

D3.3. Year 3 Accelerator Activity and Monitoring Report



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0. Executive Summary

This deliverable presents the final Year 3 Accelerator Activity and Monitoring Report of the BioBoost project, summarising the implementation of the BioBoost Accelerator during the period June 2025 – May 2026 and providing a consolidated overview of the four years of Accelerator deployment.

During the final implementation year, the Accelerator focused primarily on consolidating support activities for the most advanced BioBoosters and reinforcing project maturity, investment readiness and implementation feasibility across the portfolio. PDA activities during this phase concentrated mainly on business planning refinement, financing strategies, technical validation, regulatory support and project consolidation activities.

Throughout the implementation period, the BioBoost Accelerator supported a diverse portfolio of circular bioeconomy initiatives covering bioenergy, biomass valorisation, industrial biotechnology, circular agri-food solutions and territorial ecosystem-building projects across Catalonia. The implementation experience progressively revealed recurring BioBooster archetypes sharing similar implementation dynamics, operational challenges and support needs despite their technological diversity.

Over the four years of implementation, the Accelerator delivered more than 60 PDA services combining technical, business, financing, legal and facilitation-oriented support activities. The implementation process also confirmed the strategic importance of non-technological support dimensions such as financing preparation, stakeholder coordination, permitting procedures and territorial facilitation activities across multiple projects.

The Accelerator contributed to improving project maturity, clarifying financing strategies and supporting the mobilisation of significant investment perspectives across the BioBooster portfolio. Several initiatives progressed towards advanced implementation stages and secured or activated relevant financing resources for future deployment phases.

Beyond the direct implementation results, the BioBoost experience also generated valuable operational knowledge regarding how integrated bioeconomy acceleration schemes can be structured, adapted and potentially replicated in other European regional contexts. The implementation process also generated growing institutional interest regarding the long-term continuity and future evolution of the Accelerator model beyond the project duration, particularly due to its alignment with the Bioeconomy Strategy of Catalonia.

This report also summarises the monitoring results associated with the BioBoost Key Performance Indicators (KPIs), including operational indicators, investment-related outcomes and feedback collected from the supported BioBoosters throughout the implementation period.

1. Introduction

This deliverable (D3.3) presents the **Year 3 Accelerator Activity and Monitoring Report** of the BioBoost project, covering the final implementation period of the BioBoost Accelerator from June 2025 to May 2026. The report summarises the main activities carried out under WP3 – Delivery of Project Development Assistance (PDA) services – during the last operational phase of the Accelerator.

D3.3 builds upon the work previously reported in D3.1 and D3.2, which respectively covered the establishment of the Accelerator methodology during the first year of implementation and the consolidation and expansion of PDA activities during the second year. While the previous deliverables focused primarily on the operational deployment of the Accelerator, this final report provides an overview of the evolution of the BioBoost portfolio, the PDA methodology and the main implementation outcomes observed throughout the project duration.

The report is structured into three main sections.

Section 2 presents the main **Accelerator activities carried out during Year 3**, including the evolution of the BioBooster portfolio, the level of engagement of the supported projects and the PDA services delivered during the final implementation period.

Section 3 provides a broader **analysis of the three years of Accelerator implementation**. It presents the evolution of the Accelerator methodology, the different BioBooster archetypes identified throughout the implementation process, the investment readiness and financing perspectives observed across the portfolio, and the replication potential and future development perspectives of the BioBoost Accelerator model.

Finally, Section 4 summarises the **monitoring results associated with the BioBoost Key Performance Indicators (KPIs)**, including operational indicators and feedback collected from the supported BioBoosters throughout the implementation process.

2. Accelerator activities during 3rd year

2.1. Evolution and priorities of the Accelerator during Year 3

The third and final operational year of the BioBoost Accelerator focused primarily on consolidating the support provided to the active BioBoosters and reinforcing the implementation feasibility and investment readiness of the most advanced projects within the portfolio. Unlike previous implementation phases, Year 3 did not prioritise the onboarding of new initiatives or the expansion of the BioBooster portfolio. Instead, the Accelerator concentrated on supporting the operational consolidation and strategic refinement of the ongoing projects.

During this phase, PDA activities became increasingly targeted and adaptive according to the maturity level, implementation status and specific needs of each BioBooster. The support provided focused mainly on business planning refinement, investment preparation, governance clarification, technical validation, regulatory support and implementation-oriented assessments.

The final implementation phase also confirmed the heterogeneous nature of the BioBooster portfolio. While several projects progressed towards advanced implementation stages and substantially completed their PDA activities, others experienced strategic pauses, governance constraints or limited implementation feasibility, resulting in reduced or discontinued support during the reporting period.

As a result, the level of engagement varied significantly across the portfolio. During Year 3, the Accelerator progressively concentrated its efforts on the most mature initiatives, prioritising projects with clearer implementation pathways, stronger organisational structures and higher investment readiness potential.

This adaptive approach allowed the consortium to optimise the deployment of PDA resources during the final operational phase while maintaining sufficient flexibility to respond to the evolving conditions and priorities of each project.

2.2. BioBoosters supported during Year 3

During Year 3, the level of PDA deployment varied across the BioBooster portfolio depending on the maturity level, implementation status and operational evolution of each project. While several initiatives progressed towards implementation-oriented stages and continued receiving targeted PDA support, others remained paused, completed or received only limited exploratory support during the reporting period.

Table 1 summarises the level of engagement, the main activities carried out during Year 3 and the operational status of the BioBoosters at the end of the reporting period.

Table 1. BioBooster engagement during Year 3

BioBooster	Year 3 engagement level	Main activities during Year 3	Status at end of reporting period
BB1 – Coopirenaica	None	No PDA activities were carried out during Year 3 following the suspension of the project.	Suspended
BB2 – Alcarràs Bioproductors	None	No PDA activities carried out during Year 3, as most PDA activities had already been completed during previous implementation phases.	Completed

BioBooster	Year 3 engagement level	Main activities during Year 3	Status at end of reporting period
BB3 – Ametller Origen Hub Mont-Roig	High	Intensive PDA support focused on technical refinement, BMP assessment, social acceptance study and environmental assessment of the proposed models in Year 2	Substantially completed
BB4 – Wool Processing Plant	Medium	Medium-intensity support focused on business model refinement, governance assessment and finalisation of project structuring activities.	Substantially completed
BB5 – EPACAT Protein Plant	None	No PDA activities carried out during Year 3 following the pause of the project.	Paused
BB6 – Plana de Vic Cooperative	None	No PDA activities carried out during Year 3, as most PDA activities had already been completed during previous implementation phases.	Substantially completed
BB7 – Compost Segrià	None	No PDA activities carried out during Year 3 following the suspension of the project support activities.	Suspended
BB8 – Insectius	Medium	Medium-intensity support focused on finalisation of preliminary regulatory and financing support activities.	Substantially completed
BB9 – Labin Products	Medium	Medium-intensity support focused on finalisation activities and preparation of project closure documentation.	Substantially completed
BB10 – Ecotros	Low	Limited exploratory support focused on preliminary technical, territorial and urban planning feasibility assessment.	Discontinued
BB11 – Crinatur Energy	Low	Preliminary review activities and exploratory assessment of project maturity and implementation feasibility.	Did not advance to full PDA support

2.3. PDA services delivered during Year 3

During the final year of implementation, the PDA services delivered through the BioBoost Accelerator focused primarily on consolidating the work carried out during previous implementation phases and supporting the most mature BioBoosters in progressing towards implementation-oriented stages.

Compared to earlier years, the support activities delivered during Year 3 became increasingly targeted and selective, concentrating mainly on:

- business planning refinement;
- investment readiness preparation;
- governance clarification;
- technical validation and feasibility refinement;
- regulatory and permitting support;
- and implementation-oriented assessment activities.

