

## AlpBioEco

# Regional recommendations for the implementation of a business model

Germany - Tübingen/Oberschwaben - BM: **Walnut Flips**



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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 region 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 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.

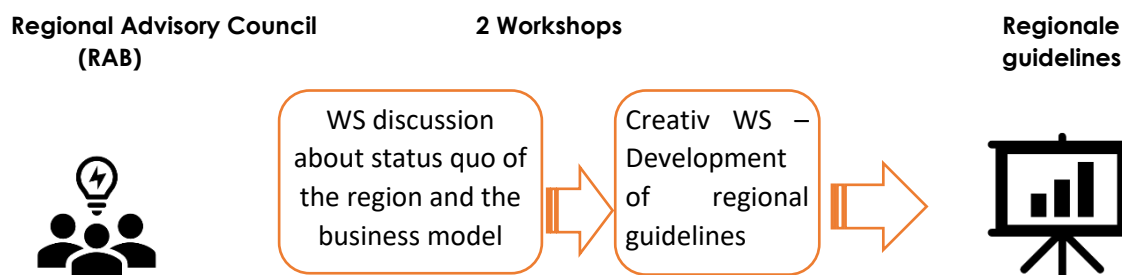
With the help of this guide, the implementation of these business model concepts and the bioeconomy as a whole in the Allgäu-Oberschwaben region is to be advanced. For this purpose, clear recommendations are formulated in this guideline for the decision-makers in politics as well as in the key economic positions, such as chambers, 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. A detailed roadmap leads from the market analysis to the final product development and includes important information on the raw material situation and funding channels. This facilitates the implementation of the business model.

## 2. METHODOLOGY

In order to be able to develop guidelines for all project regions that deal specifically with the business model concepts, a Regional Advisory Board (RAB) was established for each of 10 regions. This consists of experts from different areas and sectors (politics, economy, regional development, agriculture, food production and supply, interest groups) and thus brings in the most diverse expertise and works together on the successful implementation of the business model. This body dynamically connects the relevant stakeholders in the region to create and strengthen new value chains that lead to economic opportunities that have not been considered before. As the RAB is composed of key bioeconomy stakeholders within a region, it builds a network that is also relevant for future platforms / projects / recommendations.

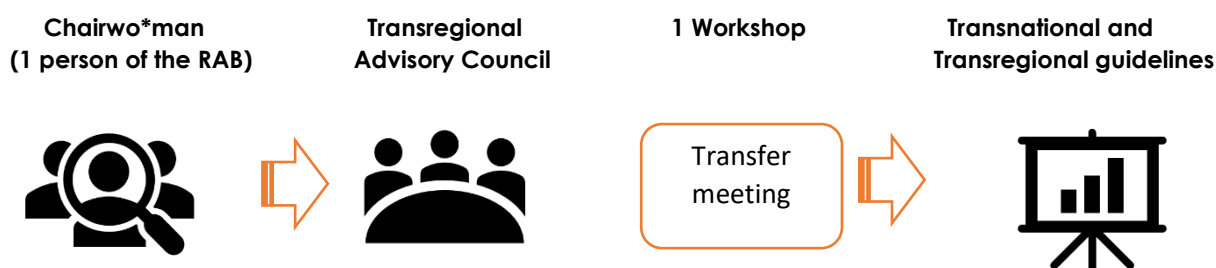
In a first step, the RAB collected information from the regions in workshops led by an AlpBioEco project partner and worked out the current status quo of the respective region. Based on this, a common vision was developed in the second workshop using a creative workshop method, e.g.

Lego Serious Play®, Mural Tool or PASTEL, in order to draft policy recommendations based on this. Depending on the current health situation (CoVid19), the meetings took place online, offline or as hybrid events.



Work steps for the development of the regional guidelines

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 the transferability to other regions.



