SHAPING THE INNOVATION ECOSYSTEM FOR THE BIOECONOMY

Four thematic webinars

Every Wednesday from the 25/03/2020 to 15/04/2020 11:00 CET

www.lift-bbi.eu/webinars • www.bioeconomy-library.eu

UrBIOfuture careers, education & research

CELEBio

THE EUROPEAN BIOECONOMY NETWORK

biobridges

BIOVOICES

LIFT
Boosting bioeconomy by maximizing CSAs results

Horizon 2020
European Union Funding
for Research & Innovation

BBI JU

Bio-based Industries Consortium

SHAPING THE INNOVATION ECOSYSTEM FOR THE BIOECONOMY

Webinar 4/4

VALUE CHAINS AND INNOVATION ECOSYSTEM

- Biomass availability, quality, supply and sustainability
- New value chains and business models
- Open innovation platforms and facilities

15 April 2020
11.00 CET
Duration: 60 min

Challenges, Gaps, Results and Recommendations

LIFT
Boosting bioeconomy by maximizing CSAs results

Horizon 2020 European Union Funding for Research & Innovation

BBI JU

Bio-based Industries Consortium

www.lift-bbi.eu/webinars www.bioeconomy-library.eu

BIOVOICES

CELEBio

THE EUROPEAN BIOECONOMY NETWORK

For your info

The webinar will be recorded

Questions can be raised via the Q&A panel. We will try to answer them during the webinar itself.
Where we can't we will answer them afterwards.

We welcome your contribution! Be ready with your cell phone
Go to www.menti.com - access code: 51488

Slides, Recording, Q&A document, and Report in the interactive session will be available at https://www.lift-bbi.eu/webinars/events/webinar-4-value-chains-and-innovation-ecosystem/

All the webinars info at https://www.lift-bbi.eu/webinars

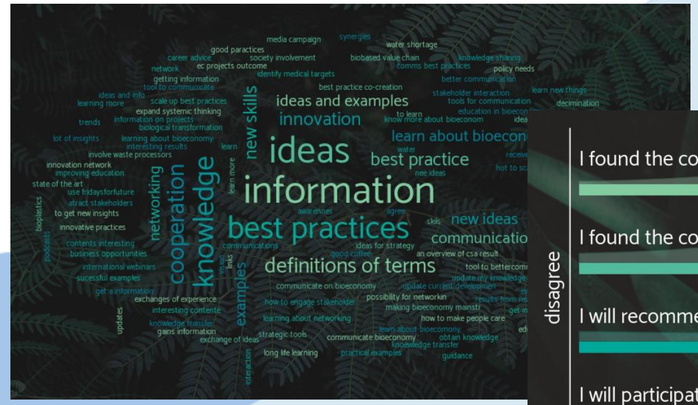
LIFT

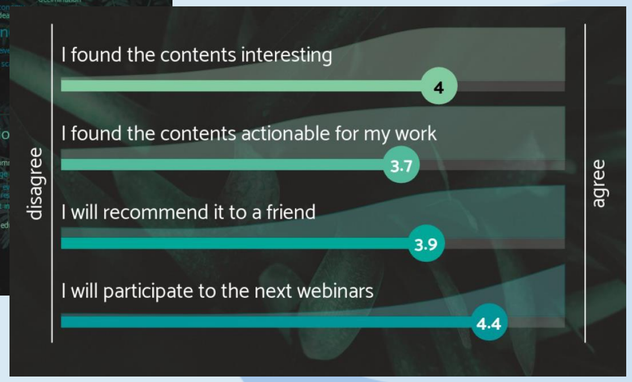
Boosting bioeconomy by maximizing CSAs results

