

SuperBIO: Building and supporting new bio-based value chains with SMEs

Guidance document for application

This document is provided to introduce and provide guidance to organizations considering an application for innovation services funding from the SuperBIO Horizon 2020 project. It should be read in conjunction with the application form. The project runs from 1st of June 2016 until 30th of November 2018. Applications can be submitted until 31st of July 2018.

Project background and aim

SuperBIO is a Horizon2020 innovation project that aims to develop and support at least 10 new, innovative, cross-border and cross-sectorial **industrial value chains in the bio-based economy**. The **bio-based economy** is an emerging economy with a large, but underexploited potential for new value chains going along and beyond energy and fuels from biomass. Within the H2020 program an industrial value chain is defined as stages of value creation by enterprises and other organisations as part of the process of designing and delivering goods and services for their users. New and innovative value chains can, but don't have to be new to the world. They can be seen as (i) new combinations along and across value chains, (ii) an innovative technology/product brought from one sector or context into another resulting in a disruptive effect.

In short, the project (i) provides general and case specific **open collaboration spaces** for cross border and cross sectoral networking, coaching and advising, (ii) will **validate ideas** for new value chains, (iii) will help building new value chains and (iv) **provide innovation support services** that are essential elements for business planning and **creating further leverage**. SuperBIO therefore engages with companies and other industrial stakeholders that want to build innovative cross-border value chains around their activities and that are interested in innovation services to bring the value chain closer to the market.

SuperBIO consortium

Partner	Country	Role	Website
Ghent Bio-Economy Valley	Belgium	Cluster	www.gbev.org
Polish technology platform Bioeconomy represented by Lodz University of Technology	Poland	Cluster	www.p.lodz.pl/en/polish-bioeconomy-technology-platform
Toulouse White Biotech	France	Cluster	www.toulouse-white-biotechnology.com
Corporacion Tecnologica de Andalucia	Spain	Cluster	www.corporaciontecnologica.com
Bio Base Europe Pilot Plant	Belgium	Service provider	www.bbeu.org/pilotplant
NNFCC The bioeconomy consultants	UK	Service provider	www.nnfcc.co.uk
nova Institute	Germany	Service provider	www.nova-institut.eu
Gill Jennings & Every	UK	Service provider	www.gje.co.uk
Biotech Subsidy	Belgium	Service provider	www.biotechsubsidy.com
BCNP Consultants	Germany	Service provider	www.bcnp.com

Superbio Value Chains

Scope

SuperBIO deals with value chains in the bioeconomy. The SuperBIO project will support the development of value chains producing **bio-based materials, chemicals, fermentation products, innovative food/feed ingredients and liquid or gaseous fuels**. This scope is determined by the expertise of the partners.

The core process used for the production of these outputs must be based on biological resources; biological resources include **organic material as a process feedstock or enzymes/cells (algae, fungi, bacteria, plants etc) used as process tools**.

SuperBIO's scope excludes pharmaceutical biotechnology and food/feed production or agriculture as end-point.

End-users can be from a **wide variety of sectors**, including chemistry, fuels, plastics, cosmetics, construction, packaging, materials, but also pharma/personal care when it deals with innovative ingredients/materials (eg formulation aids, biomaterials) and food/feed when it deals with innovative ingredients.

Eligibility

SuperBIO value chains consist of at least three cross-sectorial stakeholders from at least 2 EU member states (see <http://europa.eu/about-eu/countries/member-countries/>) or H2020 associated countries (see http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-list-ac_en.pdf) that are needed to make the innovation in the bioeconomy happen. This typically includes at least a biomass supplier, a converter and an end-user. SuperBIO selects promising value chain ideas based on several criteria (see below) and is committed to support SMEs in constructing their value chain. In addition, SuperBIO offers 10 innovation services to SMEs that are part of validated value chains in order to bring the value chain closer to the market. Only SMEs are eligible to receive support and innovation services. A definition of an SME can be found below.

A conceptual overview of potential value chain elements:



Bio-based industries consortium (BIC) have prioritized value chains which are important for the EU bioeconomy, and can be found here: <http://biconsortium.eu/about/our-work>

Innovation services

An overview of the innovation services which are made available in SuperBIO is given below. Upon validation of the value chain SMEs can select innovation services they wish to receive. Innovation services are only available to SMEs in validated value chains (see also next paragraph for more information).