The intensity and typology of the PDA services delivered varied depending on the maturity level and operational evolution of each BioBooster. While some projects required extensive business and technical consolidation activities, others only received limited exploratory support or no additional PDA deployment during the reporting period.

The following summarise the main PDA services delivered to the active BioBoosters during Year 3.



BioBooster 3 –Ametller Origen Hub Mont-Roig

Project overview

Ametller Origen, company founded in 2001 specialized in the production and distribution of food products, is now promoting the development of the Hub Mont-Roig¹. This new agro-industrial hub will include more than 50 hectares of high-tech greenhouses and R&D facilities dedicated to sustainable food production, agricultural innovation and the optimisation of resource efficiency. The Hub Mont-Roig project aims to become a reference site for sustainable and circular agri-food production, integrating advanced greenhouse systems, renewable energy solutions, resource recovery strategies and innovation activities. In this context, the project also seeks to explore new opportunities for the valorisation of local bioresources and the integration of circular economy solutions within the agro-industrial model.

PDA support and activities during Year 3

During Year 3, PDA support focused on bioresource valorisation, social acceptance and environmental performance:

1. **Social Acceptance Study:** A social acceptance assessment was also conducted to better understand how the Hub Mont-Roig project is perceived by key local and regional stakeholders, including civil society organisations. This activity was designed as a preventive measure to identify potential concerns, expectations, and enabling factors that could influence the successful implementation of the hub. The approach draws on lessons learned from the company's other agro-industrial initiative (Agro-Parc), which has faced significant social opposition, representing one of its main barriers to progress.
2. **Biomass biochemical methane potential (BMP) analysis:** Progress was made in assessing the biogas generation potential of the biomass resources available at Ametller Origen, with the objective of validating the feasibility of biogas production. The analysis sought to quantify the methane potential of the company's own resources to refine the preliminary assessment conducted during Year 2 and account for the local bioresources valorisation potential. However, due to the seasonal availability of several key feedstocks, the study could not be completed, which in turn limited further development of the biogas business model.
3. **Preliminary LCA:** PDA support also included the development of a LCA approach to evaluate the environmental performance of the proposed model in Year 2. The LCA work aimed to provide a preliminary understanding of the potential environmental impacts associated with the Hub Mont-Roig activities and to identify opportunities for improvement in terms of resource efficiency, emissions reduction and circularity.

Main outcomes achieved during Year 3

- The development of the **Social Acceptance study** to assess how the Hub Mont-Roig project is perceived by local and regional stakeholders showcased:
 - The project is generally perceived favourably, mainly because of its agri-food nature, its potential contribution to innovation, employment creation and territorial development.

¹ Link to the news from Mont-Roig del Camp city hall: [Grup Ametller Origen proyecta un nuevo hub agroalimentario en Mont-roig del Camp con una inversión de 50M€, la mayor del sector hortícola catalán](#)

- The main concerns identified were related to water consumption and aquifer protection, landscape transformation, the scale of the greenhouse model, potential impacts on traditional agriculture, accumulation of large projects in the territory, and the need for clearer and more transparent information.
 - The study confirmed that the project's social legitimacy will depend on transparent communication, credible technical information, visible benefits for the territory, quality local employment, collaboration with the primary sector, and meaningful dialogue with local stakeholders.
 - As a result, the study provided practical recommendations for the next stages of the project, including strengthening direct communication with the territory, clearly explaining water use and environmental safeguards, differentiating the Hub from more conflictive industrial projects in the area, and making the project's local benefits more visible.
- **The preliminary environmental performance** of the additional circularity measures proposed for the Hub Mont-Roig showcased additional environmental benefits by valorising the Hub's own horticultural residues and complementary local biomass streams.
 - The baseline project already included the development of around 50 ha of high-tech greenhouses supported by a 7 MW photovoltaic installation, which is expected to reduce the carbon intensity of the Hub's electricity consumption and improve the environmental performance of the greenhouse production model.
 - Depending on the scenario, estimated biogas production ranges from 1.12 million Nm³/year to 2.16 million Nm³/year, corresponding to around 617,760 to 1,186,059 Nm³/year of methane and an expected energy potential of approximately 6,832 to 13,262 MWh/year. The AD process would also generate relevant material outputs, including around 4,272 to 23,977 t/year of solid fraction and 9,968 to 55,946 t/year of liquid fraction for potential nutrient recovery, digestate valorisation or ammonia stripping. In parallel, the pyrolysis scenario considers around 8,000 t/year of non-fermentable biomass input, including coconut fibre, own pruning residues, municipal green waste and other woody biomass. This would generate approximately 5,310 MWh/year of heat, 1,500 t/year of biochar and an estimated carbon removal potential of around 3,750 tCO₂e/year.
 - Building on this, the integration of anaerobic digestion and pyrolysis. Anaerobic digestion could provide additional environmental benefits by transforming fermentable residues into biogas for renewable energy generation while producing digestate with potential use as fertiliser or soil amendment. Pyrolysis could valorise non-fermentable woody biomass and other suitable residues into biochar, contributing to carbon sequestration, soil improvement and potential substitution of conventional soil amendment products. Therefore, compared with the greenhouse + photovoltaic baseline, the combined AD and pyrolysis model could further improve the Hub's circularity by reducing external waste management needs, increasing renewable energy self-sufficiency, supporting nutrient recycling, generating bio-based soil improvement products and adding carbon removal potential.
 - A dedicated LCA would nevertheless be required in future stages to quantify the net environmental gains of these additional systems and compare them against the baseline greenhouse and photovoltaic configuration.
- **Video produced and disseminated** through BioBoost's social media channels and Ametller Origen's media and stakeholder network, contributing to the communication and visibility of the BioBooster and its circular bioeconomy approach.

This biobooster aims to valorize the wool as a valuable and marketable product. For that purpose, Tagamanent Council has promoted the implementation of a wool processing plant which allows to clean the wool and process them as a carded wool batt for material applications or textile slivers ready for spinning. The wool that is so dirty is processed as a fertilizer to be applied directly to the soil as a natural amendment. This project has been supported by the Agència Catalana de Residus. The Tagamanent plant aligns closely with Catalonia's bioeconomy strategy: it gives value to an underused resource, prevents wool from becoming waste, stimulates new markets, reduces emissions through renewable energy, and revitalises economic activity in rural areas that have long suffered from the decline of the wool value chain. Its modular, flexible and territory-based model also makes it highly replicable in other municipalities.

PDA support and activities during Year 3

During Year 3, the PDA activities focused on the assessment of wool valorisation pathways through the development of both LCA and LCI analyses, considering the initial valorisation process scenario at the Tagamanent plant. In parallel, four potential commercial application cases were evaluated:

- Carpets (supported by literature review)
- Mattress filling materials ([Ecomatalasser](#) company)
- Bio-based insulation materials (supported by literature review)
- Yarn spinning for roving production ([Hiladuras Rubio](#) company)

Among this impact evaluation, wool mattress production exhibited the highest environmental impact, primarily due to the nature and quantity of materials used during the assembly stage, particularly the use of synthetic components such as polyurethane foams and latex. Specifically, the production process of the mattresses has elevated impacts on climate change (36.9 kg CO₂ eq), resource use – fossils (172 MJ), and eutrophication, both marine (192 kg N eq.) and terrestrial (13.4 mol N eq.). For all these impact categories, the primary contributors are cotton fabric as well as soy foam. In contrast, the bio-insulation manufacturing process demonstrated the lowest overall environmental burden, benefiting from its simpler material composition and lower energy requirements.

