

AlpBioEco

Regional implementation guidelines for the realization of a business model

Region: Bavaria

Business model: **Digital service platform**



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1. INTRODUCTION

The ecosystems of the Alpine region are exposed to environmental problems related to economic activities and climate change. In addition, farms, handicraft and processing businesses in the European Alpine Space face strong competition from globalization. The development of a sustainable bioeconomy therefore represents an enormous potential for green growth and employment, especially for the Alpine Space. The innovative use and valorization of regional resources enables the strengthening of local actors. So far, many bioeconomic potentials are not yet exploited, also because many value chains in the Alpine Space are currently poorly interconnected. Many apparent waste or by-products are not used, end up in waste or are composted instead of being further developed into new products in the sense of an ecological circular economy.

In addition, there is a lack of coherent policies and strategies that promote the potential of bio-based value chains. This is where the AlpBioEco project comes in: Using innovative methods, it contributes to an integrated, territorial development of the agricultural sector, promotes innovation, especially for small and medium-sized enterprises (SMEs), and thus strengthens the economy and cohesion in the European Alpine region.

The overall objective of AlpBioEco is to promote a sustainable economy and to strengthen the markets and competitiveness of the bio-based economy in the European Alpine Space. The focus is on the value chains of bio-based food and plant extracts. In the project, exemplary work is done in particular on the value chains of walnuts, apples and herbs. These were analyzed and their potentials identified. Using "open innovation" concepts, AlpBioEco developed suitable business model concepts for different regions.

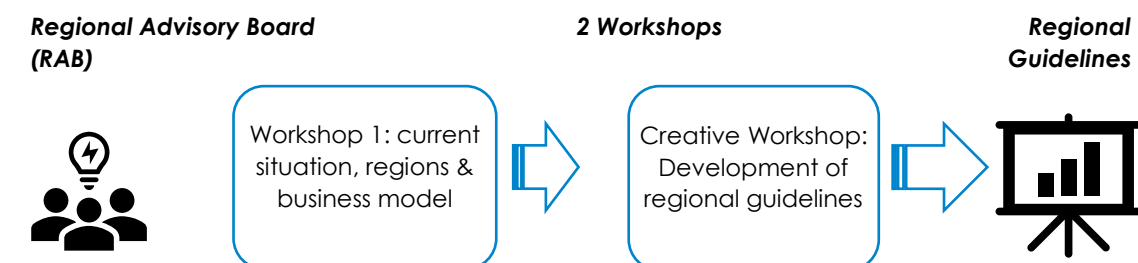
With the help of this guide, the implementation of these business model concepts and the bioeconomy as a whole will be advanced in Bavaria. On the one hand, this guideline formulates clear recommendations for the decision-makers in politics and in key economic positions, such as ministries, clusters and research institutions. On the other hand, this guide is also aimed directly at producers and companies that are looking for new market niches and want to develop further. For them, a detailed roadmap shows the next steps for implementing interesting business model concepts - from market analysis to final product development. This roadmap includes important information on the raw material situation and funding channels. This facilitates the implementation of the business model.

2. METHODS

To develop a guide for all project regions, which specifically focuses on this business models, Regional Advisory Boards (RAB) for each of the 10 regions were created. The RAB consists of experts from different fields (politics, economy, regional development, agriculture, food production, food supply, legal representatives of interests). All those experts provide their expertise and together they work on a successful implementation of the business model. The RAB dynamically connects all relevant stakeholders of a region to create and strengthen new supply chains and new opportunities that have not been utilized previously. The RAB consists of the most important stakeholders of the bio-economy sector within a region and it also provides a network which is of importance for future platforms or projects.

First step was to collect information from a region and show the current situation. This was made by the RAB in different workshops under the supervision of an AlpBioEco project partner. Second step was to develop a common vision of how to elaborate recommendations for politics based on the

project. This was made in a second workshop with creative workshop methods like for example: Lego Serious Play®, Mural Tool or PESTEL. Due to the current health situation (Covid 19) all meetings were held online, offline, or hybrid versions.



