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Report on Cross Visit Greece

4 - 8 April 2016

ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ
AGRICULTURAL UNIVERSITY OF ATHENS

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Introduction

The Agrispin Project aims at creating space for agricultural innovations, "through amplifying good examples of innovation support systems and through multiactor learning about ways to stimulate innovation and remove obstacles" (AGRISPIN Grand Agreement). The research approach for achieving such an aim is based on the in-depth exploration of a number of selected innovation cases during 13 cross visits (CV) in the project partners' countries. Participants/ project partners in each CV endeavour to gain a deeper understanding of innovation processes and inspiration for improvements of the services being offered, finding a method for exploring innovation practices and the role of support service providers and contributing to the creation of a professional network of innovation support agents(Grand Agreement).

During the Greek four innovative cases were studied:

Case 1: Agricultural Stevia Cooperative (ASYST)

Case 2: Energy Cooperative of Karditsa (ESEK)

Case 3: PSYHANTHOS, Agricultural Cooperative of Pulses and Food Items

Case 4: EFKARPON -Hellenic Super foods

The team that visited Greece consisted of the following partners:

	Participant	**Organization**
1	Heidi Rasmussen	SEGES-Project Coordinator
2	Peter Paree	ZLTO
3	Hannu Haapala	ProAgria
4	Alessandra Gemitti	Tuscany Region, RT
5	Geert Wilms	ZLTO
6	Carola Ketelhodt	VLK
7	Michael Kuegler	VLK
8	Cristi Gherghiceanu	ADEPT
9	Bernard Triomphe	CIRAD

The information gathered during the CV was analyzed in 4 thematic frameworks concerning: the innovation process, the actors involved and their networks, the ecosystem and the characteristics of the innovation cases. The outcome of the analysis was presented to local actors and authorities in a symposium, which took place in the last day of the CV and was, afterwards, completed with their feedback. The current report includes comments on information gathering and analysis processes as well as on the conclusions drawn from both the innovation cases and the methodology.

Agenda of the cross visit in Greece

Cross Visit: Thessaly, Karditsa
4-8 April, 2016

Moday **4-4-2016**	Departure from Athens: 16.30 Arrival in Domotel Arni Hotel, Karditsa
DAY 1 **Tuesday** **5-4-2016**	9.15: From the hotel to ANKA S.A. offices (10 minutes by foot) 9.30-10.00: Refreshing the Methodology 10.00-11.00: Presentation of the Greek context **Case 1: Agricultural Stevia Cooperative (ASYST)** 11.00: Bus from AN.KA. to Fanari (ASYST premises**)** 12.30 Bus from ASYST premises to Fanari Town Hall 12.45 Lunch 13.45 Presentations and discussion with innovators and the support service Reflections, timeline of the case 17.00 Visit to Fanari village 20.00 Dinner at Keramario*
DAY 2 **Wednesday** **6-4-2016**	**Case 2: Energy Cooperative of Karditsa (ESEK)** 8.30:Bus to Agiopigi (ESEK premises) 10.00: Return to ANKA S.A. offices Presentations and questions. Reflections, timeline of the case 13.00 Lunch 14.00: **Case 3: Agricultural Cooperative of Pulses and Food Items (PSYHANTHOS)** Presentations and questions Reflections, timeline of the case 20.00: Dinner*
DAY 3 **Thursday** **7-4-2016**	**Case 4: Efkarpon - Superfoods** 9.00: Bus from the hotel to Mataraga (Efkarpon premises**)** 10.30: Return to ANKA offices Presentations and questions 13.00: Lunch 14. 00: Internal meeting Reflection on the cases, preparation of the seminar 18.00: Social Program 20.00Dinner*
DAY 4 **Friday** **8-4-2016**:	9.10: From the hotel to the Thessaly Prefecture premises (by foot) 9.30: Symposium with regional authorities and rural stockholders 12.30 Bus to Plastira Lake and Lampero 14.00: Lunch in Lampero** Departure to Athens
* Dinner at visitors own expense ** Lunch offered by host	

Case 1: Agricultural Stevia Cooperative

The Agricultural Stevia Cooperative (ASYST) is a new generation cooperative (NGC) engaged in the cultivation, processing and trade of stevia products (*Stevia sp*.). ASYST is established by professional farmers under adverse financial circumstances due to the persistent economic crisis in Greece. This initiative came as a response to the abandonment of traditional cultivations (tobacco, cotton, sugar beet) and the need to replace them with innovative and more profitable ones.

