



Examples of regional bio-based business models

Power4Bio Deliverable 4.1

Based on pre-defined criteria, the most promising solutions were selected from the collection of good practice cases set up previously in the POWER4BIO project, to be further characterized by **describing the business models behind the technical solutions** and the way these models have been deployed. The main activities performed were

- elaborating the business modelling methodology of POWER4BIO,
- collecting data and information about the bioeconomy solutions selected,
- describing business models behind the solutions based on the data collected and
- evaluating the collection of these models.

19 practical examples of business cases were investigated in terms of business value and described in detail, using the POWER4BIO Business Modelling Methodology which was defined by adapting the so-called Business Model Canvas (BMC) format to the special characteristics of bio-based solutions. Six out of nine countries where POWER4BIO regions are located are covered by this business model collection, and the four product groups used for the project activities (bioenergy, biochemicals, biomaterials, feed & food) are also equally covered.

The elaboration of the business models based on the BMC methodology was supported by the fact that information collection was also made by this methodology, following the same content-wise elements. Besides intensive desk research performed by webpages of the companies, (bio)economy news portals, press releases issued by the companies, conference presentations, economical / statistical databases, scientific articles and results of other EU funded projects, business modelling process required **data collected directly from companies** implementing the bio-based solutions, and difficulties experienced during this process were the main hurdle regarding the modelling activity. There are many important pieces of information that can be accessed only by personal interviews conducted with the representatives of the companies, however, these are also the **data which are the hardest to obtain**, due to the problem of IPR issues and sensitive financial or market data. Despite the difficulties mentioned above, **BMC proved to be suitable for describing existing bio-based solutions** which were considered as good practice cases. Positive feedback was received from some of the company representatives involved in the data collection, after they checked and confirmed the business models of their solutions.

The business models are elaborated by a detailed description following the nine elements of the BMC (value proposition, key partners, key activities, key resources, customer relationships, channels, customer segments, cost structure and revenue streams). For the solutions where data of sufficient quality and quantity could be obtained, the most important information of the business model were summarised on a "classic" **one-page BMC format** as well, besides the detailed descriptions. The latter is obviously more detailed, contains more numerical data and more specific to the given case taken as good practice example, while the one-page document is more general,

summarises the key information briefly, keeping in mind the replicability of the solution somewhere else.

The solutions in the business modelling collection are distinct cases with big differences regarding either their background or the way they are established and implemented. This means that, besides very general and evident observations (for example, that raw material is always one of the key resources or feedstock providers are always among key partners), it would be quite difficult or artificial to point out similarities which could help business development work or bioeconomy strategy planning of regional stakeholders who are intended to benefit from POWER4BIO activities. Instead of this, the business model collection is rather expected to **ensure benefits for market actors by providing information on specific bio-based business models** and new insights for the relevant bio-based economy sectors and future impacts on the markets.

The **business model always needs to be individually tailored** for each case of deployment, even if the replicability is good for the bio-based solution applied. The business models in the POWER4BIO collection are described in a fairly general way and have to be elaborated much more in detail for this tailoring, which process has to be initiated by companies or investors interested in a certain solution.

POWER4BIO (www.power4bio.eu) collaborates with the Horizon 2020 project BE-Rural, which also assesses technology options and business models for regional and local bio-based economies. A joint guidance document will summarise the relevant outputs of the two projects and provide concrete recommendations for policy-makers regarding the application of bio-based technology options and business models in specific regional contexts. The present report will contribute to this joint output. For further complementary information from the BE-Rural project, we encourage the reader to visit: <https://be-rural.eu/results/>