Across all product systems, the processes conducted at the wool process facility of Tagamanent—namely scouring, drying, and compression—consistently showed lower environmental impacts. This can be attributed to the facility's reliance on photovoltaic electricity, the use of a renewable water source (rainwater), and on anaerobic wastewater treatment, all of which help minimize key environmental pressures such as fossil resource depletion, water use, and climate change potential. Specifically, the use of photovoltaic panels for electricity generation led to a 55% reduction in climate change impact and an 83% decrease in fossil resource use. Conversely, using harvested rainwater had a positive effect on water use, whereas relying on tap water contributed to the depletion of water sources.

In addition, efforts continued towards the identification and engagement of potential stakeholders for the Ramats Hub Cat, with the aim of bringing together the widest possible range of actors across the wool value chain. In this regard, further work was carried out to analyze the advantages and limitations of an association-based governance model, which was identified as the most promising legal structure due to its ability to integrate both public and private stakeholders.

On the other hand, a mapping of the sheep farms located in Catalonia, particularly those closest to the town of Tagamanent, has been carried out in order to evaluate their distance from the current plant location and estimate the transportation costs associated with moving the wool to the processing center. Furthermore, this study has also made it possible to assess the feasibility of relocating some of the equipment to the sites where the wool is generated, instead of transporting the wool to Tagamanent.

Moreover, a preliminary business model was developed, including the evaluation of CAPEX and OPEX requirements, together with an initial assessment of the potential revenue streams associated with the final

products generated. The business model was delivered as a dynamic Excel-based tool designed to be continuously updated as the valorization process evolves, and new market products are identified.

Main outcomes achieved during Year 3

- LCA and LCI assessment of wool valorisation pathways based on the Tagamanent plant scenario.
- Evaluation of 4 potential commercial applications: carpets, mattress filling materials, bio-based insulation, and yarn spinning for roving production.
- Identification and engagement of key stakeholders across the wool value chain for the development of the Wool Hub.
- Assessment of an association-based governance model integrating public and private actors.
- Preliminary business model development, including CAPEX, OPEX, and potential revenue stream evaluation.
- Mapped sheep farms in Catalonia near Tagamanent to assess wool transport logistics, associated costs, and the feasibility of relocating processing equipment closer to wool production sites.
- Participation in the [Wool Plant Inauguration in Tagamanent](#), including an [Open Day with key stakeholders](#) identified across the wool value chain.
- Facilitation and participation in a participatory workshop to define wool collection systems for the Tagamanent processing plant.
- Video produced and disseminated through BioBoost's social media channels and the Tagamanent stakeholder network.

INSECTIUS BioBooster 8 – Insectius

Project overview

[Insectius](#) is a startup specializing in the optimization of insect farming through advanced biotechnology and modular farm systems. The company breeds Black Soldier Fly larvae using organic waste as feed, transforming it into high-value outputs such as insect meal, dehydrated larvae, and organic fertilizer. Operating under a B2B model, Insectius targets businesses in the food and agriculture industries seeking sustainable and alternative protein sources for livestock, poultry, and aquaculture. Its technological platform provides real-time performance data, ensuring an efficient and scalable production process. The project promotes a circular economy model, contributing to the reduction of environmental footprint across the agricultural and livestock sectors.

PDA support and activities during Year 3

During Year 3, the PDA activities focused primarily on legal services. A preliminary analysis of the regulatory framework applicable to BSF larvae was conducted, including the identification of certain restrictions in the labelling and marketing requirements of its products, as well as in relation to the permitted denomination of the organic fertilizer derived from the insect farming process.

Additionally, in order to support the scalability of the project, which includes plans to scale the existing plant in Vilafranca, open a new facility in Ávila, and increase current production by 30%, the contact and establishment of a relationship with a potential reference investor in the field of venture capital and sustainability was facilitated.

Main outcomes achieved during Year 3

- Preliminary mapping and analysis of the regulatory framework applicable to Insectius's activity and identification of the key labelling requirements and legal restrictions applicable to the products derived from the insect farming process.
- Facilitation of contact with a potential investor in the field of venture capital and sustainability.



BioBooster 9 – Labin Products

Project overview

The [Labin Products](#) project focused on the valorisation of animal by-products through hydrolysis processes to obtain high-value bio-based products, including peptides, amino acids and other secondary fractions with potential applications in sectors such as agriculture, cosmetics and industrial bio-based products.

During the BioBoost support period, the project evolved from an initially planned pilot-scale concept towards the direct implementation of an industrial plant, driven by technological progress and emerging market opportunities. At the end of the reporting period, the industrial facility was in an advanced installation and commissioning phase.

PDA support and activities during Year 3

During Year 3, PDA activities focused on supporting the project's industrial deployment and strategic market positioning. Support activities included:

- assessment of new business opportunities beyond agricultural biostimulants, particularly in the food, nutrition and cosmetics sectors;
- support related to the industrial scale-up strategy and positioning of the future industrial facility within the circular bioeconomy market;
- continued support on regulatory considerations linked to the valorisation of Category 3 animal by-products (SANDACH);
- follow-up activities linked to territorial integration and identification of complementary valorisation opportunities within the circular bioeconomy ecosystem.

Additional support related to odour emissions mitigation was planned during the final stage of the Accelerator. However, further assessment could not be completed during the reporting period, as it depended on the availability of the company's internal emissions analysis results.

Main outcomes achieved during Year 3

- Transition from pilot-scale concept towards direct industrial implementation.
- Industrial plant in advanced assembly and installation phase.
- Identification of potential market opportunities beyond agricultural applications, particularly in food, nutrition and cosmetics.
- Consolidation of the project's industrial positioning within the circular bioeconomy sector.
- Strengthening of the project's territorial ecosystem and valorisation network.
- Substantial completion of PDA support activities.



BioBooster 10 – Ecotros

Project overview

[Ecotros](#) aimed to scale up its artisanal biochar production through the installation of a small-scale pyrolysis plant using local forest, agricultural and urban woody biomass from the surrounding area. The project sought to produce high value-added biochar while contributing to local biomass valorisation and fire-risk reduction.

PDA support and activities during Year 3

Bioboost support focused mainly on assessing the legal and urban planning feasibility of the proposed location for the biochar plant. Roca Junyent, together with Inveniam, carried out a preliminary regulatory analysis to

determine whether the selected land was compatible with the installation of a removable pyrolysis plant, considering permitted land uses, technical plot requirements and potential limitations linked to smoke emissions. In parallel, INV and SYM initiated preliminary discussions on the management of local forest, agricultural and urban woody biomass, including the identification of potential logistics actors such as municipalities, farmers, ACA and forest cleaning companies, as well as possible subsidies linked to forest management and riverbed cleaning. However, these activities were stopped once the lack of a viable project location became a blocking issue.

Main outcomes achieved during Year 3

- A preliminary legal and urban planning feasibility assessment of the proposed project location was completed.
- Several potential locations within the municipality were analysed, but none were found to be compatible with the planned activity.
- Initial stakeholder and biomass management discussions were launched but could not be further developed due to the absence of a viable site.
- The project was ultimately discontinued because of the complexity of the permitting process and the difficulty of identifying an alternative suitable location.



BioBooster 11 – Crinatur Energy

Project overview

[Crinatur Energy](#) proposed an integrated circular bioeconomy project in La Baronia de Rialb to manage livestock waste and residual forest biomass through anaerobic digestion and fluidised-bed gasification. The project aimed to produce renewable energy, biofertilisers and regenerated water while reducing wildfire risk, nitrate pollution and greenhouse gas emissions.

PDA support and activities during Year 3

Initially, the project seemed to require support in governance definition, Engineering, Procurement and Construction (EPC) and SPV structuring, technology integration, investment structuring, and the development of detailed technical and business model figures. Nonetheless, after several meetings and around two months of review, it became clear that the project was still at a very early stage. Key aspects remained undefined, including the detailed plant configuration, the integration of the proposed technologies, technical assumptions, financial figures and business model foundations. As a result, no PDA technical, business, financial, legal or administrative services were ultimately provided.