Work steps for the development of the transnational guideline

#### Overview Members Regional Advisory Council Upper Swabia/Tübingen Region:

Funktion	Name	Unternehmen / Organisation	Bereich	Ebene der Vernetzung
Vorsitzender	Sascha Damaschun	BODAN	Natural food trade	National
Mitglied RAB	Bruno Kriegelstein	Ministerium Ländlicher Raum und Verbraucherschutz Ba-Wü	Ministry for agriculture, rural areas and consumer protection	International
Mitglied RAB	Lena Schuttkowski	REMO Mittleres Oberschwaben	LEADER	Regional
Mitglied RAB	MdL Martin Hahn	Landtag Baden-Württemberg	Member of the parliament of Baden-Württemberg,	National
Mitglied RAB	Cornelia Ptach	Sinne und Sensorik	Food-chemistry	National
Mitglied RAB	Andreas ter Woort	Hochschule Albstadt-Sigmaringen	Innovationen und Wissenstransfer	National

The following contents were developed in several workshops with stakeholders from the administrative district of Tübingen (in the state of Baden-Württemberg). In some cases, stakeholders from outside this region were also involved - from ministries, economic development agencies, oil mills, walnut associations and walnut cooperatives.

## 3. DESCRIPTION OF THE DEVICE MODEL: WALNUT FLIPS

### 3.1. PRODUCT DESCRIPTION

Walnut flips are puffed snacks or puffed additives for cereals or energy bars made mainly from starch, e.g. potatoes, wheat or corn, and walnut press cake. Flips can vary widely in shape and size: As small pellets, they can be part of cereal for breakfast. As larger flips, similar to the well-known peanut flips, walnut flips can be a snack served with appetizers - at business events, at the movies, but also at home as a healthier and regional alternative to potato chips.



*Walnut pomace and raw oats*

*Prototype Walnut Flips*

*Photos: Ulfried Miller*

Walnut Flips can be produced in two ways. One way is to use already made starch extrudates that are then coated with oil, spices and walnut press cake. The second option is to include walnut press cake in the extrudate mass and then process the mass into foamed extrudates so that the starch extrudate also contains walnut press cake. For smaller companies, the first option seems more attractive because it requires less product development, less technological know-how, and less investment in production equipment. Therefore, the following business and marketing opportunities refer only to the coated version.



In the project, different varieties of walnut flips with different thicknesses, oils and flavors were produced. Extrudates made from oats and millet were used as a base. By coating these extrudate varieties with different spices, oils and different amounts of walnut press cake, we produced over twelve varieties in two stages, including walnut-chili, walnut-pepper, walnut-herb or even walnut-vanilla-cinnamon. The most popular savory flips were made with walnut oil, walnut press cake, paprika and salt. The most popular sweet version was made with walnut oil, walnut press cake, sugar and cinnamon, and was preferred as an addition to cereals.

### 3.2. BUSINESS MODEL AND MARKETING OPPORTUNITIES

The interest for the business model is very high from regional retailers, walnut farmers, and oil mill owners, because it is an innovative product that is not yet available on the market and could add value to walnut oil production. It opens up the possibility for oil mills to reuse walnut press cake, which until now is often used as animal feed, or even thrown away. For retailers, it seems to be an interesting regional and healthier alternative for conventional peanut flips. Nevertheless, some research is still needed regarding the business and marketing opportunities for walnut flips, as no detailed market study has been done yet. The flips can be produced and sold directly by oil mills. In addition, the production and sale of walnut flips could also be interesting for existing snack or cereal producers - they have relevant knowledge and the necessary technical equipment - or for a service provider.

If further allergens can be avoided (e.g. by using potato starch instead of cereals to make the product gluten-free) and the regional and health aspects are taken into account, the flips could also be interesting for people who care about a healthy diet and regional products. However, for both the spread and the flips, the regionality aspect complicates production, market placement, and development of an appropriate marketing strategy for regional flips. The regional sale of the walnut flips in conventional food retail (e.g. Rewe, Edeka) is hardly possible due to the low production volumes, the unclear certification and the seasonality. Therefore, direct sales seem to be the better option.