First 3 webinars

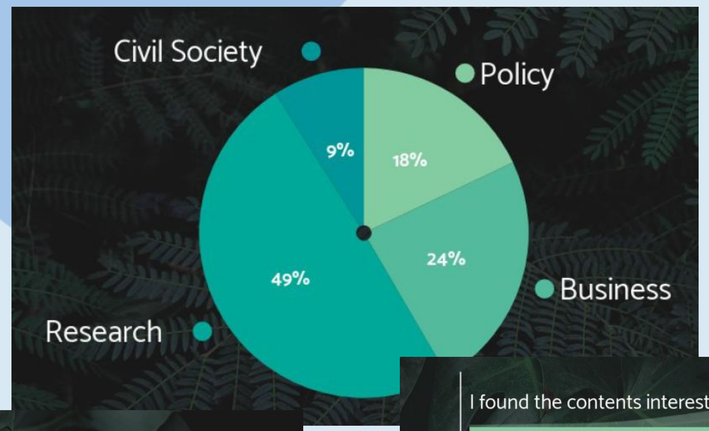
Webinar 1: Awareness and Education

420 participants

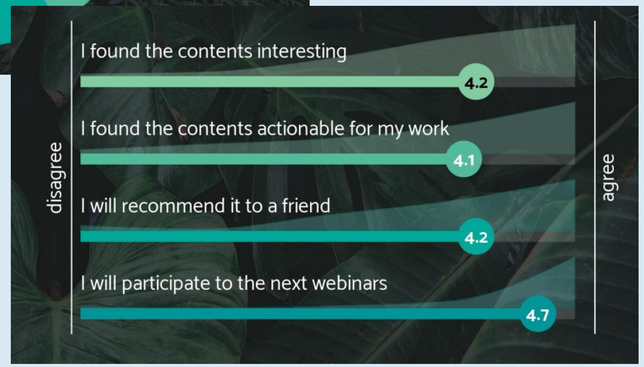




Webinar 2:03/04 Policy framework



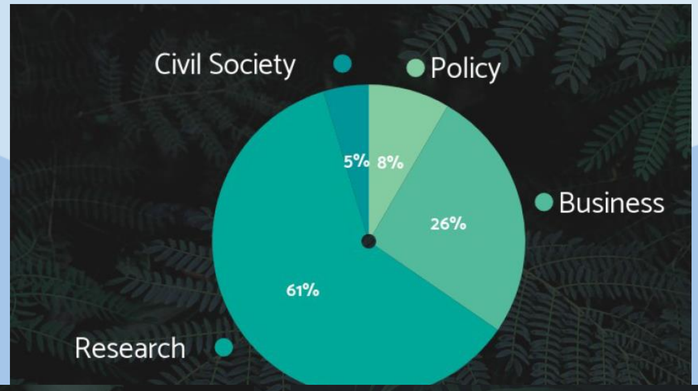
191 participants (initially 314, 191 in the rescheduled date)



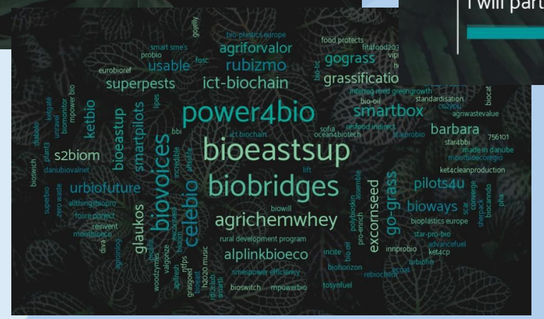
834 Registered people

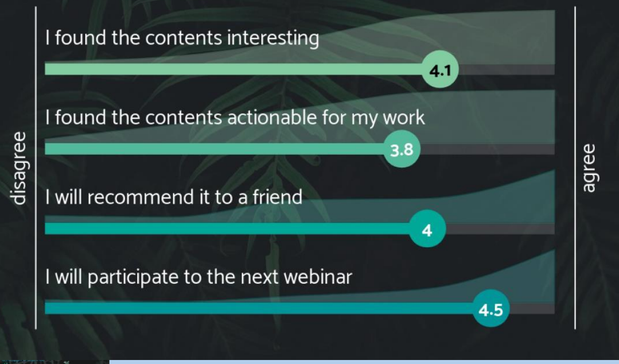
More than 550 additional recommendations collected

Webinar 3: 08/04 From Research to Market



251 participants





Contents and Speakers

Contents:

- ✓ LIFT Project
- ✓ CELEBio Project
- ✓ BIOVOICES project
- ✓ LIFT Factsheets
  - ✓ Biomass availability, quality, supply and sustainability
    Mentimeter interactive discussion
  - ✓ New value chains and business models
    Mentimeter interactive discussion
  - ✓ Open innovation platforms and facilities
    Mentimeter interactive discussion

Speakers:


Alexandre Almeida (LOBA, LIFT coo)
e-mail: alexandre@loba.pt


Berien Elbersen (WUR, CELEbio)
e-mail: berien.elbersen@wur.nl


Matteo Sabini (APRE, BIOVOICES coo)
e-mail: sabini@apre.it


John Vos (BTG, LIFT)
e-mail: vos@btgworld.com


Susanna Albertini (FVA, LIFT and European Bioeconomy Network)
e-mail: albertini@fvaweb.it

LIFT

Boosting bioeconomy by maximizing CSAs results

Objectives

1. Provide a global vision of objectives and results of past and ongoing Coordination and Support Actions (CSA) (FP7, H2020, BBI JU, Erasmus+ and Interreg)
2. Maximise the impact of CSAs results, making them readily available, integrated and especially actionable by industries and policy makers
3. Analyse the existing gaps and identify the challenges to be addressed
4. Raise awareness and communicate the CSAs' contribution in addressing the Bioeconomy related challenges
5. Provide actionable recommendations and suggestions for new CSA topics

