



FoodLab:
Developing courses dedicated to
entrepreneurship and effective
transfer in the field of agri-food and
food innovation

Vaucluse, France





General Information

Title	FoodLab										
Pitch	Developing courses dedicated to entrepreneurship and effective transfer in the field of agri-food and food innovation										
Organisation	Vaucluse Chamber of Commerce (France) – Project coordinator										
Country	France										
Author	Olivier Mallet (Technopolis Group UK)										
Nature of interaction	<table><tr><td><input checked="" type="checkbox"/> Collaboration in R&D</td><td><input type="checkbox"/> Lifelong learning</td></tr><tr><td><input checked="" type="checkbox"/> Commercialisation of R&D results</td><td><input checked="" type="checkbox"/> Joint curriculum design and delivery</td></tr><tr><td><input type="checkbox"/> Mobility of staff</td><td><input type="checkbox"/> Mobility of students</td></tr><tr><td><input type="checkbox"/> Academic entrepreneurship</td><td><input checked="" type="checkbox"/> Student entrepreneurship</td></tr><tr><td><input type="checkbox"/> Governance</td><td><input type="checkbox"/> Shared resources</td></tr></table>	<input checked="" type="checkbox"/> Collaboration in R&D	<input type="checkbox"/> Lifelong learning	<input checked="" type="checkbox"/> Commercialisation of R&D results	<input checked="" type="checkbox"/> Joint curriculum design and delivery	<input type="checkbox"/> Mobility of staff	<input type="checkbox"/> Mobility of students	<input type="checkbox"/> Academic entrepreneurship	<input checked="" type="checkbox"/> Student entrepreneurship	<input type="checkbox"/> Governance	<input type="checkbox"/> Shared resources
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Summary	<p>FoodLab is an Erasmus+ Knowledge Alliance, gathering Higher Education Institutions (HEIs), SMEs, and professional associations from the agri-food sector, around the local Vaucluse Department's (France) Chamber of Commerce and Industry (CCI). FoodLab focuses on two major UBC activities: higher education joint curriculum design and delivery on the one hand, and entrepreneurship on the other. The objectives of the initiative are:</p> <ul style="list-style-type: none">▶ To develop business and innovation-oriented curricula in agri-food HEIs, based on industry needs and cooperation among HEIs;▶ To create an online platform for students, providing access to online courses as well as tools and institutions that can support them in creating their own business. <p>FoodLab is complementary to other initiatives led by the CCI, which focus on increasing the links between HEIs and industry in the field of agri-food. Online courses are already available for students of HEIs participating in the programme and are part of new curricula focusing in innovation and entrepreneurship in the field of agri-food.</p>										



Introduction & Overview

1. BACKGROUND

The food and drink industry is the EU's biggest manufacturing sector (in terms of jobs and added valueⁱ). As other manufacturing sectors, it faces very strong competition at world level, but it also has issues attracting highly-qualified human resources. In comparison to other industries, agri-food is highly regulated (for sanitary reasons).

The EU agri-food industry's assets are epitomised as: high quality, healthy and safe products. As the food and drink market is rapidly changing (experts estimate that 50% of the products on the market change every five years), innovation is vital if the industry wants to successfully face global competition.

In this context, the Vaucluse local Chamber of Commerce and Industryⁱⁱ (CCI - France) has been involved in a number of different initiatives aimed at strengthening University-Business Cooperation (UBC) in the agri-food sector, with a special focus on innovation. FoodLab, a Knowledge Alliance (part of the Erasmus+ programme) is the last of these projects. It is considered as part of a portfolio of complementary actions, which include the following:

- ▶ Ecotrophelia France (since 2000), the Food Innovation Awards, targeting agri-food students: the objective is to support innovation in the field of agri-food, through a national contest. Groups of students from French agri-food HEIs can propose innovative food projects (new food products but also new usages or new design) and the best projects are selected by a jury, composed of agri-food experts (companies, researchers, technical centres, etc.). In 2016, 12 sponsors provided financial support to the Awards (including three companies and two professional organisations). This contest involved students from a large majority of French HEIs offering curricula focusing on agro-food;
- ▶ Ecotrophelia Europe (since 2008): this European competition is based on the success of the French Food Innovation Awards, with competition at national level and a "play-off" round at European level (with all the winners from the national Awards). In 2016, 15 European countries participated in the competition. In 2016, 8 sponsors provided financial support to the Awards (including two multinational companies);
- ▶ IDEFI Ecotrophelia (2012-2018): gathering the Vaucluse CCI, 12 French HEIs with a special focus on agri-food and the French innovation cluster Terralia (focusing mainly on fruits, vegetables, wine and cereals – rice and wheat), this project supports the development of new courses by agri-food HEIs. These courses focus on eco-innovation and eco-design in the field of agri-food. This project benefits from €3.5m, and is funded in the framework of the "Investment for the Future"

national programme, as part of the “IDEFI”ⁱⁱⁱ sub-programme. It also benefits from the support from agri-food technical centres and industrial representatives.

These three complementary actions bring together students, teachers, researchers and professionals of the agri-food sector, with the objective of boosting innovation. They have some common partners, including the Vaucluse CCI.

2. OBJECTIVES AND MOTIVATIONS

Because the food and drink market is rapidly changing, innovation is considered by industry representatives to be key in facing global competition. Supporting innovation projects is also a way to attract recent graduates, as it can help changing the global image of this industry, which is generally seen as more traditional. Attracting graduates who have a strong background in innovation and entrepreneurship is likely to increase the capacity of companies to conduct R&D and innovation projects and launch innovative products on the market.

Since the early 2000s, Ecotrophelia France and Ecotrophelia Europe have been successful in raising awareness among students and HEIs. As a consequence, there has been a significant increase in applicants over the years, leading to more rigorous selection criterion. IDEFI Ecotrophelia has also completed existing agri-food curricula, by introducing dedicated modules for innovation in agri-food in HEIs participating in the project (12 French HEIs^{iv}) and available for students willing to increase their knowledge on eco-innovation.

Even though an increasing number of companies is participating in these projects and increasing numbers of students benefit from training on innovation and innovation project management, stakeholders still identify two main issues: these activities have not yet managed to overcome the general low level of transfer from projects to companies and the low level of business creation in this industry. The objective of FoodLab is thus to increase the capacity of students:

- ▶ To create their own business based on innovative food products;
- ▶ To place their food products on the market.

3. STAKEHOLDERS

FoodLab is a Knowledge Alliance, as defined in the Erasmus+ programme. According to the programme’s Award criteria, Knowledge Alliances must involve a minimum of six independent organisations from at least three Programme Countries^v, out of which at least two HEIs and at least two enterprises.

FoodLab gathers 15 partners, from different types of stakeholders:

- ▶ **HEIs** in the field of agri-food science & technology – five partners, from three different countries (France, Spain, Italy). These HEIs are in charge of developing the modules dedicated to management and business creation;

- ▶ **SMEs and Professional Associations**, which provide insights into the needs of the industry, in terms of innovation and business creation. They also provide feedback on the different tools, to see whether they fit their needs or not;
- ▶ **The Vaucluse Chamber of Commerce**, which is the coordinator of the project – in charge of the overall management of the project and responsible for the quality of the deliverables.

Another important target group participating in the project is agri-food students from the five participating HEIs. In the framework of FoodLab, they are in charge of testing the different modules, in order to provide feedback. Students can also use the various project modules to develop concrete projects as part of their classwork.