Main outcomes achieved during Year 3

- Several meetings were held with the promoters to better understand the project's maturity, technical concept and support needs, which led to the identification of a significant maturity gap, particularly regarding technical definition, financial assumptions and business model development.
- Crinatur was ultimately rejected as a BioBooster candidate due to its low TRL and early-stage development status.

Additional information on the supported BioBooster projects is available through the public factsheets prepared for each project. These factsheets provide an overview of the project, the support received through the BioBoost Accelerator and the main outcomes achieved. Detailed final project reports were also prepared and shared individually with the respective project promoters; however, these reports are not

included in this deliverable due to confidentiality and commercial sensitivity considerations. As a result, some technical, financial and strategic information generated during the PDA process is not publicly available.

3. Three Years of Accelerator Implementation

3.1. Evolution of the Accelerator Portfolio

Over the three years of implementation, the BioBoost Accelerator supported a diverse portfolio of circular bioeconomy initiatives covering different sectors, biomass streams, technologies and territorial contexts across Catalonia. The supported projects reflected the multidisciplinary and systemic nature of the bioeconomy sector, combining industrial innovation, circular resource valorisation, territorial integration and the development of new bio-based business models.

The BioBooster portfolio included initiatives linked to biogas production, agro-industrial by-product valorisation, composting, protein and insect-based solutions, wool processing and other bio-based industrial applications. The projects also presented heterogeneous maturity levels, ranging from exploratory initiatives and early-stage concepts to projects already progressing towards implementation and investment preparation phases.

The BioBoost portfolio reflected the diversity, heterogeneity and evolving maturity levels characteristic of real circular bioeconomy ecosystems.

Throughout the implementation period, the evolution of the portfolio varied considerably across the different BioBoosters. While several initiatives substantially advanced their technical, business and operational preparation during the Accelerator process, others experienced pauses, limited progression or discontinuation during the implementation period.

In total, the Accelerator engaged with 11 BioBooster initiatives during the project lifetime, although not all projects evolved towards the same level of PDA intensity or implementation maturity. Out of the 20 projects evaluated by the consortium:

- 8 projects completed or substantially completed the PDA process;
- 3 projects were initially accepted as BioBoosters but later suspended during the implementation process;
- 1 initiative remained at preliminary exploratory stage and did not advance to full PDA deployment;
- and 8 projects were not selected for PDA support.

Table 2 summarises the evolution and final status of the initiatives evaluated within the BioBoost Accelerator.

Table 2. Overall evolution and status of BioBoosters throughout the Accelerator

Project	Evaluation outcome	Final status within the Accelerator
Coopirenaica	Accepted as BioBooster 1	Finally suspended
Alcarràs Bioproductors SAT	Accepted as BioBooster 2	PDA support substantially completed
Timberlab	Rejected	Not selected for PDA support
Ametller Origen	Accepted as BioBooster 3	PDA support substantially completed
Alere Circular	Rejected	Not selected for PDA support
Wool Processing Plant	Accepted as BioBooster 5	PDA support substantially completed

Project	Evaluation outcome	Final status within the Accelerator
EPACAT – Protein Plant	Accepted as BioBooster 4	PDA support substantially completed but not finalised. Project paused/suspended
Segrià Compost SA	Accepted as BioBooster 7	Finally suspended
Plana de Vic Cooperative	Accepted as BioBooster 6	PDA support substantially completed
Inoït SL	Rejected	Not selected for PDA support
Napros SL	Rejected	Not selected for PDA support
Labin Products SL	Accepted as BioBooster 9	PDA support substantially completed
Insectius	Accepted as BioBooster 8	PDA support substantially completed
Archroma Iberica SL	Rejected	Not selected for PDA support
Penedès-Garraf Mancommunity	Rejected	Not selected for PDA support
Envall Cooperative	Rejected	Not selected for PDA support
Ecotros	Accepted as BioBooster 10	PDA support completed with limited continuation potential
Chlydro	Deferred to later stages	Not onboarded during project lifetime
Crinatur Energy	Accepted as BioBooster 11	Finally suspended following preliminary assessment
Fungi Farmers	Rejected	Not selected for PDA support

3.2. Evolution of the Accelerator Methodology and PDA Approach

Throughout the implementation period, the BioBoost Accelerator progressively evolved from an initially structured support scheme into a more adaptive Project Development Assistance (PDA) framework capable of responding to the heterogeneous maturity levels and implementation needs observed across the BioBooster portfolio.

The implementation experience progressively reshaped the Accelerator methodology around real project development needs.

The methodology combined project evaluation procedures, Project Development Plans (PDPs), continuous monitoring activities and tailored PDA deployment processes designed to accompany BioBoosters throughout different development and implementation stages.

Throughout the implementation period, the consortium delivered more than 60 PDA services across the BioBooster portfolio, covering technical, business, legal, financial and facilitation-oriented support activities. In order to structure the support provided, the Accelerator organised PDA services into four complementary intervention categories addressing different dimensions of circular bioeconomy project development.

Table 3 summarises the different PDA services delivered throughout the Accelerator under each support category.

Table 3. Overview of PDA services delivered throughout the Accelerator

PDA category	PDA services delivered
Facilitation & ecosystem mapping	Stakeholder coordination; territorial ecosystem mapping; biomass availability mapping; value chain analysis; collaboration opportunity identification; public-private coordination; ecosystem facilitation; territorial integration support; market access exploration; stakeholder engagement processes; support for social acceptance; creation of collaboration hubs; identification of synergies with regional initiatives; feedstock sourcing coordination; industrial symbiosis exploration.
Technical services	Technical feasibility assessments; BMP analysis; biomass characterisation; technology screening; process optimisation; industrial scale-up assessment; infrastructure needs analysis; technology integration support; process efficiency evaluation; biomass logistics assessment; sub-product valorisation pathways; energy system sizing; water and energy consumption optimisation; feedstock availability assessment; pre-industrial scaling analysis.
Business & financial services	Business plan development; CAPEX/OPEX estimation; investment readiness assessment; financing strategy development; investor engagement support; market analysis; market access assessment; governance model development; revenue diversification strategies; business model refinement; funding opportunity identification; risk analysis; economic viability assessment; support for blended finance approaches; value-chain business structuring.
Legal & administrative services	Regulatory analysis; permitting support; environmental licensing guidance; urban planning assessment; legal feasibility review; governance framework clarification; land availability assessment; support on administrative procedures; legal advisory on shared facilities; regulatory roadmap development; support regarding by-products and waste regulation; review of commercialisation restrictions; regulatory risk identification.

The relative importance of these services varied significantly depending on project maturity, implementation barriers and operational priorities.

Table 4 summarises the relative relevance of the different PDA categories across the supported initiatives.

Table 4. Relative importance of PDA service categories across the BioBooster portfolio

	Facilitation / Mapping	Technical	Administration and legal	Business and financing
BioBooster 1	High	Medium	Low	High
BioBooster 2	High	Medium	High	High
BioBooster 3	Medium	High	Low	High
BioBooster 4	High	Low	Medium	High
BioBooster 5	Low	Low	High	High
BioBooster 6	Medium	High	Medium	Low
BioBooster 7	N/A	N/A	N/A	N/A
BioBooster 8	Low	Low	High	Low
BioBooster 9	High	Low	Low	Low
BioBooster 10	High	Medium	High	High
BioBooster 11	Medium	Low	Low	Medium

The implementation experience progressively highlighted the strategic importance of non-technological PDA services across the portfolio. While technical validation remained important, many projects ultimately required stronger support related to business planning, financing strategies, stakeholder coordination, permitting procedures and territorial facilitation.