https://www.lift-bbi.eu/

LIFT

Boosting bioeconomy by maximizing CSAs results

Outcomes

1. Analysis of ongoing and concluded CSAs and CSAs like projects (64)

ABBEE Bioeconomy Education
Interreg Alpine Space Alp Bio Eco
Interreg Baltic Sea Region
EUROPEAN REGIONAL DEVELOPMENT FUND EUROPEAN UNION
BERST Building Regional BioEconomies
BE-Rural
BIO-TIC
BIO4ECO Interreg Europe
Interreg North-West Europe BioBase4SME
Bio Base NWE Innovation and training for the biobased economy
biobridges
BioCannDo Bioeconomy Awareness and Discourse Project
BioEnergyTrain
BioLinX
biomonitor Monitoring the Bioeconomy
BIOPEN
BIOPROM
BioReg GIVE WOOD WASTE A CHANCE!
BIOREGIO Interreg Europe
European Union European Regional Development Fund
BioSTEP
BIOVOICES
BIOWAYS
bloom
Bioeconomy Strategic Working Group
CELEBio
CommBeBiz
CommNet COMMUNICATING THE BIOECONOMY
Interreg Danube Transnational Programme DanuBioValNet
enabling
ERIFORE European Research Infrastructure for Circular Forest Bioeconomy
Interreg Vlaanderen-Nederland GRENZELOOS BIOBASED ONDERWIJS
Interreg Mediterranean GREEN GROWTH
ICT-BIOCHAIN
InnProBio FORUM FOR BIO-BASED INNOVATION IN PUBLIC PROCUREMENT
KBBPPS Pre-Standardization Research for Bio-based Products
KETBIO Biotech transfer
LIFT Boosting bioeconomy by maximizing CSAs results
OPEN BIO
Pilots4U
POWER4BIO REGIONS FOR BIOECONOMY
ProBIO
Interreg Baltic Sea Region RDI2ClusB
ROAD TO BIO
Rubizmo
S2Biom
SATBBE
UrBIOfuture careers, education & research
STAR ProBio
ST★R4BBI
Superbio

LIFT

Boosting bioeconomy by maximizing CSAs results

Outcomes

2. **Increase adoption and improve the use of CSAs' findings (11 Fact sheets)**
    - Awareness raising
    - Bioeconomy Education
    - Stakeholders engagement and co-creation
    - Standardisation, LCA, labelling and regulatory hurdles
    - Regional potential and bioeconomy strategies and implementation action plans
    - Uptake of RTD results
    - Foresight, market studies and market roadmaps
    - Industrial road-mapping
    - **Biomass availability, quality, supply and sustainability**
    - **New value chains and business models**
    - **Open innovation platforms and facilities**

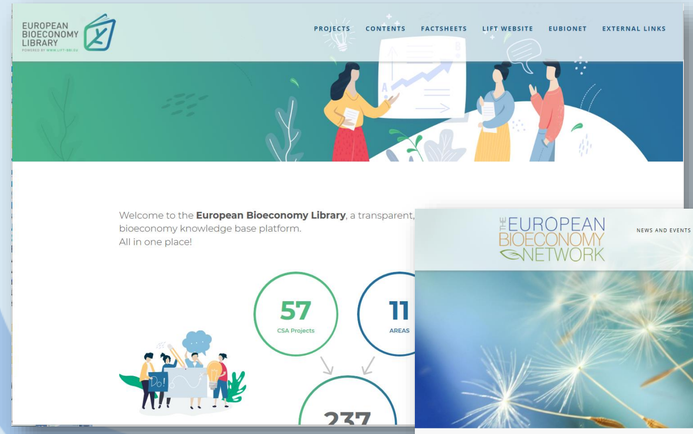
3. **Bioeconomy Library (https://www.bioeconomy-library.eu) with 266 contents.**
4. **Facilitate Mobilisation and Mutual Learning among projects (also from different programmes)**
5. **Recommendations for future new CSA topics**

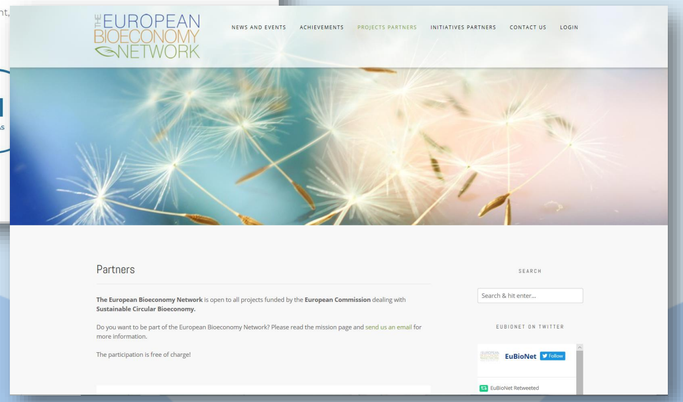
https://www.lift-bbi.eu/

LIFT

Boosting bioeconomy by maximizing CSAs results

Resources





European Bioeconomy library

https://www.bioeconomy-library.eu/

European Bioeconomy Network website

http://eubionet.eu/

11 Thematic Factsheets

https://www.bioeconomy-library.eu/

Stakeholders-oriented recommendations for the innovation ecosystem for the bioeconomy and for future new CSA topics

