Partners:*

- *Czechia:* [HiLASE](#), [SIC](#), [Czech Optical Cluster](#), [CARDAM](#), [STAR Research & Innovation Cluster](#), [AMIRES](#), [ELI ERIC](#), [Junior Achievement Czechia](#)
- *Lithuania:* [FTMC](#), [Lithuanian Innovation Centre](#), [Innovation Agency Lithuania](#), [Lithuanian Laser Association](#), [Akoneer](#), [Junior Achievement Lithuania](#)
- *Ukraine:* [Lviv Polytechnic National University](#), [Scientific Park of Lviv Polytechnic](#), [NoviNano Lab](#), [Junior Achievement Ukraine](#)

**Press Contacts:** [Marie Thunova](#), HiLASE Centre

### **MEDIA CONTACT**

**Ing. Marie Thunová** | HiLASE Centre Leader of PR & Marketing  
[marie.thunova@hilase.cz](mailto:marie.thunova@hilase.cz) | +420 702 235 039



**Co-funded by  
the European Union**