In November 2012 an informal group living outside the area (mainly in Athens) but with strong personal bonds with their place of origin (Fanari community and its neighboring communities) organized a seminar regarding stevia cultivation and its potential in Karditsa. This group, under the name "Fanariotes for the Development of the Thessaly Plain" (Fanariotes = persons with originating from Fanari) organizes events and calls experts to provide information in three main areas of local farmer's interest, i.e. new, alternative cultivations; food processing and food marketing; and, the optimization of the irrigating system of the Plain of Thessaly. Among the organizers there were four key - for the project trajectory- persons: Mr. George Koulossousas, the President of the Community of Fanari; Mr. Vassilis Bellis, the executive director of the Development Agency of Karditsa (ANKA; a company of the local authorities and coops); Mr. Koutsos, the mayor of Mouzaki municipality- where the community of Fanari is situated; and Mr. Zachokostas, agronomist (and former manager) in the Karditsa Tobacco Research Centre, who had carried out experiments and collaborated with stevia growers in the neighboring Prefecture of Fthiotis, in 2006.

During the seminar, Prof. P. Lolas (University of Thessaly and the Institute for Research and Technology in Thessaly), who was invited speaker, told farmers that he had been carrying out stevia trial cultivations since 2005 in several areas previously cultivated with tobacco, including the plain of Karditsa. The experiments were supported by EU, national and regional funding and concluded that stevia is well adapted in the specific soil and weather conditions of Karditsa as well as that the estimated production costs and revenues make stevia a promising cultivation. The second invited speaker was Prof. Konstantinos Petrotos (TEI of Larissa) briefly presented his experimental method on the production of steviol glucoside.

However, nothing would have happened if the above mentioned four key-persons had not facilitated the farmers' next step by posing a critical question at the end of the meeting, i.e. "how interested are we in being engaged in a collective scheme regarding stevia cultivation as an alternative to the traditional tobacco and cotton cultivation?"

Then, ten farmers immediately responded positively and arranged for a new meeting, in which concrete actions were planned. They started by informing their colleagues and within a short time (December 2012) ASYST was founded by 21 farmers. Since then, membership has grown to sixty four (64) farmers and stevia has been cultivated in pilot farms by 17 members, who share the knowledge they acquire through these experimental cultivations with the rest of the coop's membership.

Right from the beginning ASYST farmers have aimed beyond primary production, i.e. at the vertical integration of the whole production chain in order to produce high added value (final) products, thus responding to the increasing interest of consumers for healthy diet and ensuring at the same time the

maximum profitability for its members. In engaging in such a course of action farmers had to overcome various obstacles; nonetheless, no effort has been in vain till now.

First, there has been a scarcity of financial resources, which made the collection of the necessary funds for the establishment of the ASYST processing unit hard. The endeavour was self–financed (on top of the already high fee required for subscription in the coop) by 50% while, on the other hand, ANKA supported ASYST by including the processing unit in the local Leader Programme. Thus, in June 2014, the coop was funded with 130,000 euros while financing facilities were provided by the Cooperative Bank of Karditsa, an action that was facilitated by ANKA in the framework of the technical and financial support provided by its Cooperation Incubator, which hosted ASYST during its take-off. The construction of the processing unit started in March 2015, was completed on December 2015 and is expected to start producing the first high quality steviol glycosides by the end of summer 2016. The processing unit is the cornerstone asset of the coop since it differentiates ASYST from the other stevia growers, who have engaged in the production of dried leaves without getting involved in processing, and allows for the production of the final product (steviol glycosides) as well as the control of its quality. This is especially important for gaining access to the European market, which currently depends on dubious quality stevia products imported mainly from China.

At technical level, the challenge concerned the experimental procedure for the production of steviol glycosides without using organic solvents. Here the solution came from the Laboratory of Food & Biosystems Engineering of the Technological Educational Institute (TEI) of Larissa, where an innovative production method of high purity steviol glucoside (more than 98%) had been developed, after three-year experimentation. Prof. Konstantinos Petrotos, the Head of the Lab, made the method available to ASYST free of charge. Prof. Petrotos who, as aforementioned, was the second speaker in the first meeting had collaborated with ANKA in the past. However, in the transition from the experimental to the industrial scale several bureaucratic obstacles - derived from the absence of appropriate legislative and regulatory framework at both European and national level - had to be overcome.