To be available (end of April in the LIFT website)

https://www.lift-bbi.eu/

CELEBio

CELEBio Objectives

1. To contribute to strengthening the bio-economy in BG, CZ, HR, HU, SI, SK and other neighboring countries (MK, RS, EL, BiH, MO, & AL) with fact-based information, the elaboration of evidence-based Action Plans and networking
2. To support the creation of concrete opportunities to expand and/or create industrial bio-based activities in the target countries
3. To raise awareness on the benefits for the local economies, environment and society coming from bio-based activities
4. To provide the bio-based industry and sector with biomass availability reports on target countries and the region, as well as stakeholders inventories and national action plans
5. To rise awareness and mobilize stakeholders through national websites and social media as well as bioeconomy workshops, a joint final event @EUBCE and a network of “BBI Ambassadors”

CELEBio

Outline country reports

1. Introduction
2. Biomass supply: Agriculture
3. Biomass supply: Forestry
4. Biomass supply: Waste
5. Bio-based industries, products and markets
6. Infrastructure, logistics and energy sector
7. Skills, education, research and innovation potential
8. Policy framework: Regulations, legislation, rule of law & taxes and tariffs
9. Financing

CELEBio

SWOT-biomass availability

Strengths:

- Still large unused primary & secondary residual biomass potential in agriculture & forestry
- Waste potential large and still many waste separation, treatment and processing steps to make in most countries
- Some countries have a long sectoral tradition in forestry and wood processing industry
- Forest ownership more concentrated in hands of large players (large state owned forest)

Weaknesses:

- Agriculture not very attractive to younger generations
- Poor technical, economic and environmental performance and high exposure to climate change in agriculture
- Lack of education in agriculture and waste separation
- Still many unclear land owner rights
- Some countries have large unmanaged forest lands

Opportunities:

- Increasing demand for sustainably produced local products
- Increasing interest in climate action
- Law of the inhibitory advantage does not apply to many sub-sectors in agriculture, forestry and waste
- Large unused land potential
- Expansion of family farms
- Expansion of food processing industries

Threats:

- Too slow restructuring in agriculture, forestry & waste sector due to lack of own resources & financing mechanisms to co-finance investments
- Lack of interest in taking over the farm and continuing farming in the younger generations
- Climate change and diseases in forests
- Unsustainable management of private forest
- Lack of public-private partnerships

SWOT for opportunities for biomass delivery chain development

Strengths:

- Biomass/renewable resources are available
- Relatively high educated/skilled workforce

Weaknesses:

- Short and vertical chains, low added value in processing agricultural products
- Little mobilization of biomass for non-food uses
- Lack of bio-hubs for storage, pre-treatment and processing
- Pilot and demo plant (TRL 4–6) development and funding is minimal

Opportunities:

- Increasing demand for biobased products
- Law of the inhibitory advantage does not apply to many food processing, biochemical and biomaterial industries

Threats:

- Insufficient connection between academic, public, and private sector (PPP)
- Lack of pilot and demo plant development ("death valley")
- No market for high added value biomass, uses only low-quality chains for heat/electricity

CELEBio

Resources (Berien 5/5)

Global website

www.celebio.eu

National mini-sites

www.(country).celebio.eu

National Facebook pages

BIOVOICES

CONNECTING BIO-BASED FORCES
FOR A SUSTAINABLE WORLD

Objectives

1. **Promote** Multi-actor dialogue and Multi-stakeholder **co-creation** of research, innovation, development and political context in Bio-based economy

2. Design and promote a **MML (Mobilisation and Mutual Learning) platform**, **engaging different stakeholders** at European, National and Local levels, including a plurality of perspectives, experiences, interests, aspirations and knowledge

3. **Increase the quality, relevance, social acceptability and sustainability of research and innovation outcomes in the Bio-based domain**, thus minimizing the technology mismatches

4. Through the BIOVOICES multi-stakeholders platform, design and implement **an action plan fostering the awareness of the wider public about the benefits and** potential social, economic and environmental **impact of the Bioeconomy and widening the diffusion of BBPs** (Bio-based products)

https://www.biovoices.eu/

BIOVOICES

CONNECTING BIO-BASED FORCES
FOR A SUSTAINABLE WORLD

Outcomes

- Definition of **12 challenges** for market uptake of Bio-Based Products
- **Biovoices stakeholders' platform**
- Organization of at least 70 MML workshops (4 European, 22 National, 44 Local)
- BIOVoices Action Plan and stakeholders oriented policy briefs
- A wide range of activities for engaging stakeholders, in particular citizens: e.g. active participation in citizens science events and fairs, social network campaigns, bioart gallery, BBPs exhibition, etc.
- Building a community of EU funded projects dealing with Bioeconomy promotion, communication and support – European Bioeconomy Network (EUBioNet)

https://www.biovoices.eu/

BIOVOICES

CONNECTING BIO-BASED FORCES
FOR A SUSTAINABLE WORLD

Resources

Biovoices website

https://www.biovoices.eu/

Biovoices multistakeholders platform

https://www.biovoices-platform.eu/

European Bioeconomy Network website

http://eubionet.eu/

Social media: @biovoices - #BioeconomyatHOME

Challenges for Market Uptake of BBPs

https://www.biovoices.eu/download.php?f=117&l=en&key=886f71f88ecda7d5555be45fb58c9d5d

