transition2bio
Towards a more sustainable future

Toolkit 6
Bioeconomy Kit for Business

Not only must we seek new ways of consuming, but also of producing that respect the ecological boundaries of our planet. All stakeholders, especially the supply side, must be engaged in this systemic change towards a more sustainable economic model, promoting growth and development and preserving the ecosystem. This kit aims to raise awareness and educate the supply side about the bioeconomy at large and its benefits for them.

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1 How can the bioeconomy be a model of green growth?

Did you know?

The bioeconomy can help us transform the way we produce and be a key vector of green growth.

Economic benefits stemming from the bioeconomy are abundant and offer major opportunities for regional and local communities. In 2019, the European bioeconomy employed 17.4 million people and generated EUR 657 billion of value added.

EU BIOECONOMY
European Commission's Knowledge Centre for Bioeconomy

	EMPLOYMENT (MILLION JOBS)	VALUE ADDED (BILLION EUR)	VALUE ADDED (SHARE TOT)
	17.4	657	
AGRICULTURE	8.8	193	29%
FORESTRY	0.5	25	4%
FISHING AND AQUACULTURE	0.2	6	0.9%
FOOD, BEVERAGES AND OTHER AGRO-MANUFACTURING	4.7	237	36%
BIO-BASED TEXTILES	0.8	25	4%
WOOD PRODUCTS AND FURNITURE	1.3	50	8%
PAPER	0.6	48	7%
BIO-BASED CHEMICALS AND PHARMACEUTICALS, PLASTICS AND RUBBER	0.5	65	10%
LIQUID BIOFUELS	0.03	3	0.5%
BIOELECTRICITY	0.03	5	0.8%

DATA 2019 EU-27
Source: based on Ronzon et al., 2022

- A major strength of the bioeconomy concept is the development of rural, coastal and remote areas by adding values to commodities which are produced by the agricultural, forestry, fishery or waste sectors. Watch this **video** to better understand the rural approach.
- Get deeper insights into the bioeconomy value chain, which is the flow of environmental, economic and social values added by a broad set of actors to the process of creating bio-based product or services from biomass feedstock, in this interactive BLOOM **infographic**.
- Check out this **factsheet** for an overview of EU projects supporting local bioeconomies and the development of new value chains and business models.

2 What are promising business models and sustainable technologies for local deployment?

Did you know?

Many valuable resources and potentials remain unexploited by businesses.

Several tools exist to help businesses unlock new competences, open new markets, and ensure that concepts like resource efficiency and circularity, and sustainable economic growth are integrated into their business models.

- The ENRD Rural Bioeconomy Portal shares information and examples of sustainable bioeconomy and nature-based solutions in rural areas.
- BE-Rural's handbook on regional and local bio-based economies provides an in-depth overview of local potential including information on biomass use, business models and sustainability impacts. An array of small-scale technology options for regional bioeconomies have further been identified by BE-Rural in this resource.
- POWER4BIO has developed an online catalogue of bio-based solutions and business model pathways to fully realise bioeconomy potential.
- RUBIZMO's Transformation Support Tool helps you understand which business models are the best fit for your objectives, taking into account key information on your business environment and stakeholders. It consists of a database of business models and a tool to implement the selected model.
- Enabling's Best Practices Atlas has collected best BBP (Bio based Products and Processes) practices, from inside and outside Europe, that are wholly or partly transferable to other regions, and can serve as an inspiration for partners in the value chain.
- AlpBioEco developed exciting eco-innovative business ideas and concepts for small and medium-sized enterprises in the Alpine region. Examples include the: Apple, Walnut, and herbal value chains. Further exciting impulses can be found in AlpBioEco's replicable roadmap to analyse bio-based value chains.
- Tech4Biowaste developed a database on biowaste valorisation technologies. Technology providers can showcase new and emerging technologies. Technology searchers can analyse and compare bio-waste valorisation technologies.

3 How can we ensure a sustainable supply of biomass?

Did you know?

Even though biomass is considered renewable it remains a finite resource.

Biomass is at the core of bioeconomy. The sustainable and reliable supply of non-food biomass feedstock is essential for the success of the bioeconomy and its bio-based products.

- This LIFT factsheet explains the challenges needed to be addressed in biomass availability, quality, supply and sustainability and European projects addressing these issues.
- Enabling's process Flows Platform represents data for different feedstock and shows the process flows for the different feedstocks. The project also provides a BiomassTrade Platform where biomass producers and biomass processors can meet to exchange currently not valorised organic biomass residues and organic by-products.
- S2BIOM's planning toolset contains harmonised datasets for the availability of lignocellulosic biomass in EU27, western Balkans, Turkey, Moldova and Ukraine and its Bio2Match tool helps match biomass and conversion technologies.
- ICT-BIOCHAIN is working to guarantee a secure and sustainable supply of biomass feedstock by improving the efficiency of the biomass value chain. Don't miss its platform of ICT solutions.
- Baltic For Bio produced a Forest Energy Atlas GIS platform.
- In the forestry sector, ERIFORE is establishing an open access distributed forest bioeconomy research infrastructure across Europe.
- BIOREG's Geoportal Tool, a tool focused on wood waste management provides a unified platform which helps disseminate suitable solutions and success factors, depending on the regional context.