In practice, business and financing services, together with facilitation and ecosystem mapping activities, became some of the most recurrent and strategically relevant support areas throughout the implementation process. This operational evolution progressively transformed the Accelerator into a more integrated and multidisciplinary framework capable of addressing the systemic nature of circular bioeconomy projects.

Business and financing services, together with facilitation and ecosystem mapping activities, emerged as some of the most strategically relevant support areas across the BioBoost portfolio.

3.3. BioBooster Archetypes, Common Barriers and Project Patterns

3.3.1. Emergence of recurring project archetypes

Although the BioBooster portfolio included highly diverse initiatives in terms of technologies, biomass streams, territorial contexts and business models, the implementation process progressively revealed several recurring project typologies sharing similar implementation dynamics and support needs.

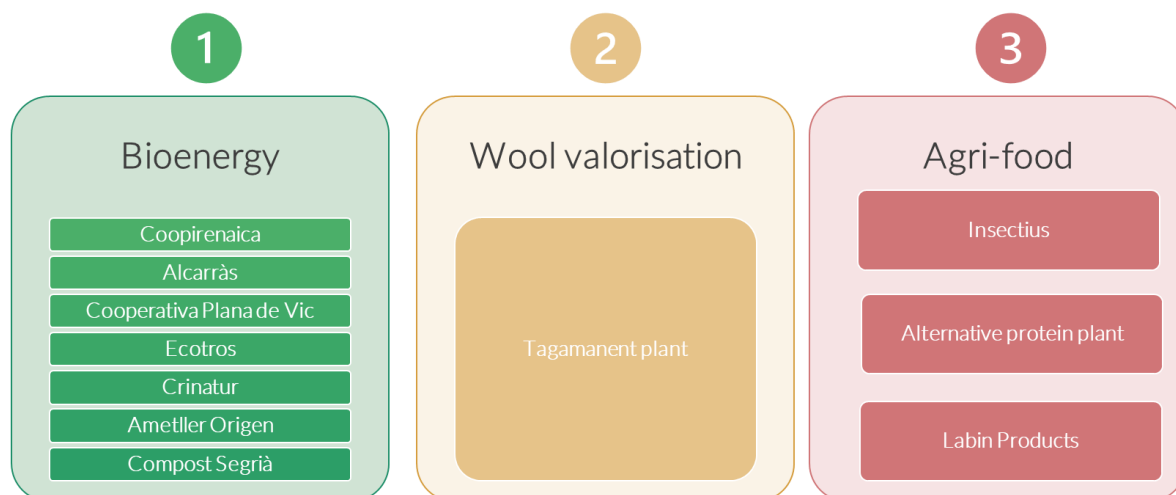
Based on the operational experience accumulated throughout the Accelerator, three main BioBooster archetypes emerged within the portfolio:

- bioenergy and territorial resource valorisation projects;
- territorial circular economy and ecosystem-building initiatives;
- agri-food and biotech innovation projects.

Figure 1. BioBoosters selected, supported and analysed throughout the BioBoost project.

The Bioboosters

11 Bioboosters, 3 typologies



These project typologies differed in terms of scale, implementation logic, governance requirements, investment intensity and operational maturity. At the same time, the identification of these recurring archetypes became particularly valuable for refining the Accelerator methodology and understanding how different bioeconomy initiatives require different combinations of PDA services throughout their development process.

Table 5. Bioenergy and territorial resource valorisation projects: recurrent characteristics, barriers and PDA support needs

Dimension	Description
Archetype	Bioenergy and territorial resource valorisation projects
Representative BioBoosters	Coopirenaica, Alcarràs, Plana de Vic, Ecotros, Ametller Origen, Crinatur, Compost Segrià
Core project logic	Territorial valorisation of agricultural, livestock and forestry biomass streams through anaerobic digestion, bioenergy production and circular resource management approaches
Common implementation characteristics	Infrastructure-intensive projects; high CAPEX requirements; strong dependence on biomass availability and logistics; territorially embedded implementation models linked to agricultural and livestock ecosystems
Most recurrent barriers	Complex permitting and administrative procedures; uncertainty regarding financing structures; dependence on stable biomass supply; environmental and urban planning constraints; market uncertainty for bio-based products; social acceptance challenges
Most recurrent facilitation & ecosystem mapping services	Mapping of local available biomass resources; market access support for bio-based products; strategies for digestate valorisation; collaboration opportunities with regional projects; gas expansion and shared grid options

Dimension	Description
Most recurrent technical services	Technology integration and optimisation; biomass availability analysis; sub-product valorisation pathways; energy system sizing and efficiency
Most recurrent business & financing services	High CAPEX and financing planning; economic viability assessment of bio-based by-products; creation of new value chains; revenue diversification strategies; market access assessment for new bio-based products
Most recurrent legal & administrative services	Permitting acceleration; regulatory overview and guidance; environmental and urban planning assessment; land availability and site evaluation; administrative and licensing procedures

Table 6. Territorial circular economy and ecosystem-building initiatives: recurrent characteristics, barriers and PDA support needs

Dimension	Description
Archetype	Territorial circular economy and ecosystem-building initiatives
Representative BioBoosters	Wool Processing Plant (Tagamanent wool valorisation initiative)
Core project logic	Creation of territorially embedded circular value chains through ecosystem-building, local stakeholder coordination and valorisation of underused regional resources
Common implementation characteristics	Strong dependence on stakeholder coordination; fragmented and weakly structured value chains; high territorial component; ecosystem-building dynamics; public-private collaboration needs
Most recurrent barriers	Lack of stable valorisation markets; fragmented governance structures; limited regulatory references for innovative circular initiatives; administrative complexity; coordination difficulties across the value chain; limited operational references
Most recurrent facilitation & ecosystem mapping services	Multi-stakeholder collaboration building; coordination across the wool value chain; ecosystem awareness activities; public-private partnership structuring; creation of regional collaboration hubs
Most recurrent technical services	Wool washing and processing optimisation; water and energy consumption management; operational efficiency improvements
Most recurrent business & financing services	Definition of stable and profitable wool markets; viable business model development; public-private governance alignment
Most recurrent legal & administrative services	Identification of regulatory references for valorisation activities; governance model clarification; administrative coordination between stakeholders; permitting for industrial and municipal facilities

Table 7. Agri-food and biotech innovation projects: recurrent characteristics, barriers and PDA support needs

Dimension	Description
Archetype	Agri-food and biotech innovation projects
Representative BioBoosters	Insectius, EPACAT Protein Plant, Labin Products
Core project logic	Development of innovative bio-based products and advanced valorisation pathways through industrial biotechnology, circular processing systems and emerging bio-based markets

Dimension	Description
Common implementation characteristics	Innovation-driven projects; strong dependence on industrial validation and scale-up; emerging or weakly consolidated markets; high uncertainty regarding industrial deployment and commercial uptake
Most recurrent barriers	Uncertainty linked to industrial-scale validation and production capacity; limited coordination between public administrations and companies; difficulties identifying stable market demand; unclear regulatory frameworks for circular products; high CAPEX requirements and limited private investment availability
Most recurrent facilitation & ecosystem mapping services	Identification of opportunities to connect with regional innovation ecosystems; territorial and social integration activities; trend analysis and partner identification; coordination between industrial actors and public administrations
Most recurrent technical services	Industrial scale-up assessment; validation of raw material supply; multi-purpose facility adaptation; optimisation of processing infrastructure; identification of specialised industrial needs
Most recurrent business & financing services	Demonstration of market demand; uncertainty assessment regarding long-term business models; definition of product diversification strategies; identification of investment opportunities; CAPEX planning and financing strategies
Most recurrent legal & administrative services	Clarification of regulatory frameworks for circular products; legal assessment regarding governance and IP structures; support regarding commercialisation restrictions and labelling requirements; regulatory uncertainty assessment for investors

3.3.2. Cross-cutting barriers and operational patterns

Despite the diversity of technologies, sectors and implementation models represented across the BioBooster portfolio, several recurring operational patterns progressively emerged throughout the Accelerator implementation process.