Biovoices Workshops overview - Booklet

https://www.biovoices.eu/download.php?f=122&l=en&key=249511223ab3cf8e0d984e23ae23a77b

Biovoices Bioart Gallery

https://www.biovoices.eu/gallery/

Biomass availability, quality, supply and sustainability

More info

EUROPEAN BIOECONOMY LIBRARY
POWERED BY WWW.LIFT-BIO.EU

FACTSHEET #8
Biomass Availability, Quality, Supply and Sustainability

01 THE CHALLENGE

In the context of the development of the bioeconomy, the sustainable and reliable supply of non-food biomass feedstock of the right quality is a critical success factor for the long-term perspective of biomass-based technologies to implement bio-based products on a large scale, while not competing with the food market and also benefitting local rural development.

02 HOW COORDINATION AND SUPPORT ACTIONS (CSAs) ADDRESS THE CHALLENGE

Biomass availability studies focus on a broader range of biomass types coming from diverse sources, from land and sea – such as crops, forests, fish, animals and micro-organisms, waste, etc. The presented projects all develop one or more decision support tools, e.g. offering insight on national/regional biomass availability and on suitable technologies for converting the biomass.

Biomass availability: Pan-European focus

S2BIOM aimed to support the sustainable delivery of non-food biomass feedstock at local, regional and pan European level through developing strategies and roadmaps. The project developed a planning toolset (with associated databases) containing up to date and harmonised **datasets for the availability of lignocellulosic biomass** in EU27, western Balkans, Turkey, Moldova and Ukraine. Further outcomes include **BioMatch**, a tool for matching biomass and conversion technologies, a database proving information on the **regulatory and financial framework** impacting bioeconomy development throughout Europe, and a set of **country roadmaps** for lignocellulosic biomass exploitation and relevant policies for a bio-based economy in 2030.

Biomass availability: Regional focus

BIOREG modelled and mapped theoretical and technical potentials of wood waste, including wood in municipal waste, demolition wood and wood waste from industry, at NUTS2 level. The study on regional potential had a special focus on the regions Normandy (France), Alentejo (Portugal), Lisbon (Portugal) and Lubelskie (Poland).

ICT-BIOCHAIN objective is to identify opportunities for the introduction of ICT, Internet of Things and Industry 4.0 to increase the efficiency and sustainability of high potential biomass supply chains for the bio-based industry. The project brings leading experts and support networks to develop Digital Innovation Hubs within ready-made test bed bioeconomy regions (South East Ireland and Andalusia). For both regions a **biomass availability data model / inventory** is under development. The report will also analyse the current use of selected biomass by-products.

ENABLING aims to support the spreading of best practices and innovation in the provision (production, pre-processing) of biomass for the bio-based industry. In particular, **ENABLING** aims at creating appropriate conditions for the development of efficient biomass to bio-based products and processes value chains. The project is collecting several cases of business models of circular economy in different value chains. One of the project deliverables under development is the **Biomass Matrix Tool**, an Excel template developed to help the user in evaluating the potential and available biomass and industrial processes, considering the different bio-based products pathways.

* The Nomenclature of Territorial Units for Statistics or NUTS is a geocode standard for referencing the subdivisions of countries for statistical purposes. Within the EU27 (excl.UK), there are 244 regions at NUTS 2.

[Factsheet](): Challenges to be addressed in **Biomass availability, quality, supply and sustainability** projects' main results, gaps to be bridged and recommendations.

Biomass availability, quality, supply and sustainability

Related projects/Sources:

Acronym/logo	Programme	Duration	Website
S2Biom	FP7	Sep 2013 - Nov 2016	www.s2biom.eu/en/
OPEN BIO	FP7	Nov 2013 - Oct 2016	www.open-bio.eu
STAR ProBio	H2020	May 2017 - Apr 2020	www.star-probio.eu
BioReg GIVE WOOD WASTE A CHANCE!	H2020	Jan 2017 - Dec 2019	www.bioreg.eu/project
ICT - BIOCHAIN	BBI JU	June 2018 - May 2020	www.ictbiochain.eu
enabling	H2020	Dec 2017 - Nov 2020	www.enabling-project.com

Biomass availability, quality, supply and sustainability

CSAs projects' achievements

- ✓ **Pan-European datasets** for the availability of biomass
- ✓ **Regional datasets** for selected biomass (by-product) streams
- ✓ **Decision support tools** e.g. for matching biomass & technologies
- ✓ **Platforms and marketplaces** for biomass trading
- ✓ **Good practices** on developing biomass supply chains