Implementation

4. INPUTS

FoodLab was selected in 2014 for EU co-funding, as part of the 2014 Erasmus+ Knowledge Alliance's Call for proposal. It received €1m in financial support from the programme. This financial support is spread over 15 different institutions and companies – each organisation receiving between €30,000 and €130,000 – depending on their role in the project. The EU financial support does not cover 100% of the costs, and each organisation provide its own resources, mainly in the form of Human Resources. The Knowledge Alliance involves a total of 50+ people in total, from these 15 different organisations. There is no direct infrastructure input. However, the project relies heavily on the different partners' infrastructures – especially HEIs (classrooms, computer facilities, meeting rooms...).

FoodLab cannot be considered on its own, but rather as one dimension of a group of national and European initiatives (Ecotrophelia initiatives), aimed to strengthen UBC in the field of agri-food. Some of the FoodLab partners are also partners in these other initiatives and CCI Vaucluse is the leading partners of all the Ecotrophelia initiatives. FoodLab was developed to focus on activities that are not covered by the other initiatives and thus is complementary in its approach.

5. ACTIVITIES

FoodLab focuses on two major UBC activities: Higher education joint curriculum design & delivery and entrepreneurship.

FoodLab is organised around three main types of activities:

- ▶ Working on the consolidation of industrial needs: the objective of this task is to identify and centralise innovation needs in food companies and to establish contacts between interested companies and students from the Ecotrophelia network. ANIA, the French professional Food industry association, with support from companies involved in the project, designed and administrated a survey targeting all its members, in order to identify the actual needs of the industry in the area of innovation and entrepreneurship skills. Some start-ups from the Ecotrophelia network also provided feedback, highlighting the needs of new businesses. For instance, start-ups were asked to present the story of the company and specify the kind of support they used (e.g. support for drafting a business plan, support to comply with food regulation, support to identify the right financial support scheme) and what could have been relevant to them. This feedback was then used to develop the courses;
- ▶ Developing new educational content, new methodology and organisation in terms of business creation and promotion of the entrepreneurial spirit. This is the core activity of the project. The main objective is to develop courses dedicated

to entrepreneurship and business creation (with a focus on innovative projects), based on innovative methods (distance learning, innovative teaching methods). All HEIs involved are working on this activity with the idea of complementing existing curricula and providing students interested in creating their own businesses with the most important business and management tools (e.g. creating a business plan, identifying the relevant legislation, finding the right financial support scheme). The overall objective is to increase the added value of the HEI dedicated to food innovation and the added value of companies that will be created or make use of students' results;

- ▶ Creating an online platform dedicated to business creation: based on the identification of the needs of entrepreneurs, the idea is create a platform to select and present all the useful tools a business creator in the agri-food sector needs, e.g. methods for drafting a business plan, models of IP agreement between a company and a HEI. The objective is to facilitate entrepreneurship both by high-qualified students and SMEs. The platform was created by the project's partners and is managed by the CCI Vaucluse. It is only available for partner HEIs' students.

The overall objective of this project is to create a virtual incubator that offers access to online courses, tools for entrepreneurship and a database with relevant information on products, regulation, supporting institutions (incubators, accelerators, business angels, clusters...).

In addition to these activities, partners have to work on dissemination, to maximise the impact of FoodLab, among the partners but also at EU level.

6. OUTPUTS

FoodLab partners aim to finish the project by the end of 2017, and activities are still on-going. However, some deliverables are already available and used by the different stakeholders, such as the courses focusing on innovation. HEIs participating in the project have managed to meet and discuss what could be done regarding innovation training for students. From these exchanges, they have developed common courses on innovation and business development. Participating in the project has led HEIs to strengthen their curricula, based on insights from other HEIs and feedback from students. Another important output of FoodLab is the development of project-based business courses. Five HEIs already use these courses with their students and the courses are part of an innovation-focused curricula. These courses focus on the different steps to create a product or service: concept, prototype, business plan, industrial plan, commercial plan. For the moment, these courses are only available for partner HEIs' students (at Masters' level) and form part of the courses students can attend in their graduate year.