A successful marketing strategy needs good "storytelling" to highlight the regional origin, the health characteristics and the ecological aspect of preserving the old cultural heritage of the regional walnut trees. One strategic way to achieve this would be regional cooperatives of walnut farmers. The raw materials needed for the coating are oil and the by-products of oil production, making the snack more sustainable than similar existing products. Business relationships also need to be developed to bring the walnut flips to the end consumer on a larger scale. Here, (walnut) farm stores, farmers' markets, regional retailers, supermarkets, drugstores, cinemas, schools, universities, cafeterias, catering services or similar businesses could be conceivable

### 3.3. HURDLES IN IMPLEMENTATION

The first hurdle is the lack of a detailed market study. So far, it is not clear whether and under what circumstances this product would be successful on the market. In order to implement the business model, investments also need to be made in product development, expertise and equipment. In addition, the available product prototypes need further improvements in terms of recipe development

To produce the walnut flips, a grinder or cutter is needed to process the walnut press cake. In addition, a coating machine and a packaging machine are needed. As with other natural raw materials, the quality differences in the processed walnut press cake can be another challenge. Many oil mills produce walnuts from different owners and thus do not know about the prior treatment of walnuts. This increases the need for reliable quality management and flexibility in production. Due to the differences in taste and composition of walnut press cake depending on the batch, it is difficult to implement quality management and consistent taste. In addition, the product itself could be sensitive in terms of distribution and shelf life due to the fats it still contains after processing.

### 3.4. PROPOSALS FOR THE NEXT STEPS

The first step is to conduct an in-depth market analysis on raw materials, competition and demand to find out which walnut flips product is most promising: cereal pellets or flips (as a chips substitute and healthy snack). This will also require further research on the product and product development to ensure good taste and longer shelf life. In any case, oil mills play a key role. Based on this information, a cost-benefit analysis could be implemented to verify the economic benefits for walnut oil mills.

### 3.5. FURTHER INFORMATION AND CONTACT

More information about the Walnut Flips business model can be found here.

If you would like to receive more information about this business model or our related research activities, you can contact the following AlpBioEco project partners from Germany:

→ BUND Association for the Environment and Nature Conservation, Regional Association Bodensee-Oberschwaben, BUND, Ulfried Miller: [ulfried.miller@bund.net](mailto:ulfried.miller@bund.net) | [www.bund-bodensee-oberschwaben.net](http://www.bund-bodensee-oberschwaben.net)

→ City of Sigmaringen, Anna Bäuerle: [alpbioeco@sigmaringen.de](mailto:alpbioeco@sigmaringen.de) | [www.sigmaringen.de](http://www.sigmaringen.de)

For the development of this business model we have cooperated with the following company from Germany:

→ Sinne & Sensorik, Cornelia Ptach: [cornelia@ptach.de](mailto:cornelia@ptach.de) | [www.ptach.de](http://www.ptach.de)

## 4. STATUS QUO

### 4.1. BIO-ECONOMY STRATEGIES

#### 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 eco-economy, while in France the strategy was published by the Ministry of Agriculture and accordingly sets the focus here.

## Bioeconomy Strategy Baden-Württemberg

The federal state of Baden-Württemberg has a bioeconomy strategy. Its main goals are:

- Develop renewable and recyclable raw materials
- Reduce greenhouse gas emissions
- Strengthen biodiversity

The establishment of a raw materials exchange is planned. Contact person at the Ministry of Rural Areas and Consumer Protection is Alexander Möndel (Forestry Department).

Regional bioeconomy strategies do not yet exist. However, there are some good examples in the field of bioenergy (e.g. energy pellets from apple pomace, biogas from landscape management grass or food leftovers)

## 4.2. RAW MATERIALS

There are enough walnut trees - about 300,000 in Ba Wü alone. 30 kg of dry walnuts per tree would be available for the regional market - a maximum of 10,000 tons could be collected and processed.

However, there are only a few, small oil mills that process regional walnuts. There are large gaps between the Alb and Lake Constance and in Bavaria. Only small quantities of regional pomace are available (a few tons). The larger oil mills process imported walnuts (partly in organic quality)



Walnuts from the farm at the Ravensburg weekly market

Photo: Ulfried Miller



The biggest problem in collecting regional walnuts is quality and logistics. The variety is enormous, harvesting and drying is not done very professionally, and logistics are complex because farms often have only a few walnut trees (in Upper Swabia, an average of 3 trees = 100 kilograms). There are few receiving points and processing plants for walnuts.

Walnut pomace is not professionally marketed so far. A small part goes to bakeries (walnut flour) or is fed to animals (e.g. as bird feed).