Work steps performed when developing regional guides

One member per RAB was nominated as chairperson. This chairperson is responsible for the presentation and discussion of the developed recommendations in an international working meeting, the "Transnational Transfer Meeting". At this meeting not only the regional guidelines are presented, but also a transnational and transregional guideline is developed together. In this guideline, transnational and transregional guidelines are developed in which the project regions are depicted as model regions and pioneer regions for other regions and thus function as model regions. The guidelines ensure transferability to other regions.



Work steps performed when developing transnational guides

Overview Members RAB Region Bavaria:

Function	Name	Business / Organisation	Sector	Network
Chairwoman	Magdalena Buch	Chemistry Cluster	Cluster	regional, national, international
Member RAB	Johanna Kallenbach	Food Cluster	Cluster	regional, national, international
Member RAB	Silvia Hrouda	Competence Center for Nutrition – KErn	R&D, Science	regional, national
Member RAB	Prof. Dr. Tobias Chilla	University of Erlangen-Nuremberg	Science, Regional Development, Apprenticeship	regional, national, international
Member RAB	Dr. Andi Wieser	Byprotex	SME	national
Member RAB	Peter Sanktjohanser	Byprotex	SME	national

Our Regional Advisory Council pursues political, scientific or ecological-economic aspects of sustainability through the orientation of its work. The goal is a more sustainable future and bio-based economic cycles.

3. MODEL DESCRIPTION

The digital platform is intended to create a virtual marketplace for all kinds of biobased products, such as raw materials or biobased "waste material". The offer is not limited to walnuts, apples or herbs, but can offer a variety of feedstocks. This is intended to improve the use and trade of material with bioeconomic potential. At the same time, it serves as a virtual space to exchange information and ideas about these materials. The connection of small businesses, farmers, private persons or scientific institutions creates an innovative network. The digital platform bundles aspects of sustainability, digitalization, networking and the reduction of food waste and creates added value by opening up new, cross-sector value chains. In this way, by-products that were previously considered waste products can gain new value. Both suppliers and buyers benefit from this offer.



Pilot activities

For the further development of the platform business model, we worked together with contacts who already realize similar platforms or would like to realize them. With the help of expertise, including from the scientific side, we considered how the platform could bring the greatest benefit to stakeholders. The foundations needed for this, such as resources, data protection on the website or the image of the business model, were defined.

3.1 BUSINESS OPPORTUNITIES AND MARKETING

The target group includes people from various sectors: the start-up scene as well as farmers, private individuals and industry employees can benefit from these offers.

It is important that the issue of regionality is further promoted and remains in the foreground.

New economic cycles should be created and a big step towards sustainability should be made by reusing products. Of particular interest are the possibilities to improve the supply and availability of raw materials, to influence sustainable development and networking (e.g. in the Alpine region), how digitalization can contribute to more sustainability in the value chain and how transparency can be implemented. From the point of view of the project partners, the investigated "Digital Commodity Exchange for Sustainable Raw Materials" (original German title: Digitale Rohstoffbörse für nachhaltige Rohstoffe) is well suited as an innovative portal to improve regional networking and market transparency regarding raw and residual materials in the future.

Concrete and specific marketing recommendations regarding further platform development cannot yet be made at this point of the project.

3.2 ADDITIONAL INFORMATION AND CONTACTS

Further information on the Digital Service Platform business model can be found [here](#).

If you would like more information about this business model or our related research activities, you can contact the following AlpBioEco project partner:

→ Competence Center for Nutrition Bavaria, KERN, Robin Ehrhardt:
robin.ehrhardt@kern.bayern.de | www.kern.bayern.de

→ City of Sigmaringen, Anna Bäuerle:
alpbioeco@sigmaringen.de | www.sigmaringen.de

→ Biotechnical Center Naklo (Slovenia), Mihela Ferlinc:
mihela.ferlinc@bc-naklo.si | www.bc-naklo.si

We collaborated with the following organization to develop this business model:

→ Competence Center for Nutrition Bavaria, KERN (Germany), Silvia Hrouda:
silvia.hrouda@kern.bayern.de | www.digitale-rohstoffboerse.de

→ fortiss GmbH – State Research Institute of the Free State of Bavaria and
Affiliated Institute of the Technical University of Munich (Germany), Rainer Diesch:
info@fortiss.org | www.fortiss.org

4. STATUS QUO

4.1 BIOECONOMY

European Bioeconomy Strategies in Comparison

Four students from the University of Hohenheim analyzed and compared selected national bioeconomy strategies (France, Austria, Germany, Slovenia and Italy) for the development of a sustainable bioeconomy as part of their master studies in bioeconomy. A comparative overview of the strategies can be used as a basis for developing proposals to improve the existing strategies and to facilitate the innovation and implementation process of sustainable, ecologically innovative business models and to promote cross-regional and interdisciplinary cooperation in the Alpine region.

