



# LASER-PRO: Linking Science and Industry to Shape Europe's High-Tech Future

Dolni Brezany, 5 March 2025

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. To mark the official launch, the consortium members gathered for a Kick-Off Meeting at the HiLASE Centre in Dolni Brezany, where they outlined the project's strategic direction, key objectives, and collaborative framework for the coming years.

## Kick-Off Meeting at HiLASE Centre marks the start of LASER-PRO

The LASER-PRO initiative was officially launched during a Kick-Off Meeting held on March 3–4, 2025, at the HiLASE Centre in Dolni Brezany, Czech Republic. The event brought together all consortium members and key stakeholders to outline the project's vision, structure, and roadmap.

The public session of the Kick-Off Meeting began with a welcome message from Michael Prouza, Director of FZU – Institute of Physics of the Czech Academy of Sciences, followed by addresses from other prominent figures: Petra Peckova, Governor of Central Bohemia; Jana Havlikova, Deputy Minister for Science, Research, and Innovation of the Czech Republic; Radek Spicar, Vice-President of the Confederation of Industry of the Czech Republic; Helena Schulzova, Deputy Director of the Department of Economic and Science Diplomacy at the Ministry of Foreign Affairs; Rolandas Kacinskas, Ambassador of Lithuania to the Czech Republic; Helena Jelinkova, Professor in Applied Physics at the Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague; and Petr Ocko, Deputy Minister of Industry and Trade of the Czech Republic.

This public session of the meeting was concluded by the strategic industrial partners of the HiLASE Centre: Krystof Polak representing Crytur, Michal Lorenc from ONSEMI, Tomas Tethal from IQS Group, and Gediminas Raciukaitis from the FTMC – Center for Physical Sciences and Technology.

A comprehensive overview of the LASER-PRO project was then presented by Tomas Mocek, LASER-PRO Coordinator and Head of <u>HiLASE Centre</u>, outlining the project's vision, key objectives, and expected impact.

The session also featured a presentation by Anca-Adriana Cucu, Project Officer from the European Research Executive Agency (REA), who will be overseeing the LASER-PRO initiative.

Following the public session, consortium members participated in dedicated working







sessions focusing on the strategic and technical aspects of the project, including:

- Excellence Hub Governance & Strategic Growth
- Joint Research & Innovation Projects
- Education, Training & Development
- Science-Business Collaboration
- Ecosystem for Innovative Companies
- Mentoring Programme for Ukraine
- Communication, Dissemination & Exploitation

The two-day event concluded with a wrap-up session led by Mocek, summarizing key takeaways, milestones, and next steps for accelerating the adoption of laser technologies in Europe's high-tech industries.

"LASER-PRO is not just another EU-funded project – it is a strategic movement reshaping Europe's laser technology landscape. By driving cross-border collaboration and accelerating the commercialization of laser technologies, we will establish a European Powerhouse in Laser Innovation centered around Central Bohemia and Lithuania. said Tomáš Mocek, Head of the HiLASE Centre and Coordinator of the LASER-PRO project.

## **PROJECT OVERVIEW**

Led by Czechia's HiLASE Centre and Lithuania's <u>FTMC</u>, the **LASER-PRO project** (Excellent Laser Technologies for the Sustainable Prosperity of Europe) is a landmark initiative demonstrating the power of cross-border collaboration.

Highlighting the transformative potential of cross-border cooperation, Gediminas Raciukaitis, lead researcher at FTMC and also the "father of the Lithuanian laser ecosystem", emphasized the importance of international partnerships in driving technological progress:

"Our consortium exemplifies how international collaboration can lead to groundbreaking innovations. Through LASER-PRO, we will not only accelerate the adoption of laser technologies across Europe but also strengthen the capabilities of our Ukrainian partners, enabling them to integrate and succeed within the European innovation ecosystem."