4 How is the business community supported in driving bio-based innovation?

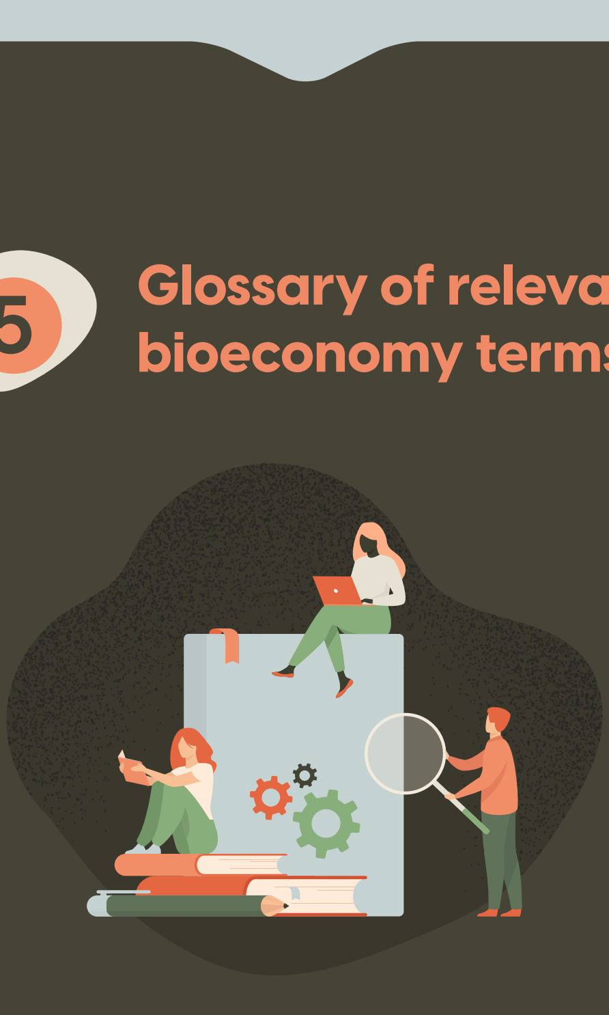
Did you know?

A number of tools exist to help bring bio-based innovations closer to the market.

The business and research community play a central role in driving bio-based innovation and investing in healthier, safer, and more sustainable products and services. From a vast range of primary producers, SMEs and start-ups, industries, and companies providing bio-based and ecosystem services everyone has an important role to play.

- Start off reading this European Commission report on 15 EU success stories, "Bio-based products from idea to market", for concrete real-life examples that can serve as inspiration.
- The Circular Bio-based Europe Joint Undertaking (CBE JU) is a €2 billion partnership between the European Union and the Bio-based Industries Consortium (BIC) that funds projects advancing competitive circular bio-based industries in Europe. The partnership is building on the success of its predecessor, the Bio-based Industries Joint Undertaking (BBI JU), while addressing the current challenges facing the industry.
- Many start-ups and SMEs need support to take advantage of these emerging opportunities. A good place to start is with this clear description of a business plan from ProBIO.
- For those striving to launch a bioeconomy-related business, these CommBeBiz webinars might help you:
  - **Business Plan writing**
  - **Market Partner Research**
- By offering start-ups and SMEs voucher services for technical and non-technical innovation support services, many projects are helping bring innovations to the market.
  - Here you will find an overview from SuperBIO of ten innovation **services**, including everything from proof-of-concept and scale up to life-cycle assessment, and access to investors.
- BIOPEN's European Open-innovation Platform helps with matchmaking among project ideas and stakeholders, funding opportunities, and offers a semantic search engine to perform searches over millions of patents and scientific papers.
- BioeconomyVentures created the first innovator/investor matchmaking platform of the European bioeconomy space!
- MPowerBio offers a number of courses to empower Clusters to bring SMEs across the financial valley of death.
- For those brand owners wanting to switch to bio-based approaches, the BIOSWITCH toolbox is essential as you embark on your bio-based transition journey.
- It can also be important for businesses to understand the maturity level of certain bio-based market segments. These BIOWAYS factsheets describe the market conditions, barriers and future trends, and public perceptions of a range of bio-based application areas from biochemicals, biofuels, to bio-based plastics.
- Cross-sector and multi-stakeholder collaboration can be key elements of success. In this Biobridges factsheet the main practices and challenges are listed.
- Here the Interreg Danube Transnational Programme has developed a joint bio-based value-added network for the Danube Region (DANUBIOVALNET).
- For a helpful overview of European projects working in the area of open innovation platforms and facilities, check out this LIFT Factsheet.

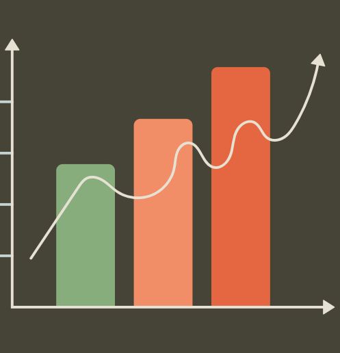
5 Glossary of relevant bioeconomy terms



Business Model
describes the rationale of how an organization creates, delivers, and captures value, in economic, social, cultural or other contexts.

Value Chain
is defined as a set of interlinked activities that deliver products/services by adding value to bulk material (feedstock).

Integrated Value Chain
is a logical chain of partners working together to add value to primary biomass in several steps and to look for synergies in production pipelines.



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Who we are – the consortium

APRE
FVA New Media Research
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