Here, it was found that the elaboration of bioeconomy strategies varies in the different nations, as well as in the level of detail. A few countries have not defined a bioeconomy strategy or do not set action plans following the strategy. The strategies are also strongly dependent on the background against which they were written, for example, Germany focuses strongly on the industrialization of the bioeconomy, while in France the strategy was published by the Ministry of Agriculture and accordingly sets the focus here.

Bavarian Bioeconomy Strategy

As early as **2010**, the German Federal Ministry of Education and Research drew up the "National Research Strategy BioEconomy 2030", which aims to fully utilize renewable raw materials from agricultural and forestry production. What is called for is a move away from limited availability of fossil source materials - toward a genuine circular economy. More and more industries are now consciously choosing renewable raw materials for their basic products.

In **2015**, the before mentioned Bioeconomy Expert Council was established. It is significantly involved in the development of the strategy. Prof. Dr. Volker Sieber, Rector of the Straubing Campus for Biotechnology and Sustainability at the Technical University of Munich, is the spokesman for the Council of Experts.

The bioeconomy strategy was presented on **23.11.2020: "Future.Bioeconomy.Bavaria"**.

The Bavarian State Ministry of Economic Affairs, Regional Development and Energy is responsible for the project, which is closely supported by the Bavarian Bioeconomy Expert Council and the Interministerial Working Group on Renewable Resources and the Bioeconomy. Based on regional location factors, the Bavarian strategy shows the way to a sustainable and ecologically responsible as well as socially just and future-oriented way of life and economy. It defines **50 concrete measures** to support all actors relevant for a bioeconomic transformation - society, administration and politics, agriculture and forestry, companies as well as science and research.

The Bavarian Bioeconomy Strategy pursues eight main objectives:

1. Reduction of the consumption of fossil raw materials through the implementation of a sustainable, future-oriented economy and the development of sustainable, biobased technologies, processes and products
2. Contribution to environmental protection, resource conservation and the protection of biodiversity
3. Contribution to the implementation of the objectives of the Bavarian Climate Protection Program 2050 and the Bavarian Climate Protection Offensive, in particular the legally binding objectives of a Bavarian Climate Protection Act
4. Promoting open dialogue and enabling social participation in order to achieve acceptance and understanding of the bioeconomy in the community

5. To contribute to the Bavarian way of "protecting and using" domestic renewable resources. The bioeconomy adds value to these resources and creates and secures new income perspectives and jobs in rural and urban areas.
6. Securing international competitiveness and opening up new markets through the trend-setting use of renewable raw materials as well as residual and waste materials, if possible according to the principle of coupling and cascade use. This triggers the development of new technologies, materials and substances as well as the necessary processes for innovative products. This creates new jobs within the framework of a sustainable economic system.
7. Striving to be a leading location for sustainable products and production methods and thus a role model for other regions.
8. Strengthening science for the further development of biological knowledge as well as a targeted transfer of knowledge to the economy.

Start-ups play an important role as technology drivers. This is why, for example, the "BioCubator" technology and start-up center in Straubing is being expanded by a second construction phase. A multi-purpose demonstration facility for biotechnology is being built in Straubing at a cost of 40 million euros.

Patricia Eschenlohr, a successful founder, is appointed to the new Council of Experts. With her company, Eschenlohr develops environmentally friendly straw-based packaging.

4.2 RAW MATERIAL

How much raw material is generated in the raw materials of the apple, walnut and herb value chains alone can be seen in the other business models. Bundling and expanding the product range would bring great potential for further new products.

Two platforms are currently already being set up and offer opportunities for linking up. From the government side, the "Digital Raw Materials Exchange" was developed at the Competence Center for Nutrition together with fortiss GmbH. The company "byprotex" is pursuing the same goal and is currently in a further development phase. Both are members of our regional advisory board.