Biomass availability, quality, supply and sustainability

Gaps still to be bridged

- ✓ Lack of awareness and knowledge about **(a) emerging opportunities (b) benefits** for regional development from exploiting local biomass.
- ✓ Biomass is (often) bulky, seasonal, heterogeneous, contaminated. **Extensive and timely treatment may be needed** (drying, separation, etc.), in particular when the added value compounds should be rapidly extracted.
- ✓ Economic **industrial processing in biorefineries** requires multiple feedstock types, large volumes, efficient use/disposal of all co-products.
- ✓ Securing long-term supply of affordable and sustainable biomass and developing **efficient and cost-effective logistics** is a challenge.
- ✓ **Poor data** (biomass availability, trade, use). Better statistics and harmonisation of reporting are needed on the use of biomass from different sources. Examples: local/regional availability, (residue) availability in processing industries, international biomass trading.
- ✓ **Biomass quality** needs to be monitored continuously. Compliance with high quality criteria should be ensured and certified.
- ✓ Need for **integrated solutions**, promoting full biomass cascade utilisation into diverse and cross-connected value chains.
- ✓ **Better harmonisation** of legislation across Europe, to improve productive use of biomass, generating new socio-economic opportunities.

Biomass availability, quality, supply and sustainability

Recommendations

- ✓ Raise awareness, educate, involve, demonstrate to primary producers & industries the added value and **economic potential**.
- ✓ Promote debate among local stakeholders to identify effective, shared and **sustainable solutions** and a better future use of biomass.
- ✓ **Promote integrated activities** at the local level, building on project outcomes (platforms, decision support systems, good practices, etc.)
- ✓ Ensure improved **data collection** methodologies, better comparable statistics, and easier data access
- ✓ **Periodically conduct data availability studies**. Why? (a) technology developments result in other feedstock types becoming of potential interest; (b) climate change may lead to crop types and yields changing; and (c) bioeconomic developments and structural changes have an impact on biomass availability.
- ✓ **Support improved biomass exploitation**, in particular of added-value compounds, and valorise underutilised biomass.
- ✓ **Develop and refine easy-to-use tools to match information** on (locally) available biomass with technologies
- ✓ Future research should carefully examine the **synergies/conflicts and interdependencies amongst the different biomass feedstocks** and develop coherent indicators for their careful evaluation
- ✓ Promote the **harmonisation of waste and end-of-waste definition/classification** across Europe

Biomass availability, quality, supply and sustainability

Interactive discussion

MENTIMETER INTERACTIVE SESSION

New value chains and business models

More info

EUROPEAN BIOECONOMY LIBRARY
POWERED BY WWW.LIFT-BIO.EU

FACTSHEET #9
New Value Chains and Business Models

01 THE CHALLENGE

Bioeconomy is a major opportunity for regional and local communities. Despite broad political agreement, the potential of many European regions to develop a thriving circular bio-based economy, better deploying their own resources remains largely untapped.
New, sustainable technology options or business models suitable for local deployment are needed. Supporting new bio-based value chains and business models through raising awareness activities, knowledge development (studies), clustering and networking is a central focus of several Coordination and Support Actions.

02 HOW COORDINATION AND SUPPORT ACTIONS (CSAs) ADDRESS THE CHALLENGE

Platform and cluster development

BIOPEN aims to support collaboration and knowledge sharing in the bio-based industry and to stimulate the setup of co-innovation partnerships for the development of new products and markets. Key asset of the project is an actively managed online innovation platform capable to involve industries, research centres and universities, and offering support actions including matchmaking among project ideas and stakeholders for joint development, funding opportunities, sharing of information etc.
ICT-BIOCHAIN aims is to identify opportunities for the introduction of ICT, Internet of Things and Industry 4.0 to increase the efficiency and sustainability of high potential biomass supply chains for the bio-based industry. The project develops Digital Innovation Hubs within two test bed bioeconomy regions: South East Ireland and Andalusia. The hub includes a biorsource modelling platform with two components: (1) statistical data on regional biomass availability (2) social network connecting ICT providers and users.
Bio-Reg created the European Wood Waste Platform, a platform of stakeholders who are able to influence and develop their regions towards bio-based industries and products. Modal regions include Gothenburg (SE), Baden-Wurttemberg (DE), Lombardy Emilia-Romagna (IT), North West England (UK) and Vorarlberg and Syria (AT). Recipient regions include: Normandy (France), Lublin (Poland), Andalucia (Spain). The platform provides information on the expected evolution of the regulatory and normative framework (regulatory watch), or structural trends (cascade use, carbon storage, circular economy, etc.).
In cooperation with BIO-TIC, BioBasedNWE (Interreg) set-up a partnering platform the BIO-TIC/Bio Base NWE Technology Database.