The identification of recurring BioBooster archetypes helped refine the Accelerator methodology and progressively adapt PDA services to different implementation dynamics, operational challenges and project maturity levels observed across the portfolio. The implementation experience also confirmed that many circular bioeconomy projects evolve through iterative and non-linear development processes requiring continuous adaptation of technical, business, regulatory and coordination support activities over time.

Overall, the implementation experience revealed that highly diverse bioeconomy projects often share similar structural and non-technological barriers independently of the technologies involved.

Different bioeconomy projects frequently required similar combinations of PDA services despite their technological and organisational diversity.

A more detailed analysis of the operational barriers, implementation challenges and lessons identified throughout the Accelerator process is provided in **Deliverable D5.6. “Lessons learnt and Best Practices”**.

3.4. Investment Readiness and Financing Perspectives

Throughout the implementation of the Accelerator, investment readiness progressively became one of the main cross-cutting dimensions addressed through the PDA services delivered to the BioBoosters. Beyond technical feasibility, several projects required additional support related to business planning, financing strategies, market positioning and implementation structuring to strengthen their deployment potential and financing perspectives.

Depending on the maturity level and characteristics of each initiative, the Accelerator supported BioBoosters through activities such as financial modelling, business model definition and refinement, identification of funding opportunities, preparation of investment-oriented documentation and interaction with financing stakeholders.

The financing trajectories observed across the portfolio varied considerably depending on project scale, maturity and implementation status. The approaches explored combined different financing instruments, including public grants, cooperative financing schemes, private investment opportunities, blended finance approaches and regional support mechanisms.

The financing approaches explored across the portfolio combined different instruments depending on the typology and maturity of the projects, including public grants, cooperative financing schemes, private investment opportunities, blended financing approaches and regional support mechanisms. Infrastructure-intensive projects linked to bioenergy and industrial valorisation generally required substantial CAPEX investments and longer implementation timelines, while ecosystem-building initiatives and innovation-driven projects often followed more progressive scaling and validation strategies.

At the end of the project implementation period, several BioBoosters had already secured or mobilised relevant financing resources for implementation or next-stage development activities, while others continued progressing towards future investment and deployment phases. The Accelerator support contributed to improving project maturity, clarifying financing needs and strengthening implementation credibility across multiple initiatives.

Table 8 summarises the financing status and investment perspectives identified across the BioBooster portfolio at the end of the Accelerator implementation period at the end of the project implementation period.

Table 8. Investment mobilisation and financing outlook across the BioBooster portfolio

	Description of the current investment situation	Detailed inversion components	Estimated total investment potential	Investment activated during BioBoost	Main financing typology	Estimated implementation likelihood
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BioBooster 2 – Alcanarès Bioproductors	The full investment process is structured into 5 phases. Phase 1 (biogas energy production), Phase 2 (composting plant expansion) and Phase 3 (biomethane production) are 100% executed. Phase 4 (virtual pipeline) is 60% executed, expected completion by Dec 2025. Phase 5 (physical pipeline) has started procedures and is pending permits.	Phase 1: Biogas plant (70,000 tonnes): €3.5M - €500kM equity - €1.8M bank loan - €400k IDEA grant (energy community grant) - €800k Generalitat (public admin) Biogas grant Phase 2: Composting plant expansion (35,000 → 56,000 t): €645k - €321k bank loan - €321k NextGen grant Phase 3: Biomethane expansion (70,000 → 126,000 t): 1.5M€ - €300k equity - €200k bank loan - €1M Generalitat Biogas grant Phase 4: Virtual pipeline: €2M - €2M bank loan Phase 5: Physical pipeline: €2.8M (initiated, pending permits) - €2.8M bank loan	€10.45M	€7.64M (Phases 1-4)	- €800k equity - €5.12M bank loans - €400k IDEA grant - €1.8M public grants - €321k NextGen grant	Phase 5: High pending permits All others: Executed
BioBooster 3 – Ametller Origen	The potential of investment has been estimated by the BioBoost consortium during the planning phase. Detailed planning and design are underway before moving to the implementation stage.	The investment includes various components: €2.5M for advanced digesters, designed for efficient breakdown of organic matter and biogas production; €3.5M for mini cryo-upgrading, enhancing biogas processing efficiency through cryogenic separation; €1M for cryogenics tanks, essential for storing and maintaining low temperatures; €2.7M for a pyrolysis plant, converting biomass into biochar and syngas; The investment associated to the units for the wool valorisation including washing and processing of the clean wool is around €500k.	~€9.7M	€0	Equity, Grant (not defined yet)	Likely, as Ametller Origen is a company with proven experience and has proven high interest on the proposed models. Investments will come once project is more mature.
BioBooster 4 – Wool processing plant	The investment for the wool processing plant promoted by Tagamanent's Council is €500k. Additional €300k of investment are estimated for the auxiliary equipment.	Auxiliary equipment for the proper operation of the plan and complementary infrastructure is estimated in €300k. The total investment could reach up to €800k.	€800k	€800k	Grant: €500k (ARC funding) + €300k (local/national public funding).	Likely
BioBooster 6 – Plana de Vic Cooperative	The investment for CPV has been allocated for the enhancement of biogas production facilities. The project is in the planning phase. Detailed planning and design are underway before moving to the implementation stage.	This includes the complete biogas plant with 4 digesters plus 2 more co-digesters, a deodorization system for remove gas emissions and a solid/liquid separation unit and valorisation of both sub-products	~€25M	0€	Cooperative (49%) and equity (51%) – tbc	Probably likely, the most critical factor influencing the investment is the location where the plant will be established.

BioBooster 8 - Insectius	According to the information provided the estimated inversion taking into the account the stage of the project is €1-5M.	The estimated inversion includes the business model of optimizing insect farming through advanced technologies and a circular production model with a positive environmental impact	~€1-5M: €1M venture debt (with 25% eligible counted as equity), €1M commitment from a lead investor, and €1M from an impact fund. The remaining €2M tbc.	The company is currently in discussions with a confidential venture debt investor to sign a term sheet for the €1M venture debt component.	Equity (100%)	Likely, pending private investors meetings
BioBooster 9 – Labin Products	Initially conceived as a pilot plant, the project evolved towards the direct implementation of an industrial-scale plant due to the project's development and identified market needs. The plant is in a rented industrial facility selected to facilitate start-up and industrial scale-up. The project is currently in the final assembly and installation phase, including adaptation of production areas and installation of operational equipment.	Equipment: €450k Installations: €360k R&D: €30k Engineering, permits and licences: €80k	Approx. €920k	Approx. €920k already activated through implementation phase	Combination of own funds and public subsidies	High – the project is already in an advanced execution phase and close to operational start-up
BioBooster 10 - Ecotros	Investment estimates are preliminary and depend on private funding for the pyrolyzer and public subsidies to support biomass collection logistics, as the biomass will come primarily from forests (public land).	The investment required includes several components: €2.5M pyrolyzer; €800k logistics and forestry biomass collection (and approximately €1M/year in OPEX)	€3-5M	€0 (as it was discontinued)	Equity (100%)	Unlikely, there is still some uncertainty as the BioBooster project might not proceed as planned

Overall, the BioBooster portfolio represented an estimated total investment potential exceeding €50 million across the different projects supported by the Accelerator. By the end of the project implementation period, approximately €10 million had already been activated or secured through a combination of public funding, private investment, cooperative financing schemes and other financing mechanisms. While a significant share of the identified investment potential remains linked to future deployment phases and long-term infrastructure developments, these figures demonstrate the capacity of the Accelerator to contribute to project maturation, facilitate access to financing opportunities and support the mobilisation of investments within the Catalan circular bioeconomy ecosystem.