Resources are needed for a successful implementation of the business model. In the spectrum of human resources, it needs at least one person to supervise, steer and further develop the platform. This "caretaker" oversees the activities on the platform and adjusts the content and technical direction as needed.

Workshop findings - the business model, and what is needed to achieve it:

Together with the RAC members, it was determined what the business model needs to achieve the desired goals.

A solid financial framework is the basic condition for a successful platform. For any platform, high registration numbers mean greater chances of success and better exchange through a large community. The networking aspects are crucial here. In addition to at least one responsible person, a lot of patience, persistence and strength are needed to build this up. The "caretaker" of the platform should be permanently employed in order to steer and further develop the platform in long term. The use of targeted advertising through a content strategy will lead to the desired higher level of awareness.

The exchange on the platform of new business or product ideas must be subject to clear share and protect rules. It must be ensured that companies benefit from a fair and open exchange and that their unique ideas remain so. "Out of the box" thinking and innovation should take a step toward sustainable product utilization. Through further pilot projects and experiments, the ideas can be tested for their suitability.

The buyers and sellers of the platform will be audited by the platform's management team. Transparency and openness are intended to build trust among the participants. Buyers and sellers benefit not only from the actual exchange of goods, but also from networking and the exchange of know-how. For consumers, the informative basis can create a better awareness of food and the seriousness of food waste. In the long term, this should lead to a change in attitude among consumers and producers with regard to food waste and bio-based value creation cycles.

4.3 ASSESSMENT OF MARKET AND CONSUMER BEHAVIOR

Not only because of the CoVid 19 pandemic, the request for regionality is growing in all areas. Local suppliers, small companies with good ideas and unconventional implementation methods are currently enjoying increased demand and interest. Consumers are becoming more and more aware of products from sustainable production. A platform that supports companies in sourcing raw materials in order to launch innovations and sustainable products is in line with the spirit of the times.

4.4 RESEARCH AND DEVELOPMENT

The current market situation shows that the idea of such a platform is not new and that similar approaches already exist.

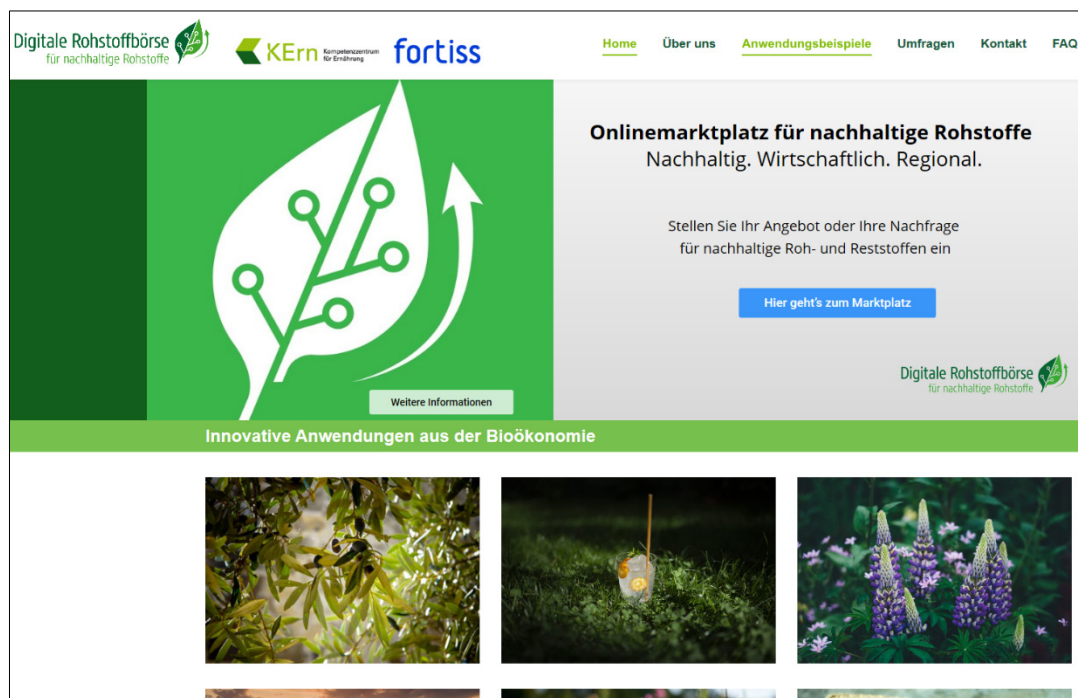
- On the government side, there is a comprehensively elaborated approach from research and development. The "**Digital Commodity Exchange for Sustainable Raw Materials**" pursues the same goals. It is intended to bring together the players in the biobased economy via a digital economic platform and to promote the formation of value creation networks. Development and establishment are in the service of resource conservation. Currently, exploratory talks are being held with the chemical cluster (Ms. Buch is the chairwoman of our regional advisory board) on the operator model, further use and evaluation.