## Lasers: Powering Europe's Industrial Growth and Prosperity

Lasers, the "super-tools of the 21st century," are transforming industries from manufacturing to healthcare and aerospace. LASER-PRO offers Europe a unique opportunity to leverage advanced laser technologies for energy efficiency, sustainable production, and global competitiveness.

#### **Excellence Hubs: Advancing Innovation Across Europe**

Horizon Europe's Excellence Hubs initiative strengthens research and innovation ecosystems by connecting regions through advanced science and industry. It aims to:







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

## **Key Research and Innovation Areas**

The LASER-PRO project is centred on several critical research domains that will redefine industrial processes through laser technology:

- **Sustainable Manufacturing** Optimizing material processing and minimizing waste through ultrashort-pulse laser applications.
- **Semiconductor Technology** Advancing laser technologies for chip manufacturing and packaging in alignment with the EU Chips Act.
- **Biomedical Innovations** Developing laser-based solutions for medical devices, implants, and microfluidic systems.
- **Digital and 3D Printing** Enhancing design and performance through advanced digital tools and 3D printing in laser system development.

By addressing regional and national industrial needs, LASER-PRO will create a comprehensive innovation strategy, including pilot projects and new training programs for the next generation of researchers, engineers, and entrepreneurs. Moreover, the project will support startups, spin-offs, and SMEs in leveraging laser technologies to enhance market competitiveness.

### Paving the Way for Europe's Industrial Competitiveness

The LASER-PRO project is set to reshape the European industrial landscape by:

- Driving greener and more resource-efficient manufacturing.
- Fostering knowledge transfer to SMEs and startups to create new business opportunities.
- Strengthening Europe's position as a global leader in photonics and laser technologies.

## Driving Technological Excellence: The LASER-PRO Consortium

LASER-PRO brings together a diverse group of stakeholders committed to advancing laser technology and industrial innovation:

- Czechia: <u>HiLASE</u>, <u>SIC</u>, <u>Czech Optical Cluster</u>, <u>CARDAM</u>, <u>STAR Research & Innovation Cluster</u>, <u>AMIRES</u>, <u>ELI ERIC</u>, <u>Junior Achievement Czechia</u>
- Lithuania: <u>FTMC</u>, <u>Lithuanian Innovation Centre</u>, <u>Innovation Agency</u>
  Lithuania, Lithuanian Laser Association, Akoneer, Junior Achievement Lithuania
- Ukraine: <u>Lviv Polytechnic National University</u>, <u>Scientific Park of Lviv Polytechnic</u>, <u>NoviNano Lab</u>, <u>Junior Achievement Ukraine</u>



<sup>&</sup>quot;By fostering innovative initiatives like LASER-PRO, we strive to solidify Europe's position as a global leader in laser technologies, promote sustainable industrial growth, and strengthen collaboration across regions," said Renata Liubinavice, Project Manager





at Innovation Agency Lithuania.

Reaffirming its dedication to advancing innovation and partnerships, Oleksandra Falchuk, Project Manager of the Scientific Park of Lviv Polytechnic National University, highlighted the project's significance:

"The Scientific Park of Lviv Polytechnic National University is committed to bridging academia, industry, and government by facilitating knowledge transfer, supporting start-ups, and mentoring innovators. Through LASER-PRO, we aim to strengthen Ukraine's position in laser technologies, enhance our innovation ecosystem, and expand collaboration with European partners, driving sustainable development and new business opportunities."

# Excellence Hubs: A Gateway to the Future

LASER-PRO is shaping the future of laser technology and industrial innovation by bringing together expertise from across Europe. As part of the Excellence Hubs initiative, it strengthens collaboration between research institutions, industry leaders, and technology pioneers, driving advancements that enhance Europe's global competitiveness. By fostering cutting-edge solutions and sustainable industrial practices, LASER-PRO is not only transforming the high-tech sector but also building a resilient and innovation-driven economy for future generations.

For further details, please contact: **Marie Thunova, HiLASE Centre** 

