

PROMICON: Revolutionizing Biotechnology with Nature-Inspired Microbial Consortia

The PROMICON project, funded by the EU Horizon 2020 programme (GA No. 101000733), is redefining sustainable biotechnology. By decoding the functionality of microbiomes, PROMICON leverages productive microbial consortia to produce biopolymers, butanol, and hydrogen, aligning with the EU 2018 Bioeconomy Strategy. This pioneering initiative drives the circular economy by replacing resource-intensive processes with eco-friendly solutions, offering transformative potential for the water and energy sectors.

Final Innovation Workshop: Paving the Way for Market Adoption

On 29 April 2025, PROMICON convened its third and final Innovation Workshop at the Helmholtz Centre for Environmental Research (UFZ) in Leipzig, Germany. Organized by Isle Utilities, a key partner spearheading exploitation activities, the event maximized the commercial potential of PROMICON's breakthroughs through strategic stakeholder engagement.

Isle's comprehensive market and competitor analyses identified opportunities and risks for market entry, while the Innovation Board—comprising leading experts in biotechnology and hydrogen—provided critical end-user insights. Through a series of three co-creation workshops, including this final event, the Board shaped PROMICON's solutions to meet industry needs. These efforts informed robust commercial and non-commercial exploitation roadmaps, guiding partners toward scalable, impactful deployment.

The workshop united all project partners, including UFZ (coordinators), Isle Utilities, Pensoft Publishers, Uppsala University, OnCyt Microbiology AG, Spanish National Research Council (CSIC), AIMEN Technology Center, Polytechnic University of Catalonia (UPC), ADM Biopolis, and Nova University Lisbon, alongside Innovation Board members. Attendees explored cutting-edge advancements through technical demonstrations and engaged in dynamic discussions to chart pathways for market

adoption. The event underscored PROMICON's potential to deliver cost-effective, sustainable solutions for industries seeking greener alternatives.

"I was honoured and delighted to be a member of the PROMICON's Innovation Board. I was very impressed by the high quality of PROMICON's partners, especially ISLE and the Innovation Workshops they organise. The presentations from PROMICON's partners have consistently been excellent. It is very encouraging to see that Europe has strong and motivated innovators." Prof. Dr. Bruno G. Pollet, President of the Green Hydrogen Division at International Association for Hydrogen Energy, Canada.

Why It Matters

PROMICON's innovations are a game-changer for the bioeconomy, offering scalable, circular solutions that reduce reliance on fossil-based resources. By harnessing microbial consortia, the project enables efficient production of biopolymers for packaging, butanol for biofuels, and hydrogen for clean energy—directly addressing water and energy sector demands for sustainability and economic viability.

"Our roadmaps to commercialisation ensure PROMICON's solutions are market-ready, delivering both environmental and economic value." Blanca Antizar, Director of Consultancy, Isle. "PROMICON has been a great project for Early Career Researchers, constantly providing opportunities for collaboration." Eleonora Paissoni, Consultant, Isle, UK.

What's Next?

As PROMICON concludes, partners are scaling up pilot systems to validate these technologies in industrial settings. Guided by Isle's commercialization roadmaps, they are pursuing partnerships and exploring commercial opportunities to drive widespread adoption. PROMICON invites stakeholders to join its mission to bridge nature's ingenuity with industrial innovation for a sustainable, bio-based future.

For more information, visit <https://promicon.eu/>.

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About PROMICON:

PROMICON is a €6 million Horizon 2020 project (2021-2025, GA No. 101000733), which learns from nature how microbiomes function through the development and application of quantitative physiology, online flow cytometry, imaging, cell sorting, machine learning, and systems biology. Newly constructed microbial consortia, inspired by natural microbiomes, are used for the biotechnological production of energy carriers and drop-in feedstocks for the chemical and fuel industry, and functionalised bacterial polyesters for bio-medical applications.

The partners of the project are: [UFZ \(Coordinator\)](#), [Isle Utilities Ltd](#), [Pensoft Publishers](#), [Uppsala University](#), [OnCyt Microbiology AG](#), [Spanish National Research Center \(CSIC\)](#), [AIMEN Technology Center](#), [Polytechnic University of Catalonia - Barcelona Tech \(UPC\)](#), [ADM Biopolis](#) and [Nova University Lisbon](#).

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