„The project is currently being successfully completed. A launch is planned for the 2nd week of December 2020.“ Silvia Hrouda, Project Manager

Hopefully, this also guarantees the chance for further development. Fortiss GmbH supports the transfer of knowledge.

Already now, every user can test the prototype of the online marketplace and get to know the diverse functions. After the end of the project period in February 2021, the source code of the Digital Commodity Exchange can be used as an open source license, further developed - and possibly used commercially. For more information see project page: <https://www.digitale-rohstoffboerse.de/quellcode/>

Figure 1 Digitale Rohstoffbörse, screenshot of the homepage (status 02.12.2020)



- The company **Byprotex GmbH** is a member of our regional advisory board team and pursues the goal of an independent B2B platform. This digital marketplace is intended to connect producers, traders and industrial buyers directly with each other. The customers are to be accompanied on the marketplace from the business initiation to the complete process handling. The workflow-based creation of relevant documents, as well as the audit-proof exchange of data, are to enable seamless traceability. Their goal is to act as a full service provider. Byprotex wants to curb food waste for animal and plant by-products with the help of a B2B platform. The start-up is currently in a reorientation phase after the initial concept did not meet with the desired response. Part of the concept is the participation of the operator in the value creation ("commission").

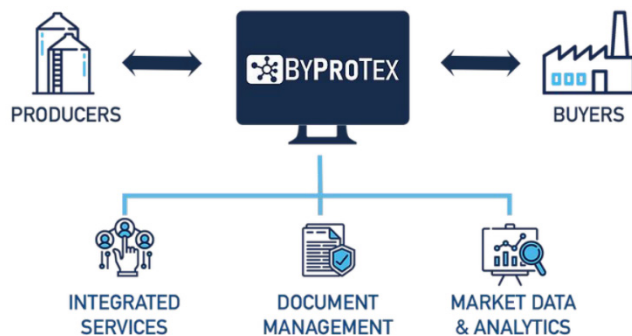


Figure 2 Byprotex business model, Source: Byprotex

"In addition, some companies are afraid to disclose information about themselves on a platform, even if the information is anonymized at Byprotex. But it's only a matter of time before digitalization also takes hold in the market for animal and plant byproducts. After all, the platform allows our customers to save a considerable amount of time and money."

Dr. Andi Wieser, Managing Director

What are the next goals for Byprotex

Volume onto the platform so that trade really takes place there.

"We are also looking for investors who want to take a stake in Byprotex or who might also be interested in an acquisition. Ideally, we would like a company builder who has the appropriate networks and can help us on the sales side to win customers,"¹ says Wieser.

4.5 FUNDING AND LEGAL FRAMEWORK

Institutions such as the Bavarian clusters, the LfA Förderbank Bayern, Bayern Kapital, the European Circular Bioeconomy Fund (ECBF) or the High-Tech Green Fund (HTGF) as well as the Bavarian Research and Innovation Agency (BayFIA) initiated by the Bavarian State Government support Bavarian companies and research institutions with innovative projects.

The following contact points and programs should also be mentioned:

- Bavarian collaborative research program "Materials and Substances"
- Bavarian collaborative research program "Lifescience, focus on biotechnology and genetic engineering"
- Bavarian funding program "Technology-Oriented Business Start-Ups" (BayTOU): The aim of the funding is to encourage the establishment of company start-ups in future-oriented technology areas.
- Bavarian Technology Support Program plus (BayTP+): The support is intended to enable companies to develop technologically new products and processes and to facilitate the application of modern technologies in products and production.

