

DIGITAL TWINS OF LASER PROCESSING FOR MULTI-CAPABILITY MANUFACTURING OF COMPLEX COMPONENTS AND DIGITAL CERTIFICATION

Newsletter #8

Maximising Impact in the Final Phase Focus on WP10

The **DILAPRO** project has now transitioned into its decisive second phase, following the completion of key foundational development work, such as establishing **Digital Twin (DT)** prototypes and initial sensor integration within Work Packages 2 and 3.

The final 18 months of the project are dedicated to software integration, extensive demonstration, and ensuring that **DILAPRO**'s groundbreaking outputs achieve maximum impact across European industry.

This crucial final stage is spearheaded by **Work Package 10 (WP10)**, led by the **European Federation for Welding Joining and Cutting (EFW)**, building directly upon the groundwork established in WP5.

Our aim is not merely to develop software, but to redefine quality and efficiency standards in European laser production.

01. The Measurable Impact of Digital Technology

DILAPRO partners are validating results that promise to transform European industry, directly contributing to the **"Green and Digital Transition"**:



Cost and Time Reduction

The methodologies being implemented aim to achieve a **cost reduction of 20% to 30%** in **quality assurance (QA)** and **accelerate qualification times by up to 50%**.



Sustainability

By enabling **"first time-right"** production, **DILAPRO** helps to **reduce the scrap rate of complex components between 50% to 60%**, contributing to lower material and energy consumption.



Key Innovation

Digital Certification: Our **DILACERT (Digital Laser Certification)** module is being developed to revolutionise industrial certification, aiming to **replace slow physical tests with digital validation, providing greater flexibility and production autonomy to European industry.**

02. From Pilot to Industrial Standard: Next Steps

WP10 focuses on ensuring the innovative tools **DILAFAC** (the Digital Twin and planning software) and **DILACERT** (the certification software) reach the market:



Real-World Use Case Validation

Commercial Sustainability (Exploitation)

Standardisation

03. Community Engagement and Workforce Training

DILAPRO's success hinges on its adoption by the community.

The **DILAPRO LASER Community** is designed to act as a living bridge between the project consortium and the wider ecosystem of laser-based manufacturing across Europe. It moves beyond simple communication (raising awareness) into active engagement, collaboration, and co-development.

The community targets a diverse group of stakeholders, from researchers who will use the open-source DT algorithms to industry managers who need faster certification.

The existence of a strong, engaged community helps overcome this barrier by:



Building Trust

A strong community increases the trust by the industry in certification based on **Online Monitoring and DT**.



External Case Studies

The community is expected to provide external case studies (hosted by external companies) to rigorously test and demonstrate the **DILAPRO** approach and verified cost reduction, proving its real-world viability.



Influence on Standards

Feedback from the community (which includes standardisation experts and machine manufacturers) informs the final recommendation document for relevant standardisation bodies.

Events



DILAPRO at Formnext! Meet the Experts in Digital AM Qualification & Certification!

The **DILAPRO** Project wishes to extend a sincere thank you to everyone who visited our partners at the recent Formnext – Where ideas take shape event (18th – 20th November)!

[Read More](#)



DILAPRO in the Spotlight: Project Progress Featured at Manufacturing Partnership Days 2025!

We are delighted to share exciting news regarding the **DILAPRO** Project's prominent participation in the Manufacturing Partnership Days 2025 event, held in Brussels from 20–22 October.

[Read More](#)

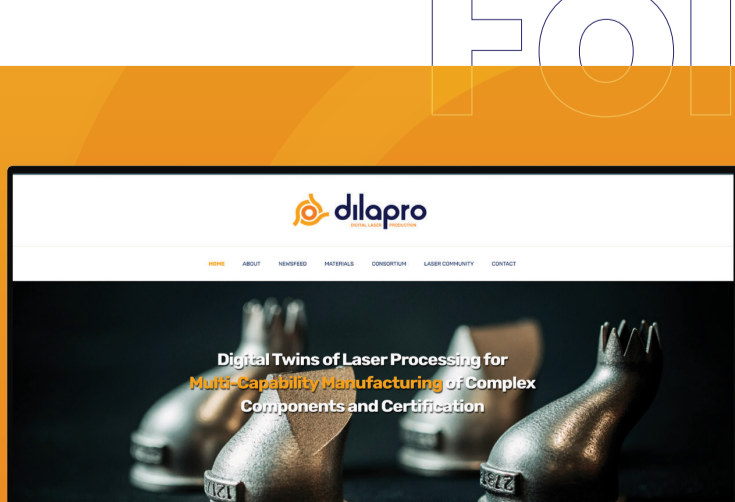


DILAPRO Project Takes the Stage at the 67th EWF General Assembly in Lisbon

The **DILAPRO** Project achieved a key Dissemination milestone last week as it was formally presented at the 67th European Federation for Welding, Joining and Cutting (EFW) General Assembly, held in Lisbon.

[Read More](#)

Follow Us



[DILAPRO Website](#)

