Dr Laia Llenas Argelaguet: opening the doors to circular models

Dr Laia Llenas Argelaguet is a Chemical Engineer with a PhD in Chemical Engineering and currently serves as Deputy Director of the BETA Technological Centre at the University of Vic – Central University of Catalonia.

Her work focuses on circular bioeconomy, sustainable water management, waste water reuse, membrane technologies, and nutrient recovery. With extensive experience in national and European research and innovation projects, she is particularly engaged in bridging scientific knowledge and practical solutions for the agri-food and environmental sectors.

Dr Laia Llenas Argelaguet

Chermical Engineer

What very concrete issue in agriculture is most on your mind at the moment, and why?

Helping farmers become co-creators of resilient agrifood systems by translating research into actionable insights and providing continuous, grounded support.

What is a key challenge you are tackling right now, and what are you doing concretely to move the needle?

As Deputy Director of the BETA Technological Center, my focus is to ensure that our research truly generates impact in the rural areas where it is most needed. I am deeply motivated by contributing to the transition toward agrifood systems that regenerate ecosystems, empower rural communities and make environmental responsibility economically viable. This means moving beyond isolated improvements and rethinking how we produce, transform, and manage resources across the whole agrifood chain.

One of our greatest challenges is making sustainability actionable for the people who operate on the ground. At BETA, we collaborate closely with farmers, cooperatives, food industries, municipalities and policy makers to develop solutions that are both scientifically rigorous and operationally feasible.

We design new technologies, processes and digital tools that open the door to circular models: nutrient recycling, improved waste and water management, regenerative agricultural practices and low-emission production systems.

We move the needle by combining advanced technical expertise with a permanent presence in the territory, engaging with farmers in a language and approach that reflect their practical needs and everyday experience.

As a woman in a leadership role, I prioritize proximity, listening and long-term engagement with all the actors of the agrifood value chain. This allows us to bridge science, practice and policy effectively, and to ensure that innovation is co-created rather than imposed.

By translating research into practical solutions, we work alongside the people who face these challenges daily.

This proximity ensures relevance, accelerates adoption, and strengthens our mission of supporting a fair and resilient transition.

At BETA, we have learned that innovation becomes transformative when farmers, policymakers and scientists shape the future together rather than reacting to problems once they appear.

Share one practice, tool or approach you have tested that delivers real results. Why would you recommend it?

One approach that consistently delivers impact is co-designing solutions with end users from the very beginning, using ex-ante impact strategies.

This ex-ante approach allows us to anticipate barriers, align expectations and design technologies, models and governance frameworks that are not only scientifically solid, but also socially accepted and economically viable. It shifts the focus from research that hopes to create change to research engineered for impact.

We apply this model across nutrient circularity, water reuse, regenerative agriculture, climate change mitigation and adaptation and biodiversity monitoring, among others. Instead of developing technology first and searching for users later, we involve end-users from the earliest design stages. This fosters shared commitment, accelerates adoption, and ensures that innovation responds to real needs and real constraints.

I recommend this approach because it changes the trajectory of projects: it reduces implementation gaps, builds trust, and transforms innovation into a collective journey. When impact is co-designed (not imposed), it becomes deeper, faster and more resilient.

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