¹ Source: Interview 5-ht, 02.10.2020, <https://www.5-ht.com/2020/10/02/mit-einer-digitalen-plattform-gegen-die-lebensmittelverschwendung/> [Stand 25.11.2020]

- Bavarian Innovation Voucher" program: Support for cooperation between small companies and craft enterprises and external research and development institutions through the award of innovation vouchers.

In addition, there are funding opportunities at federal and EU level, e.g. from

- the Agency for Renewable Resources (FNR),
- KMU-Innovativ: Bioeconomy, material research, resource efficiency (BMBF),
- Ideas Competition Biologization of Technology (BMBF),
- Central Innovation Program for SMEs (ZIM) or
- EU funding for bio-based projects in the Horizon 2020 program of the Bio-Based Industries Joint Undertaking.

The European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-Agri) is another funding instrument aimed at strengthening innovation in the agricultural sector.

4.6 OVERVIEW TABLE

The table below was completed by the Regional Advisory Board according to their experiences, assessments, and level of knowledge regarding the business model. Since this advisory board is comprised of individuals from a variety of disciplines with perspectives from many directions, it provides a good overview of the current starting point in the region.

The term "excessive/unproblematic" defines that these areas are present to such an extent that it is possible to implement the business model without much work, or that the framework conditions are such that they no longer need to be changed. The term "too little/problematic" is used to summarize all those areas in which changes still need to be made so that the business model can be implemented.

Table 1 Summary table - overview

	excessive/ unproblematic	sufficient	middle	Too less/ problematic
Raw material in the region	✓			
Raw material producers in the region	✓			
Market and consumer		✓		
Competing products				
Dealer and Trader				
Interested project partner		✓		
Possible processors and implementers of the BM		✓ Chemie Cluster and Partner		
Research institutions in the area of the BM		✓		
National research / nationale experts		✓		
International research / International experts				
Legal framework			✓ share+ protect: protect intellectual property	
Promoter of the business idea (stakeholders / areas / people)		✓		
Regional funding			✓	
National funding			✓	
International funding			✓	
Research funding			✓	
Project development funding	✓			
Market maturity / marketing promotion		✓		
Additional financing possibilities			✓	

GUIDELINES FOR STAKEHOLDERS

Political decision-makers and representatives of interest groups not only have an influence on the legal framework and laws, but also have a decisive influence on the direction in which a region develops. Whether innovations and visionary ideas are implemented and fall on fertile ground in which they can grow depends not least on the environment shaped by politics. With the help of strategy papers, a common economic and research policy is defined in advance for a region. It is important for all co-decision-makers to consider and keep an eye on all aspects.

These guidelines are addressed to political decision makers, representatives of interest groups (chambers) and clusters. It provides assistance and serves as a basis for strategic decisions, especially in the field of bioeconomy, which will play an increasingly important role in regional regulations in the future.

STRENGTHENING THE REGION

Bavaria is characterized by family-run companies. This is both a strength and a challenge when it comes to networking the small-scale structure of the businesses.

"The heart of our agriculture and forestry beats in rural areas. Here, therefore, there are the best conditions for the bioeconomy. Because where renewable raw materials are produced and processed, new jobs are also created in an innovative environment."

Bavarian Minister of Economic Affairs Hubert Aiwanger

On the industrial side, there are high-performance companies in Bavaria and a great deal of expertise in the clusters promoted by the Free State. With its strategy, the Ministry of Economic Affairs also promotes networking among the clusters of forestry and wood, chemistry, new materials, industrial biotechnology, environment and nutrition in order to advance the bioeconomy across industry boundaries. The state government is also supporting the construction of a multi-purpose biotechnology demonstration plant in Straubing with 40 million euros.

RECOMMENDATIONS FOR STAKEHOLDER REPRESENTATIVES

For the business model to become attractive to companies, framework conditions must also be created by policymakers to facilitate implementation or, in many areas, make it possible in the first place.

The Bavarian Regional Advisory Council is almost unanimous in its opinion that establishing a platform for residual materials requires staying power, a good network and the right supporters. It is not initially seen as a business model in the sense of a profit-generating company or a company that is itself involved in value creation. If it is possible to further expand the network that has been created and to provide further examples of good practice, it is conceivable that it could be part of the value chain as a further development step from a contact exchange to a full-service platform.