The implementation experience confirmed that investment readiness in circular bioeconomy projects depends on multiple interconnected dimensions extending beyond technological maturity alone. Across the BioBooster portfolio, factors such as financing structure, permitting feasibility, market maturity and operational scalability frequently influenced project bankability and investment perspectives.

Overall, the Accelerator reinforced the importance of progressive de-risking approaches capable of reducing technical, operational and financing uncertainties throughout project development.

Most circular bioeconomy projects require progressive de-risking and phased financing approaches before reaching implementation-ready investment conditions.

A more detailed analysis of the de-risking mechanisms and investment readiness approaches explored throughout the BioBoost project is provided in the **report on de-risking mechanisms and investment readiness strategies**.

3.5. Replication Potential and Future Development of the BioBoost Accelerator Model

3.5.1. Why bioeconomy projects require a specific acceleration approach

The implementation of BioBoost demonstrated that bioeconomy projects require a significantly different acceleration approach compared to conventional innovation or start-up support programmes. While traditional accelerators often focus primarily on business mentoring, fundraising or technological validation, bioeconomy projects are usually characterised by high territorial dependence, complex stakeholder ecosystems, regulatory uncertainty, long implementation timelines and significant infrastructure and capital requirements.

Most of the projects supported through BioBoost depended on local biomass availability, territorial synergies, industrial integration and cooperation between multiple actors, including farmers, industries, technology providers, municipalities, public administrations and investors. In many cases, the main barriers identified were not exclusively technological, but rather related to governance complexity, administrative procedures, stakeholder coordination, market structuring or investment readiness.

The BioBoost experience confirmed that bioeconomy projects cannot be accelerated solely through business-oriented support mechanisms. Instead, they require integrated Project Development Assistance (PDA) frameworks capable of simultaneously addressing technical, legal, financial, territorial and governance dimensions.

In addition, the implementation process highlighted that bioeconomy projects are often slower, less linear and more territorially embedded than conventional innovation projects. Several initiatives entering the Accelerator were still in early structuring phases and required substantial support before becoming suitable for investment discussions. Consequently, acceleration activities frequently focused first on consolidating governance models, clarifying value propositions, validating resource availability, identifying stakeholders or assessing regulatory feasibility before financial structuring activities could be effectively developed.

Bioeconomy projects require strong coordination between multiple stakeholders, the development of new governance models, innovative financing schemes adapted to long-term and systemic projects, regulatory innovation frameworks capable of facilitating

circular and bio-based solutions, and stronger public-private partnership models capable of aligning territorial interests and investment priorities.

3.5.2. Key components of the BioBoost acceleration model

The BioBoost Accelerator progressively evolved towards a multidisciplinary and ecosystem-oriented support model capable of addressing the systemic nature of bioeconomy projects.

One of the key components of the model was the integration of different Project Development Assistance (PDA) services within a coordinated framework. This included technical support, legal and administrative advisory, business development, financing support, territorial resource mapping, impact assessment and facilitation activities. The combination of these services proved essential to address the interconnected barriers faced by bioeconomy initiatives.

Another defining element was the territorial and ecosystem approach adopted throughout the project. BioBoost demonstrated that understanding territorial resource flows, identifying synergies and analysing surrounding industrial ecosystems are critical for strengthening project viability and maximizing systemic impact. In several projects, territorial analysis revealed complementary opportunities and value chains that had not initially been identified by project promoters.

Facilitation and stakeholder coordination also emerged as central components of the acceleration model. The implementation of bioeconomy projects frequently required aligning actors with different interests, capacities and decision-making processes. In this context, the role of the Accelerator extended beyond technical advisory functions, increasingly acting as a facilitator capable of building trust, coordinating stakeholders and supporting collective decision-making processes.

Finally, the implementation of BioBoost confirmed the importance of adaptive and flexible acceleration methodologies. The PDA services and support mechanisms were progressively refined according to project maturity, identified barriers and evolving project needs, allowing the Accelerator to respond to the diversity and complexity of the supported initiatives.

3.5.3. Main lessons learned from the implementation of the Accelerator

Several important lessons emerged during the implementation of the BioBoost Accelerator.

First, **governance and coordination barriers** were frequently more critical than technological barriers. Many projects already had technically viable solutions but lacked clear governance structures, stakeholder alignment or implementation roadmaps capable of ensuring long-term viability.

Second, **territorial resource mapping and ecosystem analysis** significantly strengthened project robustness and diversification potential. The identification of surrounding resource flows, complementary industries and possible synergies often generated new business opportunities and improved project resilience.

Third, bioeconomy projects require **long-term accompaniment and continuous facilitation**. Their development processes are often complex and iterative, requiring adjustments in governance, technical design, business models or stakeholder engagement strategies over time.

Another key lesson concerns regulatory and administrative barriers. Legal uncertainty, permitting complexity, urban planning constraints and fragmented administrative procedures were repeatedly

identified as major bottlenecks for project implementation. This reinforced the **importance of integrating legal and administrative advisory services** within the acceleration framework.

The BioBoost experience also highlighted the **importance of communication, social acceptance and stakeholder engagement**. Several projects required early involvement of local actors and clearer communication regarding territorial benefits, environmental impacts and value creation opportunities.

Finally, the implementation of the Accelerator revealed the **importance of project promoter commitment and internal capacities**. In some cases, the effectiveness of the PDA services depended not only on the quality of the support provided, but also on the capacity of project promoters to dedicate sufficient time, resources and decision-making capabilities to the acceleration process.

A more detailed analysis of the operational barriers, implementation challenges and lessons identified throughout the Accelerator process is provided in *Deliverable D5.6. "Lessons learnt and Best Practices"*.

3.5.4. Areas for improvement and future evolution

The implementation of BioBoost also allowed the consortium to identify several areas for improvement and future evolution of bioeconomy acceleration frameworks.

One of the main priorities concerns **strengthening project pre-selection and readiness assessment processes**. The experience demonstrated that many projects entering the Accelerator were still at early structuring stages, frequently lacking consolidated governance structures, implementation roadmaps or sufficient internal capacities.

Another important lesson concerns the need to further **improve the integration and coordination of PDA services**. Although the multidisciplinary approach implemented by BioBoost proved highly valuable, future acceleration frameworks could reinforce coordination mechanisms between technical, legal, financial and facilitation activities in order to provide more integrated and agile support processes.

The BioBoost experience also highlighted the importance of **increasing the commitment, accountability and active involvement of project promoters** throughout the acceleration process. In parallel, future acceleration models should reinforce capacity-building activities within supported projects, particularly in areas such as governance, stakeholder management, financing strategies and systemic project planning.

Another key area for future evolution concerns **regulatory support and administrative facilitation**. Regulatory complexity and administrative fragmentation were repeatedly identified as major barriers for project implementation. Future acceleration frameworks could therefore benefit from stronger collaboration with public administrations, one-stop-shop support mechanisms and more flexible regulatory innovation frameworks adapted to circular bioeconomy projects.

The implementation of BioBoost also demonstrated the need to **adapt investment-readiness methodologies** to the specific characteristics of bioeconomy projects. Future acceleration models should integrate broader territorial, environmental and systemic impact dimensions alongside conventional financial indicators and promote financing schemes adapted to long-term bioeconomy investments.

Finally, future acceleration frameworks could significantly benefit from **increasing the use of digital tools**, territorial intelligence systems and resource mapping methodologies to support ecosystem analysis, opportunity identification and strategic decision-making processes.

3.5.5. Replication potential in other European regions and future development

The BioBoost experience demonstrated a strong replication potential for integrated bioeconomy acceleration frameworks in other European regions.