Business models

POWER4BIO and BIE-RURAL share the overall goal of exploring the potential of regional and local bio-based economies.

- POWER4BIO developing a catalogue of business modal pathways to fully realise the bioeconomy potential of its ten partner regions.
- BIE-RURAL supporting relevant actors in the participatory development of bioeconomy strategies, roadmaps and business models.

RUBIZMO supports rural business success across Europe and is funded to identify the vital ingredients for developing rural entrepreneurship through the replication of successful business ideas. It identifies business models with high potential for empowering rural communities to take advantage of the opportunities arising from improved value chain optimisation. First tools and findings, including a Beta-version of a library of business cases, were published online in December 2019.

Factsheet: Challenges to be addressed in **New value chains and business models**, projects' main results, gaps to be bridged and recommendations.

New value chains and business models

Related projects/Sources:

Acronym/logo	Programme	Duration	Website
BIOPEN	BBI JU	May 2017 – Oct 2019	www.biopen-project.eu/
ICT-BIOCHAIN	BBI JU	June 2018 – May 2020	ictbiochain.eu
biobridges	BBI JU	Set 2018 - Aug 2020	www.biobridges-project.eu
BioReg	H2020	Jan 2017 – Dec 2019	bioreg.eu/project
POWER4BIO	H2020	Oct 2018 - March 2021	power4bio.e-p-c.de
BE-Rural	H2020	April 2019 - March 2022	be-rural.eu
Rubizmo	H2020	May 2018 – Apr 2021	rubizmo.eu
Superbio	H2020	June 2016 – Mar 2019	www.h2020-superbio.eu/
Interreg Danube Transnational Programme	Interreg B	Jan 2017 – June 2019	www.interreg-danube.eu/approved-projects/danubiovalnet
Interreg Alpine Space	Interreg B	Apr 2018 –Apr 2021	www.alpine-space.eu/projects/alpbioeco/en/home
Interreg Baltic Sea Region	Interreg B	Oct 2017 – Sep 2020	www.slu.se/balticforbio
enabling	H2020	Dec 2017 – Nov 2020	www.enabling-project.com

New value chains and business models

CSAs projects' achievements

- ✓ **Online platforms/clusters** supporting development of new bio-based products & **creation of value chains**, supporting co-innovation partnerships, facilitating knowledge sharing across European bioeconomy regions, promoting good practices and inspiring examples
- ✓ Catalogues of **replicable business models/pathways** to fully realize rural/regional bioeconomy potential
- ✓ Identify and address **cross-collaboration and implementation challenges** along the value chain
- ✓ Identify and facilitate **creation of cross-sectorial and cross-border new bio-based value chains**

New value chains and business models

Gaps still to be bridged

- ✓ **Lack of awareness/understanding** about (a) emerging opportunities and (b)replicable business models
- ✓ **Lack of skilled workforce** along the value chains
- ✓ Need for a **supportive environment** promoting integrated solutions for full biomass valorisation
- ✓ **Involvement of all actors along the value chain**, in particular primary producers (feedstock suppliers) and investors, is needed
- ✓ Need for innovative, scalable, transferable and replicable **business models** that match local realities to adapt global ideas and process to local conditions, resources and mindsets
- ✓ Need for **impact assessment studies** to validate the applicability of new business models
- ✓ Need to make less-mature (but long-term promising) value chains competitive with markets that are incentivised (like biogas)

New value chains and business models

Recommendations

- ✓ A collaborative **assessment of the different business models and value chains** could be conducted, to generate insights and recommendations for new bio-based value chains. Consolidate outcome in an online catalogue
- ✓ **Raise awareness, educate, showcase and demonstrate** the added value of new business opportunities and scalable innovative business models to primary producers and industries to drive the transition, create new value chains and attract investments.
- ✓ **Successful concepts and initiatives** stimulating networking and knowledge transfer should be continued and replicated in different contexts.
- ✓ Build regional **multi-stakeholders bioeconomy hubs** engaging different types of stakeholders, representing the quadruple helix stakeholders as well as actors from along the value chains, to create a critical mass, decrease risks and address hurdles and barriers.
- ✓ Support initiatives interconnecting different value chains for promoting full biomass valorisation to create more resilient, effective and sustainable **ecosystems for the bioeconomy**

New value chains and business models

Interactive discussion

MENTIMETER INTERACTIVE SESSION

Open innovation platforms and facilities

More info

EUROPEAN BIOECONOMY LIBRARY

FACTSHEET #10

Open Innovation Platforms and Facilities

01 THE CHALLENGE

Several supporting activities can contribute to unlock the innovation potential of industries (in particular of SMEs and start-ups) in the bio-based sector, reducing the operational costs and increasing their competitiveness. These activities include open access research infrastructures, where interested parties can take advantage of operating equipment and facilities they may need, to carry out lab, test or pilot work.