Partners are still in the process of building a database with information regarding business creation tools and supporting organisations: list of supporting financial schemes, list of supporting organisations relevant to the field of agri-food (e.g. clusters, incubators). Additionally, partners are in charge of identifying the relevant tools or stakeholders in each country and

gather all the information relevant for potential users. In the medium-long term, this database could be expanded to countries that do not have direct participants to FoodLab, as this type of initiative should also play a role in strengthening the single market.

All the outputs (i.e. online courses and database) will be tested, as a quality control procedure, under the responsibility of the University of Valencia.



7. IMPACTS

As already stated, FoodLab is an ongoing project, so impacts are yet to be achieved. However, stakeholders have already identified the expected impacts of this project:

- ▶ A stronger “business” culture in agri-food HEIs. By developing courses dedicated to business creation, entrepreneurship and marketing, agri-food HEIs have completed their curricula. This should enable them to better support students that are willing to start their own businesses but also increase the interest in business creation among students;
- ▶ Students with a better knowledge and understanding of the barriers and drivers of innovation and business creation in the field of agri-food. Companies and entrepreneurs dealing with innovation and business creation face common barriers (e.g. financial risk) but also sector-specific barriers, such as the importance of legislation or the low level of R&D spending. Workers that have already benefited from courses on these issues should be more able to deal with them when starting a company or an innovation project;
- ▶ Stronger capacity for companies to innovate. Companies that will hire these students should be able to increase their focus on innovation, based on the capacity of these new comers to build an innovation project that is consistent with the needs of the company and the general environment.

A more indirect impact expected from this project is the mutual improvement of the HEIs’ capacity, companies and start-ups, to exchange on their specific needs and identify common ground to work together.





Support & Influencing factors

8. SUPPORTING MECHANISMS

FoodLab is supported by the Erasmus+ Knowledge Alliance, which is part of Key Action 2 “Cooperation for innovation and the exchange of good practices”. This programme focuses on UBC at a transnational level. It supports projects for a length of two to three years with a direct grant (up to €1m). The objective of these Knowledge Alliances are as follows^{vi}:

- ▶ Develop new, innovative and multidisciplinary approaches to teaching and learning;
- ▶ Stimulate entrepreneurship and entrepreneurial skills of higher education teaching staff and company staff;
- ▶ Facilitate the exchange, flow and co-creation of knowledge.

These Knowledge Alliances should focus on the challenges identified at EU level: increasing attainment levels; improving the quality and relevance of higher education; strengthening quality through mobility and cross-border cooperation; making the knowledge triangle work and improving governance and funding.

As presented in previous sections, FoodLab is one among several initiatives dedicated to UBC in the field of agri-food (Ecotrophelia). They are built on the same logic: involving representatives from different stakeholder groups (HEIs, companies, start-ups, students, organisations providing support to innovation) in order to exchange on the different needs and develop innovative tools that are relevant for all the parties. All these initiatives are based on innovative educational tools: online courses, project-based courses, real case studies and common courses (between the different HEIs).

9. BARRIERS AND DRIVERS

The main drivers for UBC in the context of agri-food are collective actions that aims to strengthen the links and exchanges between HEIs, students and industry. The objective of this type of action is to develop platforms where all the stakeholders can express their needs regarding the others, on the following topics: innovation, consumers’ tastes, educational needs, legislative context, etc.

From the industry point of view, there are a number of drivers for getting closer to HEIs:

- ▶ Using HEI scientific and infrastructure capacities for developing innovative projects;
- ▶ Expressing their needs in terms of curricula, based on actual trends of the agri-food sectors;
- ▶ Identifying “talent” who could be future employees of the companies.

The different Ecotrophelia initiatives and FoodLab help to reduce the gap between the different stakeholders. It has been effective so far, as more and more companies and professional associations are developing their own awards and are using these activities to identify potential talent and innovative ideas for their businesses. These initiatives also support the increasing trend for “open innovation”, with companies agreeing to express their needs in front of others.