In order to support the transformation to bioeconomic production as a society and region, we recommend public support for the establishment or further development of the platform. (Initially) without profit or commission claims, as for example in the case of government-operated

platforms in order to build up as large a network as possible and to ensure the density of suppliers and customers. Only in a second or third step can a full-service character with logistics and invoice processing be implemented as a "premium" variant. It would be advisable to start with a pilot phase in just one region.

In two workshops with key representatives of the relevant stakeholders, these framework conditions were discussed and consideration given to where the key factors for implementing the business model lie. Subsequently, recommendations for politics, business and the environment were defined, with the help of which the business model can become a success.

Key political factors:

- EU regulations, such as Green Deal, Farm to Fork ²
- Improving supply chain security
On June 17, 2020, the German Federal Cabinet approved **the third German Resource Efficiency Program** at the proposal of the Federal Ministry for the Environment. With this, the government wants to achieve an economical use of raw materials. The intention is for companies to make better use of the value chain and make greater use of digital media and solutions in this context.
- Good public relations work must address a broad audience and reinforce to consumers the importance of environmental protection. Consumers need to be educated to recognize the added value of biodegradable packaging. This is also stated in the Bavarian Bioeconomy Strategy called Measure 10, where it states:

10

Maßnahme

► **Plattformen für den Bürgerdialog**

Es werden **Dialogplattformen** geschaffen, um einen offenen Diskurs mit der Gesellschaft zu führen und Fragestellungen zum Thema Bioökonomie, ihrer Vorteile, Rahmenbedingungen und ökonomischen Perspektiven zu diskutieren. Besonders berücksichtigt werden hierbei aktuelle Umweltveränderungen, Vorgaben der Ökonomie, planetare Grenzen, Biodiversität und Ökosystemdienstleistungen sowie Abhängigkeiten der Menschen von der Natur.

Figure 3 Measure 10; Bioökonomiestrategie Bayern, Zukunft.Bioökonomie.Bayern, Transformation nachhaltig und innovativ gestalten, 2020, S. 26

- **Commitment to regionality:** Policymakers must promote the region, regional products and sustainability aspects even more strongly than before through political measures and funding guidelines.

Key economic factors:

- **Conflicting goals between economy and ecology**, caused by scarcity of raw materials on the one hand, competition for raw materials, price stability and security of supply on the other, require new economic approaches.
- **Budget and resources** are initially on the side of the operating state organism (cluster, authority, university or similar):
- For the implementation of a second phase - operators with full-service add-ons - appropriate innovation funding is required, both for the development of the innovation and research and for the market launch of the product itself.

"Here in Bavaria, we have the best conditions for ecological transformation. Agriculture and forestry provide a variety of high-quality biogenic raw materials in large quantities. Excellent research and training facilities guarantee the development of innovative and sustainable

² https://ec.europa.eu/food/farm2fork_en [Stand 04.12.2020]

products. Bavaria's industry is traditionally innovative, future-oriented and equipped for the new challenges with high-performance companies."

Bavarian Minister of Economic Affairs Hubert Aiwanger

Key social factors:

- **Networks/Cooperations:** The existence of a good network and cooperation partners are success factors. Bavaria has already made good progress in this area.
- Promote fair production conditions, wages and trade through good governance.

Key technical factors:

- Interdisciplinary cooperation between the individual research institutions and with other disciplines, as well as cooperation with companies are important prerequisites. **Bavaria has already made good progress** in this area.
- Platform model as **innovation driver** for environmentally friendly technologies, opportunities to reduce CO₂.
- **Digitization** has a strong influence on society, politics and the economy and is also the innovation driver of the future. Digitization enables new business models and opens up additional opportunities for companies in the expansion of business areas.

Legal framework

- Why should the BM be promoted, why does it make sense to implement this BM, what are the benefits for the region? Why should we make a new funding pot for this BM?

A networking platform, possibly even a full-service platform in the medium term, can act as an incubator or accelerator to drive sustainable business relationships and ultimately product innovation.