Recent European projects promote open innovation and access to open research infrastructure, either by informing about their existence, subsidising (small and medium) industries to use them, or brokering bio-based industries and downstream sectors. Some of these projects provided additional services, including the promotion of networking opportunities, knowledge transfer and capacity building for SMEs and start-ups.

02 HOW COORDINATION AND SUPPORT ACTIONS (CSAs) ADDRESS THE CHALLENGE

Networking of Shared Research Infrastructure

Pilots4U (BBI JU) set up a **network of open access pilot and multipurpose demo-infrastructures** with Europe-wide coverage (in collaboration with EIRFORE and SmartPilots projects). Pilots4U analysed the current capabilities of these infrastructures as well as the needs of the European bio-based industry for them. The project will also produce a gap analysis to identify deficiencies in the existing provision of bio-economy scale up equipment and process plant, and a plan with remedies, actions and proposals for bridging the identified gaps.

EFIFORE (H2020) aimed to establish open access distributed forest bioeconomy research infrastructure across Europe. The project assessed (1) sources of forest-derived biomass and their availability and (2) existing expertise and equipment of project partners on the processing steps to convert forest biomass into valuable end products. Main result is the preparation of a plan for an **European Strategy Forum on Research Infrastructures** project to establish a globally competitive, open access distributed research infrastructure in the Field of forest-based bioeconomy. The **design study** work was based on extensive mapping of research needs and drivers, availability and development needs of existing research infrastructure and collaboration in the field of circular forest bioeconomy.

Factsheet: Challenges to be addressed in **Open innovation platforms and facilities** projects' main results, gaps to be bridged and recommendations.

Open innovation platforms and facilities

Related projects/Sources:

Acronym/logo	Programme	Duration	Website
Pilots4U	BBI JU	Jun 2017 - Aug 2019	www.biopilots4u.eu
SmartPilots Interreg Europe	Interreg Europe	Apr 2016 - Mar 2020	www.interregeurope.eu/smartpilots
Superbio	H2020	Jun 2016 - May 2019	www.h2020-superbio.eu
ERIFORE	H2020	Feb 2016 - Jan 2018	www.erifore.eu
Interreg North-West Europe BioBase4SME	Interreg NWE	Mar 2016 - Aug 2019	www.nweurope.eu/projects/project-search/bio-innovation-support-for-entrepreneurs-throughout-nwe-regions/
Bio Base NWE Innovation and training for the biobased economy	Interreg NWE	Jan 2013 - Dec 2015	www.biobasenwe.org/en/home/

Open innovation platforms and facilities

CSAs projects’ achievements

- ✓ An analysis (database) of **current capabilities of open access research infrastructures** and the needs of the European bio-based industry for them.
- ✓ **Start-ups & SMEs facilitated** to bring their bio-based innovations to the market by providing (access to) open access research infrastructures and tailored supporting services (vouchers).
- ✓ Gap analysis, plans and recommendations for expanding **open access bio-economy scale up equipment and process plants**.
- ✓ **Collaboration** among technology providers and local clusters.

Open innovation platforms and facilities

Gaps still to be bridged

- ✓ **Insufficient analysis and understanding** of the effectiveness of shared research platforms and facilities in supporting the industrial fabric in the bioeconomy.
- ✓ **Lack of integration** among political and industrial strategies and available shared research facilities that could easy the scale-up of small industries.
- ✓ The **potential added value** of a specific shared research platform/facility is not sufficiently clear, transparent and attractive to the intended beneficiaries.
- ✓ In general no lack of open access pilot and demo facilities, but rather a **strong need to further strengthen and invest in existing open access infrastructures** to keep them state-of-the art and increase flexibility.
- ✓ Good quality, reliability, availability of shared data in existing online platforms is perceived as not sufficiently ensured.
- ✓ **Lack of mechanism** to incentivise the sharing of valuable data in online platforms. **Concern about IPR** issues.
- ✓ **Vouchers schemes** mainly target smaller sized companies in specific regions.

Open innovation platforms and facilities

Recommendations

- ✓ **Role of shared-research facilities and open platforms** should be valorised as a solution to reduce technological risks and investments needed at early stages or to scale-up.
- ✓ The **potential of existing open access infrastructure could be optimized.** The risks of duplication can be minimised by creating collaborative networks that own complementary infrastructures within a specific value chain.
- ✓ To maximise the investments in and the potential of existing facilities, **better mobility of funding** across Europe, especially on a cross-regional basis, is required, by extending the remit of existing regional funding mechanisms.
- ✓ **Promote the collaboration among clusters/companies and service providers** (shared research facilities and open innovation platforms) to facilitate the merge among the available technologies and the requirements, knowledge and networks of local actors.
- ✓ Establish a **voucher system** to support industry to access technical and non-technical innovation support services.
- ✓ Integration of various open innovation resources and platforms in bioeconomy, providing **a single-entry point** to access opportunities.

Open innovation platforms and facilities

Interactive discussion

MENTIMETER INTERACTIVE SESSION