



Shaping the Future of Renewable Resources through EIC support

Leaves of Innovation: From A-LEAF's success to the sprouting of SUPERVAL and JOLT

In the journey of innovation and sustainability, the [A-LEAF project](#) stands out as a successful story of pioneering advancements in cleantech.

The project was supported by the [European Innovation Council](#) (EIC) and came to an end in 2021, after successfully creating an artificial leaf capable of using sunlight to turn water and CO₂ into fuels and chemicals.

The artificial leaf's proof of principle offers a promising solution to reduce carbon emissions in the atmosphere. But it also opens the way for a transition towards circularity transforming CO₂ into a feedstock, while mitigating the impact of climate change.

Today A-LEAF's success grows further and gives birth to a new EIC pathfinder challenge project in the field of CO₂ and N-compounds management and valorisation: SUPERVAL. Much like the emergence



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of fresh leaves in spring, this new venture promises to build upon the foundations laid by our scientists so far, optimising and expanding A-LEAF's strategy.

“When we finalised our prototype we recognised its untapped potential, aware that improvements were necessary but constrained by funding”, says José Ramón Galán-Mascarós, coordinator of A-LEAF's and SUPERVAL, reflecting upon the project's journey so far. “Now we have the opportunity to scale up and enhance our initial creation, bringing circularity to sustainability”.

Funding plays an integral role in advancing scientific innovation and bolstering ambitious projects, particularly within the European domain. In this context, EIC remains crucial as an initiative designed to foster innovation through funding and support services to individuals, startups, and small and medium-sized enterprises across the continent.

Stefano Gianicola, [CTO of Orchestra Scientific](#), a startup in the SUPERVAL consortium, will join the pathfinder programme of the EIC as innovation manager of the project*. He emphasises the importance of entrepreneurial skills in guiding a project towards success and the need to establish strong connections with investors and customers.

In the dynamic realm of research and innovation, securing ample financial support, including from private investments, is increasingly becoming a full-time job that demands not only considerable effort but also specific skills.

Beyond funding, the significance of strong collaborations and effective team building cannot be overstated, for companies and European projects alike.

Alberto Bucci is the CTO and co-founder of [Joltech Solutions](#) (JOLT), a company born from the A-LEAF project. He knows first-hand the dual challenge of securing sufficient funds while simultaneously consolidating a robust technological proposition and deploying the operations of the new venture to address market needs. “A cohesive and interdisciplinary team not only enhances the work environment but also fuels creativity and problem-solving”.

In conclusion, the exploration of the future of artificial photosynthesis and its potential impact on our energy and environmental landscapes reveals a complex interplay of optimism and caution. As we contemplate the transformative power of scientific advancements, it becomes evident that realising these innovations requires more than technical prowess—it demands a cohesive and interdisciplinary approach, entrepreneurial skills and funding.

The story of A-LEAF and the birth of SUPERVAL project and JOLT company not only showcases technological successes but also highlights the economic and scientific impact of collaborative efforts, offering a promising trajectory toward a European sustainable and innovative future.

*The new pathfinder challenge portfolio will kick off on the 22nd and 23rd of November.



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