Service	Service provider	Short description
IP and patent filing	Gill Jennings & Every	Services offered include carrying out an IP audit on the SME; carrying out innovation capture session to evaluate potential IP within the SME; patent drafting.
Technological scale up and proof-concept	Bio Base Europe Pilot Plant	Development and scale up of biobased processes i.e. biomass pretreatment, fermentation, biocatalysis, product recovery and purification, if needed under ATEX conditions. The service corresponds to a technical feasibility study at pilot scale and can comprise a desktop study, lab work and/or pilot tests performed at Bio Base Europe Pilot Plant.
Life Cycle Assessment (LCA)	nova Institute	LCA is the assessment of the potential environmental impact of a product/service
Sustainability and regulatory issues	NNFCC	Product sustainability, which includes environmental, social and economic principles and criteria, in house GHG calculators to assist companies with both reporting and compliance requirements, assessment of land use criteria
Techno-economic analysis	nova Institute, NNFCC	The techno-economic analysis is a method to evaluate the economic feasibility of a process, to investigate cash flows over time and to compare different technology applications within a production process.
Feedstock Analysis	nova Institute	This analysis typically includes an evaluation of potential bio-based feedstocks based on criteria provided by the customer (e.g. quantity, chemical properties and price)
Market research	nova Institute, NNFCC, BCNP	Market research spans classic approaches such as surveys, data collection application/ competition analyses, TRL assessments and product identity evaluations (e.g. Green Premium).
Business Planning	BCNP, NNFCC	Business planning means telling a convincing story to make the value chain alive. Therefore the service includes the creation of a complete business plan or developing parts of it, e.g. new business models, or financial planning.
Access to investors	BCNP	Building new value chains needs equity. This service includes connecting to international investors and preparation for investors pitches.
Subsidy and grant writing	Biotech Subsidy	Identifying the right grant schemes for a particular project or for a particular project portfolio, adapts the existing projects towards the exact scope of the grant, writing proposal text

Evaluation procedure and value chain construction

A schematic overview of the procedure:



- Stakeholders can submit an **application form** containing their idea for a new value chain through an application form (.docx, available on the website) at any time during the project (June 2016-June 2018). They should contact one of the project partners before submission to complete the form. Submission is done by e-mailing the document to the relevant contact person (from one of the clusters), who will lead the value chain through the process (value chain leader). More information on the SuperBIO website www.h2020-superbio.eu.
- Based on the criteria below, the consortium will **evaluate the proposal** using their expertise in the field. The value chain leader (cluster organization within the consortium) will explain the case. Ideas should be at least at Technology Readiness Level 4 (technology validated in the lab). Value chain idea validation meetings are organized once a month. This meeting will decide whether the value chain is taken for further development. A short report containing the decision will be made. A **concept report** will be drafted for the validated value chains containing first suggestions for a value chain and an evaluation of value chain elements proposed by the applicant.

Criteria	
In scope of SuperBIO	Eligibility criterium
Potential for a new, cross-border and cross-sectorial value chain including SMEs	Eligibility criterium
Compliance with ethics principles of SuperBIO and H2020	Eligibility criterium
Innovativeness, new value chain	Selection criterium
Business opportunity and exploitability	Selection criterium
Ethical, social, environmental and resource efficiency considerations	Selection criterium

- Once validated, the consortium will organize a **brainstorming meeting** together with the applicant to support the applicant in further development of the value chain. As a result and followed by bilateral interaction with the applicant, the value chain leader will draft a **value chain document** that contains the concrete value chain. This value chain will then be reviewed by the consortium on eligibility criteria before going further to the next stages.
- A **value chain meeting** brings together relevant stakeholders in the constructed value chain to discuss the gaps and needs of the new value chain which will be summarized in a **value chain report**. The value chain report will be delivered to the applicant and third party SMEs involved in the value chain free of charge.
- Based on this discussion and on bilateral interaction with the SMEs in the value chains, the service providers will draft offers for innovation services the SMEs would like to receive. Only SMEs can apply for this. For a definition of an SME see below.
- The SMEs **select innovation services** they wish to receive. An SME can receive innovation services through SuperBIO with a maximal total value of € 60 000. They need to co-finance 25% themselves. This is invoiced after performance of the work. A report of the work carried

out will be made by each service provider. This report will not be shared among the project partners and value chain partners, unless the receiver of the service agrees to share.

- Third party SMEs will be asked about the impact of the SuperBIO project and the services they received in their evolution to the market. This enables the SuperBIO consortium to monitor the impact of the project on the EU economy.

Confidentiality

The SuperBIO Consortium is committed to maintaining the confidentiality of information provided by applicants for the purpose of evaluating ideas for value chains. Confidential information provided by applicants will not be disclosed to any third party without the express written consent of the applicant. It is to be understood that confidential information provided by an applicant will be disclosed to members of the consortium for the purpose of evaluating an applicant's idea for inclusion in a value chain and/or the award of a value chain innovation service. Reports on the services provided to the applicant are only shared with the applicant and information will not be disclosed to other members of the consortium or other stakeholders in the value chain without the express written consent of the applicant.

Financial details

Support and advice in value chain construction and reports produced during this process are given free of charge upon selection of your value chain idea. Innovation services are covered for 75% by the project, 25% of the net value needs to be co-financed by the SME to support the action. An invoice will be sent by the service provider after the work has been carried out which includes VAT on top of the value.

EU definition SME

The EU definition of an SME can be found here:

http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition/index_en.htm

An SME is defined as an enterprise having a staff headcount below 250, a turnover below or equal to € 50 million or a balance sheet total below or equal to € 43 million. These ceilings apply to the figures for individual firms only. A firm that is part of larger group (linked or partner enterprise) may need to include staff headcount/turnover/balance sheet data from that group too. In addition, shareholder structure can play a role as well. For latest information and more details, check the above website.