There are oil mills interested in producing walnut flips:

- Martin Deuringer, Fronreute
- Wolfgang Schmid, Bad Wurzach

Several social enterprises are also being considered for services:

- Bruderhausdiakonie, Ravensburg
- Center for Psychiatry, Ravensburg
- Stiftung Liebenau, Meckenbeuren
- Zieglersche, Wilhelmsdorf
- Dornahof, Altshausen
- Regionalwert AG, Freiburg

We first need the product, with consistent quality and environmentally friendly packaging, and a marketing strategy with "storytelling". An organic certification would be helpful (prerequisite: collection certification of the walnut trees). Minderheim Mill (Rosengarten product line) in Bavaria is looking for new, innovative elements for muesli mixes. The Rubinmühle in Baden would also be a possible partner.

### 4.3. ASSESSMENT OF MARKET AND CONSUMPTION BEHAVIOR

Good distribution is important for marketing.

Customers for walnut flips could be restaurants, catering companies, cinemas and theaters, (walnut) farm stores, farmers markets, regional retailers, supermarkets, drugstores, schools, universities, cafeterias.

Marketing via the natural food trade is only possible with organic certification.

### 4.4. RESEARCH AND DEVELOPMENT

Unfortunately, universities and research institutions in Baden-Württemberg are hardly concerned with the walnut. Only the Albstadt-Sigmaringen University of Applied Sciences (<https://www.hs-albsig.de/hochschule/fakultaeten/life-sciences/>), the Agricultural Training and Research Institute in Weinsberg ([https://lvwo.landwirtschaft-bw.de/pb/\\_Lde/Startseite](https://lvwo.landwirtschaft-bw.de/pb/_Lde/Startseite)) and the Competence Center for Fruit Growing in Ravensburg (<https://www.kob-bavendorf.de/>) have "walnut expertise." While the HSAS has dealt with walnut products and ingredients, the state research and advisory centers are concerned with the diversity of varieties.

The Duale Hochschule in Ravensburg has experience in marketing issues (marketing concept, story-telling) and has already prepared a marketing study on the marketing of scattered fruit in the 1990s. (<https://www.ravensburg.dhbw.de/forschung-transfer/kompetenzzentren>)

The analyses and research conducted to date are documented and freely accessible to companies via the homepage [www.bund-bodensee-oberschwaben.de](http://www.bund-bodensee-oberschwaben.de) and <https://www.alpine-space.eu/projects/alpbioeco/en/home>.

## 4.5. SUBSIDIES AND LEGAL FRAMEWORK

The marketing company of the state of Baden-Württemberg (MBW) supports ideas and finances product developments (market launch, marketing, organic label). A call for funding will be issued at the end of 2020. Further funding programs are offered for the diversification of agricultural businesses. In the MLR, department 27 is responsible for this and provides advice. Contact for market structure support and diversification of agricultural enterprises (AFP) is the responsible head of unit, Albrecht Kümmel: [albrecht.kuettel@mlr.bwl.de](mailto:albrecht.kuettel@mlr.bwl.de); 0711 126 2297.

There are LEADER funds in many rural regions:

- <https://re-mo.org/>
- <https://www.wuerttembergisches-allgaeu.eu/>
- <https://www.leader-oberschwaben.de/startseite.html>

Financing is also possible within the framework of the common good economy:

- <https://wirundjetzt.org/projekte/wirundjetzt-projekte/regionalwert-ag/>
- [www.regionalwert-ag.de](http://www.regionalwert-ag.de)  
Contact person because of the regional value AG in Freiburg: Johannes Ell-Schnurr (supervisory board); Contact over alternative bio, Eschenweg 4,, 77746 Schutterwald, mobile: 015751151710, email: [jes@alternativebio.de](mailto:jes@alternativebio.de) oder executive committee Christian Hiss; regional value AG office, Bruckmatten 6, 79356 Eichstetten  
Tel: 07663-91436 0 Mail: [kontakt@regionalwert-ag.de](mailto:kontakt@regionalwert-ag.de) Internet: [www.regionalwert-ag.de](http://www.regionalwert-ag.de)

Laws that make it difficult or impossible to implement the business model are not known.