The main barrier for UBC is linked to the fact that 98% of companies in the European agri-food sector are SMEs, which means they often have limited internal innovation capacities - in terms of human resources, infrastructures or budget dedicated to R&D and innovation. Even though professional organisations recognise the role of innovation, small companies do not always have the possibility to work with research centres or students to develop new products, processes or services. This is considered as the main barrier for UBC. A way to overcome this difficulty is to better prepare future workers to develop innovative projects in the context of the SMEs – which is what FoodLab is trying to achieve.

10. FUTURE CHALLENGES

FoodLab is still on-going, so challenges must be cautiously analysed, as all the final outputs of the project are not available yet. However, some key challenges have already been identified regarding the future of the FoodLab outputs and how to maintain them:

- ▶ Shifting from project-based users to an open model: currently, only partners of the project have contributed and are using the online platform. But the objective is to provide a service to a larger community, i.e. European agri-food stakeholders. Financial resources will be needed to maintain and update the resources available, which means one possibility is to make the access to such platform available for a low fee;
- ▶ Keeping the database up-to-date: the other main challenge partners are facing is to maintain the database with relevant information about available support schemes and institutions or tools for businesses (e.g. building business plans, regulations). This means that partners will have to agree on the way and the frequency to update it, without the financial resources coming from FoodLab. If the Database is to be open to new comers, partners will also have to set the rules for updating it, to keep its consistency and relevance.

These will be the key focuses of the consortium for the last months of the project, with the idea of making the outputs of the project available and useful to a larger community, at EU level.

11. CONTEXT

The general context of innovation in the agri-food industry has rapidly changed. The sector faces very strong competition at the international level and innovation is considered as key to maintain the market share of the European agri-food industry. According to stakeholders, the major challenge for companies is to find a way to create a continuous link between science and technology and rapidly changing context on consumers’ tastes.

Thus, an increasing number of business managers are aware of the need to include innovative human resources in their teams. FoodLab partners consider that UBC in the agri-food sector is much easier today than a few years ago thanks to the different initiatives of agri-food stakeholders, especially professional associations. The general trend at HEI level is a growing number of curricula focusing on innovation and entrepreneurship (which is not, however, specific to agri-food HEIs).

12. KEY SUCCESS FACTORS

Stakeholders identify two main key success factors for this initiative:

- ▶ **Relevance:** the idea of FoodLab has emerged from previous exchanges between the various stakeholders of the agri-food innovation community: HEIs, entrepreneurs, business leaders, national professional associations. The consortium is representative of this community and has managed to involve high-level representatives of the agri-food industry, such as the National Food Industry Association (ANIA). ANIA is responsible for identifying the actual needs of the industry and also communicating on the outputs of the project, which should increase the final impact of the project;
- ▶ **External coherence and link with other schemes:** FoodLab is one among several initiatives aiming at increasing the innovation capacities of agri-food graduates and entrepreneurs, at national and EU levels. Since the early 2000s, a group of stakeholders have developed programmes to tackle different dimensions of UBC (e.g. innovation capacities of students or links between HEIs and students on the one hand and the industry on the other hand). Stakeholders have identified the need for a specific focus on business development as something missing among the resources available for agri-food students. With FoodLab and these other tools, partners have managed to develop a complete offer, with support from national and EU programmes and policy makers





Further Information

13. MONITORING AND EVALUATION

FoodLab is an on-going project, funded in the framework of the Erasmus+ Knowledge Alliance initiative. It reports to DG EAC on a yearly basis. This reporting focuses on the advancement of each deliverable of the project. The European Commission will also consider FoodLab in its evaluation of the Erasmus+ Knowledge Alliance initiative.

The objective is to complete all the deliverables by the end of 2017 – including plans for maximising the future impacts of this project.