The methodology developed throughout the project can be adapted to different territorial contexts and bioeconomy specialisations, particularly in regions aiming to promote circular bio-based industries, industrial symbiosis ecosystems, bioenergy clusters, rural bioeconomy initiatives or territorial circular economy strategies. The experience gained through BioBoost confirmed that accelerating bioeconomy deployment requires moving beyond conventional incubation models towards integrated, place-based and systemic support frameworks capable of simultaneously addressing technical, financial, regulatory, governance and territorial dimensions.

However, the replication of this type of acceleration framework requires several enabling conditions, including local facilitation capacities, multidisciplinary expertise, territorial mapping capabilities, stakeholder coordination mechanisms and strong collaboration between public administrations, industries, research organisations and financial actors. The implementation of BioBoost also highlighted the importance of maintaining flexible and adaptive support structures capable of responding to the evolving needs and maturity levels of bioeconomy projects.

Beyond the direct implementation results, the BioBoost experience also generated increasing institutional and strategic interest regarding the future continuity and evolution of the Accelerator model beyond the project lifetime. In particular, the implementation experience and final project outcomes aligned strongly with several priorities of the Catalan Bioeconomy Strategy, especially concerning bioeconomy deployment, biomass valorisation, investment mobilisation and the creation of implementation-oriented support structures capable of accelerating real project development.

In this context, the final stages of the project included exploratory discussions with representatives of the Catalan public administration regarding potential future frameworks capable of ensuring the continuity, adaptation and scaling-up of the Accelerator model after the end of the Horizon Europe funding period. These discussions further confirmed the perceived value of integrated and territorial bioeconomy acceleration mechanisms as strategic tools for supporting regional circular bioeconomy deployment.

The strong alignment between the BioBoost Accelerator and the Bioeconomy Strategy of Catalonia generated growing institutional interest in exploring the long-term continuity of the Accelerator model beyond the project duration.

Several of these future perspectives, including potential operational models, governance approaches, replication pathways and long-term implementation scenarios for bioeconomy acceleration frameworks, are further explored in **D5.5 “Accelerator Business Plan and Replication Strategy”**.

4. Quantification of Key Performance Indicators (KPIs)

The BioBoost Accelerator monitored a series of Key Performance Indicators (KPIs) throughout the implementation period to assess the operational performance of the Accelerator, the delivery of Project Development Assistance (PDA) services and the progress achieved across the supported BioBoosters.

The monitoring framework combined quantitative and qualitative indicators related to project selection, PDA implementation, stakeholder engagement, investment readiness and overall project advancement. KPI monitoring activities were carried out continuously during the implementation period and progressively refined as the Accelerator methodology evolved.

Beyond measuring operational outputs, the KPI framework also contributed to validating the relevance of the Accelerator methodology, identifying the most critical support needs across the BioBooster portfolio and assessing the contribution of PDA services to improving project maturity and implementation readiness.

The following sections summarise the main indicators, operational results and investment-related outcomes achieved throughout the implementation of the BioBoost Accelerator.

4.5. Operational KPI monitoring

The operational KPIs monitored within the Accelerator focused primarily on the implementation of PDA services, stakeholder engagement activities, project evaluation processes and overall portfolio management.

Table 9. Monitoring of BioBoost project KPIs

KPI	Initial target	Final result	Status
Number of bioeconomy projects applying for PDA services	20	20	Achieved
Number of bioeconomy projects receiving PDA services	10	11	Achieved
Total count of PDA services provided	50	60	Achieved
Satisfaction rating from BioBoosters	>4	4.5/5	Achieved
Number of investor-oriented business plans developed	5	2	Partially achieved
Invested projects	3	4	Achieved
Expected investments mobilised	30M€	50M€	Achieved
Investments mobilised during the project	30M€	10M€	Partially achieved

While only two fully developed investor-oriented business plans were finalised during the implementation period, this result should be interpreted in the context of the maturity level and development stage of the supported BioBoosters. For a significant share of the portfolio, the PDA activities focused on earlier project development phases, including technical validation, stakeholder alignment, business model definition, regulatory assessment and implementation planning. Consequently, regarding the business and financial services, several projects received preliminary business plans, business model assessments and financing roadmaps that supported strategic decision-making and project maturation but did not reach the level of maturity required for the preparation of a complete investor-oriented business plan. This reflects the reality of circular bioeconomy projects, where project development timelines are often longer than the duration of support programmes and where substantial de-risking activities are frequently required before projects become investment ready as stated in the *report on De-Risking Mechanisms* developed under the BioBoost project.

Overall, the Accelerator achieved or exceeded most of its operational targets. The implementation process validated the capacity of the BioBoost methodology to support heterogeneous bioeconomy initiatives through flexible and adaptive PDA services tailored to different maturity levels and implementation contexts.

4.6. Satisfaction and feedback from BioBoosters

In addition to quantitative KPI monitoring, the BioBoost Accelerator assessed the perceived usefulness, quality and added value of the PDA services delivered across the BioBooster portfolio through direct feedback collected from project promoters.

The results obtained indicate a high overall level of satisfaction with the support received. The average satisfaction score reached 4.5 out of 5 both for the quality of the services delivered and for the support provided by the BioBoost team. Feedback consistently highlighted the professionalism of the team, the responsiveness of the support provided and the relevance of the services to the specific needs of each project.

Table 10. Summary of satisfaction assessment results

Evaluation aspect	General feedback
Relevance of services delivered	High
Flexibility of PDA support	High
Quality of technical support	High
Facilitation and coordination support	High
Business and investment support	High
Overall satisfaction	4.5 / 5

The assessment also confirmed the value of the multidisciplinary approach adopted by the Accelerator. Rather than focusing on isolated technical challenges, the PDA services enabled project promoters to address multiple development barriers simultaneously through a combination of facilitation, business development, legal, administrative and technical support. This integrated approach was perceived as particularly valuable for complex bioeconomy initiatives involving multiple stakeholders, regulatory challenges, financing needs and long implementation timelines.

The feedback reinforced one of the main conclusions emerging from the BioBoost implementation experience: the successful development of circular bioeconomy projects depends not only on technical feasibility, but also on stakeholder coordination, business model development, regulatory compliance and financing readiness. Consequently, project promoters particularly valued the facilitation and business-oriented dimensions of the Accelerator, which helped structure projects, align stakeholders, identify implementation pathways and strengthen financing perspectives. Legal and administrative support also played a significant role in addressing permitting requirements, governance arrangements and regulatory barriers, while technical services contributed to validating and refining project concepts and implementation options.

The feedback collected from project promoters confirmed a high level of satisfaction regarding:

- the multidisciplinary nature of the services offered;
- the flexibility of the Accelerator methodology;
- the capacity to adapt support activities to the specific needs of each project;
- the close interaction maintained between project promoters and the BioBoost team throughout the support process;
- and the systemic approach adopted during project development.

The implementation experience also highlighted the importance of maintaining continuous coordination and interaction with project promoters throughout the PDA process, particularly in complex bioeconomy initiatives involving multiple stakeholders, evolving territorial conditions and long project development cycles. In several cases, project needs evolved significantly during the support period, requiring the Accelerator to adapt the scope and sequencing of services accordingly.

Overall, the satisfaction assessment validated the relevance of the integrated support methodology adopted by the BioBoost Accelerator and confirmed the importance of combining facilitation, business development, legal, technical and financing-related capacities within future bioeconomy acceleration schemes. The results further support one of the key lessons learned from the project: that project development assistance for bioeconomy initiatives should be understood as a continuous de-risking process rather than a purely technical support service.

The feedback collected throughout the implementation period also contributed to refining the Accelerator methodology and identifying areas for improvement regarding project pre-selection, service integration, stakeholder engagement and investment readiness support. These insights have been incorporated into the lessons learned and recommendations developed for the future replication and scaling of bioeconomy acceleration schemes.