## 4.6. ADDITIONAL INFO AND FACTS FROM THE REGIONAL ADVISORY COUNCIL WORKSHOPS

Important partners for the implementation of the business model are

- Rubinmühle, Baden-Württemberg, <https://rubinmuehle.de/de/index.php>
- Minderleinsmühle, Bavaria <https://www.minderleinsmuehle.de/>
- IG Nuss, <http://www.ig-nuss.de/>
- Genussregion" – lead product 'walnut' in Burgenland (Austria) <https://genussburgenland.at/>
- Chips-Hersteller <https://www.luetolf-spezialitaeten.ch/produkt>
- Nußdorf Frümsen <http://nussdorf.ch/>
- Walnuss-Kompetenzzentrum in Malans <https://www.swissnuss.ch/>

The business models should be presented at trade fairs

- BioSüd (Augsburg)
- Good things from the lake (Constance)
- BODAN- Fair (Friedrichshafen)
- Slow food (Stuttgart),

Cooperations are possible within the framework of "organic model regions" - in Baden-Württemberg, many counties have a regional management to increase the share of organic agriculture.

Trading companies have international contacts that can be used in the transfer to other regions.



Storytelling in Frümsern

Photo: Ulfried Miller

## 4.7. 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" summarizes all those areas in which changes still need to be made so that the business model can be implemented.

	<b>excessive/ unproblematic</b>	<b>sufficient</b>	<b>medium</b>	<b>Too little/ problematic</b>
Raw material in the region			✓ ( Quantity)	✓ (Quality)
Raw material producers in the region			✓	
Market and consumers		✓		
Competitive products				✓
Trade, customer				✓
Interested project partners				✓
Possible processors and implementers of the business model				✓
Research facilities in the area of the business model				✓
National research/national experts				✓
International Research/International Experts				✓
Legal framework		✓		
Promoters of the business idea (stakeholders, areas, persons)				✓
Regional subsidies			✓	
National funding				?
International promotions			✓	
Research Funding				✓
Product development promotion				✓
Market maturity/marketing promotion				✓
Additional financing options				✓



**SWOT Analysis for walnut products: Spread and flips**

<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Risks</b>
<p>Raw material is known And healthy Positive image Good taste Traditional specialty</p> <p>Superfood</p> <p>Growing market</p> <p>Regional replaces imports</p> <p>New idea: Flips:</p>	<p>Raw material is bitter Allergen</p> <p>Variety of varieties Cultivation structure Risk of late frosts and smaller harvests Difficult logistics Expensive organic certification</p> <p>Varying quality Danger of mold</p> <p>Little knowledge in population about valuable ingredients</p> <p>Little cooperation</p> <p>No network</p> <p>For walnut spread: competition with other spreads</p>	<p>Raw material and end product: Healthy regional Positive image</p> <p>Organic possible</p> <p>High regional added value</p> <p>Substitution of imports</p> <p>start ups</p> <p>Small quantities additional income</p> <p>Cooperation with social enterprises</p> <p>Platform for suppliers and buyers of raw material</p> <p>Independent of nuts (cashew) from international trade</p> <p>For farm sales</p>	<p>Crop failure (frost) Logistics/transport</p> <p>Price/cost Raw material competition with international suppliers</p> <p>Raw material: different qualities Quality assurance: Drying Storage Rancidity Mold Shell content</p> <p>For flips: Investment in machine</p> <p>End product short shelf life</p>

## 5. GUIDE FOR THE REPRESENTATIVES OF THE INTEREST GROUPS

This guide is mainly addressed to oil mills, social enterprises, start ups, farmers, walnut growers and consultants

### 5.1. STRENGTHENING THE REGION

Upper Swabia has a good agricultural structure - many small and medium-sized farms. Much fruit and vegetable growing (special crops). Good climate - sufficient heat and precipitation. High organic share - especially in special crops (organic model region!).

There is a good connection between agriculture - population - tourism (weekly markets, direct marketing, delivery services..)

Regional support programs and stakeholders for innovations are available.

There are many walnut trees - approx. 30,000 - with a large variety of species.