Currently, a major challenge for ASYST relates to the attraction of new members. Through deliberate efforts, ASYST abandoned the structure of traditional cooperatives (in Greece), which has failed and is repulsive to most farmers, to foster a cooperative built on personal trust relations. Its members share a common view for the future of farming; therefore, they are looking for opportunities, they take risks, and expect to bear fruits from their efforts even under the harsh conditions of the current financial crisis. After all, risk taking is inherent to entrepreneurship and this applies all the more in the context of innovative projects.

Quotes

George Roussos said during the cross visit:

"...*in this case* [persons from outside the agricultural sector who voluntarily take initiatives] *help us because they believe in it* [stevia potential] *but this does not happen often; I would say no* [this is not always the case]".

[About the motivation of the external group of volunteers]: "*we haven't asked them about their motivation, we appreciate their help. That's all*".

"*I think that, when we are going through such an economic crisis, we have to find ways to cooperate and get through it ….it is the human nature, I believe, [that makes us] to cooperate with each other to get ahead….*"

"*….we see that we have to help each other to get somewhere and that is what we do*".

Contact data

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Support Services involved

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-The Laboratory of Food & Biosystems Engineering of the Technological Educational Institute of Larissa-Greece (http://www.fabe.gr/index.php/en/laboratory)

Prof. Konstantinos Petrotos

Email:petrotos@teilar.gr, Tel.: +302410-684524

Geographical location: Fanari, Thessaly, Greece

Starting date: December 2012

Funding source:

The coops' processing unit was included in the local Leader Programme in June 2014 and funded with 130,000 Euros (i.e. 50% of the eligible cost). All other costs are covered by self-financing.

Websites

http://thestevia.gr/2014/

http://www.mouzaki.gr/index.php?option=com_content&view=article&id=677:2012-11-26-09-32-14&catid=3:2009-02-01-19-37-05&Itemid=22

http://www.agrotypos.gr/index.asp?mod=articles&id=68817

https://www.youtube.com/watch?v=FyQklbiW13w

Case 2: Energy Cooperative of Karditsa (ESEK)

ESEK is a non-agricultural (civic) cooperative that utilizes renewable sources of energy, i.e. biomass produced as byproduct of cultivations and forestry.

It is estimated that, yearly, 200,000 tn. of biomass are produced in the Prefecture of Karditsa, resulting in air pollution (re: burning) and causing forest fires. At the same time the local farm and enterprises spend a lot of money importing expensive pellet for covering their energy needs. The utilization of the locally produced biomass, thus, contributes to environment protection and energy generation as well as in the creation of jobs and incomes locally. In response to these needs, the ESEK project includes the development of a biomass supply chain, the construction of a solid fuels production unit and the construction of a power station of 500 KW from biomass.

The idea for using alternative energy sources in Karditsa was initiated in 1994. At that time, the Development Agency of Karditsa (ANKA) hosted the local Energy Centre in the context of the European project Altener. After finishing the program in 1996, the Energy Center continued promoting renewable energy at local level until 2004. Nevertheless, ANKA continued being inspired from this idea and in 2007 took the initiative to raise public awareness on the effective use of local energy resources by introducing the issue in a series of informal meetings organized at Prefectural level.

These meetings were initiated by the Prefecture of Karditsa in order to bring together key-persons representing local organizations/agencies and facilitate the exchange of ideas related to the development of the Prefecture, the exploration of the ideas for which there was consensus and, possibly, their implementation. The first meetings took place in 2007 following a call asking all interested citizens to contribute with ideas and participate in thematic workshops. All proposals for local rural development that emerged from these workshops were further presented and discussed in a conference triggered by the Prefectural authorities and organized by ANKA in 2008. Cross-thematic workshops followed the end of the conference and meetings started again in the framework of the next conference carried out in 2010.

The idea about ESEK was born during the aforementioned meetings, and was embraced by the Commerce Chambers of Karditsa that, in 2009, undertook the task to make it known among its membership. The acceptance of the initiative by the local society resulted in the foundation of the first energy cooperation in Greece by 360 members in July 2010. Each member invested 1000 euros/ share, thus, in April 2012 ESEK was able to purchase its own land. Since then, ESEK was included in the local LEADER Programme and the Cooperative Bank of Karditsa provided it with financial facilities -an action facilitated by ANKA- and thus it built its pellet factory. In parallel, its membership increased to 399 members.