14. SUSTAINABILITY MEASURES

FoodLab is an on-going project. Partners are still in the process of defining sustainability measures for the project. One of the last deliverables of the project will be a “business”/ marketing plan on the future of the online platform, with the idea of finding financial resources to maintain and update the resources available for students, entrepreneurs and business leaders.

Regarding online courses focusing on entrepreneurship, partners of the project consider that these courses are already being well used by all HEIs involved in the project. These courses have been integrated in the curriculum, which means HEIs have already thought about the added-value of such courses. HEIs have developed a habit of working together for developing such courses and are willing to continue updating them, based on the feedback received by students, entrepreneurs and business leaders – and the evolution of the general agri-food environment.

15. TRANSFERABILITY

The rationale, objectives and implementation of this initiative was based on deep analysis of industry’s needs and involved representatives from all sides of the consortium. All the stakeholder groups are part of the project. Transfer to other industries could be done by considering these two factors. However, it is important to keep in mind that each industry has different organisational make ups (e.g. some very large players making the market vs a very large number of SMEs and several professional organisations) and it is not always easy to (i) identify the needs of an entire sector and (ii) gather all the stakeholders that can have conflicting interests.

As for other UBC cases, there is no direct way of transferring the way FoodLab (and other initiatives with common partners) works. However, it seems that two transferable factors have a significant impact on the development of such activities:

- ▶ Mutual trust and collective intelligence: the experience of working together since the early 2000's (for some partners) has led to a greater knowledge of each organisation's work. Based on common and clear objectives, it has led partners to share their strategies, with the idea of benefitting from exchanges with each other. This sharing process is key to develop collective and more relevant solutions;
- ▶ Management and leadership by a "neutral" organisation: the leader of FoodLab consortium, and leader of all the Ecotrophelia initiatives before, is the Vaucluse Chamber of Commerce (nor a HEI neither an industry actor), which is seen as a "neutral" organisation by all stakeholders. The local Chamber of Commerce has experience in dealing with both HEIs and industry (small and large) and acts as an intermediate. This is considered as an asset by all the stakeholders involved, as an interface organisation is needed to ensure the needs of each party (HEI or industry) are understood and considered by the other.

16. AWARDS AND RECOGNITION

FoodLab is still an on-going project and its final evaluation has not taken place yet – meaning that it has not yet received any formal recognition linked to direct achievements. However, it can be said that FoodLab is part of a national and European movement that has benefited from different awards and recognitions:

As presented in a previous section, FoodLab was selected to receive financial support in the framework of the highly competitive Knowledge Alliance programme – meaning that it was considered relevant by European stakeholders;

Over the last years, FoodLab and other activities have managed to attract major HEI and industry partners, such as almost all French agri-food HEIs and the French national professional food association (ANIA). It has also managed to attract continuous financial support from major public and private partners, at national and European level.

These elements are signs that the main stakeholders (i.e. agri-food industry and HEIs) consider these type of initiatives beneficial for the industry and recognise their capacity to boost innovation and attract talents

17. LINKS

FoodLab Website <https://foodlab-eu.com/>

18. CONTACT PERSON



Dominique Ladeveze,
Director Research and Innovation Department
Vaucluse Chamber of Commerce
dladeveze@vaucluse.cci.fr

19. REFERENCES

ⁱ https://ec.europa.eu/growth/sectors/food_fr

ⁱⁱ <http://www.vaucluse.cci.fr/> (In French only).

ⁱⁱⁱ <http://www.enseignementsup-recherche.gouv.fr/cid59599/37-projets-de-formation-labellises-idefi.html> (In French only)

^{iv} List available here: <https://public.ecotrophelia.org/>

^v EU, FYROM, Iceland, Lichtenstein, Norway, Turkey

^{vi} https://eacea.ec.europa.eu/erasmus-plus/actions/key-action-2-cooperation-for-innovation-and-exchange-good-practices/knowledge-alliances_en