### 5.2. RECOMMENDATIONS FOR STAKEHOLDERS ON THE IMPLEMENTATION OF THE BUSINESS MODEL

For a successful implementation of the project idea are still missing:

- Criteria or handout for quality assurance (cf. marketing initiative Gelbe Bürg, Walnut Competence Center Malans, - cleanliness of shell, germs, moisture content, mold)
- Oil mills offering several services (washing, drying, cracking, pressing, quality assurance) and producing good walnut pomace
- Service providers for picking-washing-drying-cracking (e.g. social enterprises engaged in food processing and marketing)
- We need suitable process technology (machines)
- We need - at least in the medium term - regionally produced grain blanks (Rubinmühle in Lahr ?)
- Subsidies for investment in machines and buildings (subsidy pots are unknown)
- Start ups and business development in the food sector
- Inexpensive organic certification for small walnut stocks - here an amendment of the EU organic directive is in preparation. Contact person at MIR Ba-Wü is Martin Ries
- Best practice compilation of walnut marketing (e.g. Lebenshilfe Wasgaumühle in Rhineland-Palatinate)
- Product development and marketing have to be brought together
- Commodity exchange (to bring flips producers together with oil mills, for walnut owners/buyers & sellers)

Why should the business model be implemented? What are the benefits to the region?

- Innovative product, is not yet available on the (Central) European market.
- For oil mills an additional income (utilization and valorization of by-products of oil production) and marketing strategy (novelty, appeals to young people)

- Contributes to the preservation of walnut trees that characterize the landscape

How does the business model fit with the bioeconomy strategy?

- Fits with adding value to food production byproducts.

Is the business model unique?

- Unique - no "walnut flips" product known to date. Flips are "typically German" - unknown in France. Available in Italy and Slovenia.

How many jobs could be created regionally?

- 30 to 50 - many of them in social enterprises

Environmental impact

- Walnut trees are robust and easy to care for, grow without chemical - synthetic pesticides, provide habitat for specialized plant and animal life (early bloomers, deadwood-dwelling beetles and tree fungi)

Why should the business model be implemented?

- Because it adds value to regional walnuts - almost half of the end products in oil production is pomace. There are potentially large quantities available (several thousand tons).

Numbers, data & facts for those interested

- There are at least 25 oil mills in southern Germany - map at [https://www.google.com/maps/d/viewer?mid=1oi1PeqYEFi5Co18KcXAsNm14bru3nfC\\_&ll=49.49748135549206%2C11.066811750000013&z=6](https://www.google.com/maps/d/viewer?mid=1oi1PeqYEFi5Co18KcXAsNm14bru3nfC_&ll=49.49748135549206%2C11.066811750000013&z=6)
- 10 recipes for walnut flips have been tested (prototypes) - two products with "addiction factor" (oat blanks, "powdered" with paprika-salt and cinnamon-sugar mixture).

## 6. GUIDELINES FOR SMALL AND MEDIUM-SIZED ENTERPRISES FOR THE IMPLEMENTATION OF THE BUSINESS MODEL

The following roadmap shows the work steps and building blocks for the implementation of the business idea "walnut flips".

- 1) Select business model - has been done (walnut flips)
- 2) Planning - environmental analysis, market analysis, raw material research
  - Raw material availability
  - quality assurance
  - Logistics (small quantities!)
  - certification
- 3) Subsidies
  - Are available
- 4) Cooperations, implementation partners
  - Oil mills (as service provider?)
  - Social enterprises (as service provider)
  - Natural food (trade)
  - Important steps: collecting the nuts, washing, drying, pressing, processing the pomace into flips, coating the flips, packaging the products, recycling the shells?
- 5) Product development
  - Organic certification
  - Recipe development
  - Procurement/development of technology (production and coating of flips)
- 6) Promotion Market launch
  - Storytelling
  - Funding Ministry of Rural Areas & Consumer Protection
- 7) Market maturity
- 8) Success



# Roadmap





## ABOUT US

You want to know more details about our project?



Please find more detailed documents on our homepage:  
[www.alpine-space.eu/alpbioeco](http://www.alpine-space.eu/alpbioeco)



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happy to  
advise you!

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## PROJECT PARTNERS



## PROJECT FUNDERS



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