Funding for such a platform is already envisaged in the Bavarian Bioeconomy Strategy (Measure 43, see below).

- Potential analysis: Why should the BM be implemented?!

A close-meshed network, which on the one hand makes raw materials/residues discoverable and on the other hand links a start-up culture for the transformation of production processes, holds great potential for the region and its future viability.

- How does the BM fit perfectly into the bioeconomy strategies (EU - level, National level and Regional level)?

In addition to Farm to Fork, the platform model fits perfectly into Measure 43 called out in the Bavarian Bioeconomy Strategy, where it states:

► **Aufbau eines Digitalen Portals zur Bioökonomie**

Die Bayerische Staatsregierung baut ein digitales Portal für Stakeholder und Akteure der Bioökonomie auf. Die Plattform dient der Wissensvermittlung über konkrete Anwendungen der Bioökonomie in verschiedenen Branchen, zur Information über aktuelle Trends und Technologien und bietet Unternehmen die Möglichkeit, sich über das Portal mit Partnern aus Industrie und Wirtschaft zu vernetzen. Die Nutzer der Plattform können so Kooperationen aufbauen und Geschäftspartner für den Aufbau von bioökonomischen Wertschöpfungskreisläufen akquirieren.

Figure 4 Measure 43; Bioökonomiestrategie Bayern, Zukunft.Bioökonomie.Bayern, Transformation nachhaltig und innovativ gestalten, 2020, S. 63

- Is the BM a unique selling point or has this been implemented elsewhere in Europe? (Transnational)

A successful networking platform in terms of capturing bioeconomic potentials that goes beyond approaches is not known to the authors in the European Alpine Space at the time of the report [Status 04.12.2020, Team AlpBioEco, business model #03].
- How many jobs would a BM bring to the region?
The successful operation of a supra-regional platform would perhaps only require three people as full-time labor, but it would directly contribute to the preservation and creation of more jobs.

GUIDELINES FOR SMALL AND MEDIUM-SIZED ENTERPRISES TO IMPLEMENT THE BUSINESS MODEL

We do not recommend setting up a new digital platform independently as a business idea for your own company. Instead, we recommend supporting the existing projects mentioned and contributing to network building. SMEs are invited to discover and use these digital platforms, to participate in pilot phases and to become part of the further development. Through the already existing network, synergy effects can arise from which all sides can benefit.

Readers will find below a general overview of the most important points of the start-up process. The facts and figures shown here will support you in the first steps towards implementing the business idea and enable initial assessments of raw material research, environmental and market analysis. A digital raw material exchange can give an important contribution to the raw material and market research.

Roadmap





START

1. You want to develop yourself and your business and have decided to produce biodegradable packaging and disposable tableware from apple pomace? Step by step, this roadmap will guide you from the selection of the business model to the launch of your product.
2. Be aware of the extent to which you want to enter the market and research the quantity and quality of apple pomace available to you. Specify your product with the help of a market research (disposable dishes, nets, cardboard boxes or foils?) and research details on the current state of the art in order to target your investment. Consumers demand new solutions in the field of degradable packaging - analyze the zeitgeist and plan the implementation.
3. More research is needed to develop biodegradable packaging. Research within this project at FH Wels needs to be continued. Depending on the type of packaging, apple pomace must be of appropriate quality. An analysis of different apple pomace is indispensable. A further development yes according to product idea necessary. Look for appropriate partners for research and submit your project for research funding.
4. Find the right partner to concretize your ideas. A list of possible partner companies that are already interested in degradable packaging or are already working and researching with it, as well as research institutions working on biodegradable materials can be found in this document.
5. Develop your product with the help of your partners. In this process, workflows must be standardized. Ensure that there is no variation in the quality of the product.
6. Choose the right partners for the launch. The first choice for marketing disposable tableware and packaging products would be business-to-business - "B2B" business models. For example, standardized products can be sold and distributed through foodservice suppliers and through wholesalers. A second promising opportunity would be B2B marketing by working with food manufacturers who want to use more sustainable, alternative packaging materials.
7. Fix their customer and supplier relationships and enter the market together with your partners. Targeted marketing campaigns inform customers and increase market opportunities.
8. You have developed yourself and your company through collaboration with other companies and research institutions and an excellent sustainable product enriches the market.





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