Along this trajectory various obstacles had to be overcome. The first one concerned the initial denial of the relevant licensing authority to give permission for the construction of the pellet factory and the power unit (500kW) in agricultural land due to a seemingly law contradiction on agricultural land use. The licensing process was initiated on May 2013 and the bureaucratic problem was finally solved 18 months later.

However, the main challenge ESEK dealt with concerned the revision of its initial plans, as it had to postpone the construction of the power station, which was the initial objective, and instead to go on with the construction a pellet factory. The ESEK Managing Board took this decision as soon as they realized the lack of knowledge/ know-how regarding agricultural biomass residues burning characteristics among the companies which offered to construct the power station (following an open bid). Thus, the Board gave priority in building the supply chain in order to ensure continued biomass

supplies for both the pellet factory and, possibly, the power plant on a later stage. This involved ESEK in a process of searching for solutions regarding a large number of technical issues and, thus, developing collaborations with research institutes and universities regarding the exploitation of biomass (calorific value, ash content, etc.). The University of Thessaly, the Agricultural University of Athens, the Aristotle University of Thessaloniki and the Centre of Research and Development in Thessaloniki are among these collaborators. The knowledge gathered helped ESEK in running a pilot supply chain on August 2013 and made possible the completion of the construction of the pellet factory in December 2015. Nowadays, ESEK participates in the network of the European Federation for Renewable Energy Cooperatives and shares its experience, especially regarding social cooperatives/ enterprises and social economy issues, with subsequent endeavors in this field all over Greece, such as the Energy Cooperative of Crete, founded in 2015, and the Energy and Development Cooperative of Sifnos, founded in 2014.

ESEK represents an effort of the local entities -with ANKA as the spearhead- to deal with an acute environmental problem and at the same time produce valuable products from available local resources. Since its beginning, ESEK has been involved in a range of activities that built and expanded its network among multiple actors, both locals (as, for example, farmers, forestry cooperatives and local authorities) and extra-locals (such as universities and research institutes). ESEK has set an example for other energy cooperatives in the country while also trying to establish collaborations at European level through cooperation in the submission of relevant European projects.

Quotes

"*The main categories of citizens subscribed in the coop are citizens who, generally speaking, are concerned about the development of the Prefecture… the business plan we made proves that the investment is sound, and for this [reason] they have supported it even in the heart of the financial crisis*", Vassilis Bellis.

'Before the financial crisis we had to go to people, after the crisis they are coming to us", Vassilis Bellis.

"*ESEK was created by the local society of Karditsa [Prefecture]… ", "We did a lot of research and this [what we are now referring to] is only a small part of it", "A lot of work has to be done. But we managed to record all necessary data in detail [regarding the gathering and processing cost of different kinds of biomass] in order to maximize our profit later on*", Yannis Stathopoulos.

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Geographical location: 2nd km Agiopigi –Zaimi str, 43132, Karditsa, Greece

Starting date: July 2010

Funding source: The pellet production unit was included in the local Leader Programme and funded with 250,000 euros (i.e. 50% of the eligible cost). ESEK members contributed with 1000 euros/ share which was raised to 1500 euros/ share in 2016.

Website:
http://www.anka.gr/portal/index.php?option=com_content&view=article&id=461&Itemid=62&lang=en

https://rescoop.eu/renewable-energy-initiative/greece/energy-cooperative-karditsa-esek

Case 3: PSYHANTHOS, Agricultural Cooperative of Pulses and Food Items

PSYHANTHOS is a new generation cooperative (NGC) which engages in the cultivation, processing and trade of products, byproducts and derivatives of mainly commercial and traditional pulse varieties, as well as of nuts and edible seeds; it further aims at engaging in the production and trade of traditional seeds. A particular characteristic of the coop is that its operation is based on the active participation of its members and the unanimous decision-taking process. PSYHANTHOS is the answer that its members gave to the question: "which form of collective action have we to adopt for ensuring sustainable production and fair trade conditions for us and better prices and high quality products for consumers?"

The members of PSYHANTHOS are professional farmers who aspire to enjoy themselves the benefits derived from the added value of their products (instead of the middlemen/ wholesalers). According to a study of the National Agricultural Research Foundation (NAGREF) in 2013 both the European and the Greek markets of pulses are deficient while, on the other hand, in Greece consumers' demand for packed pulses of high quality and Greek origin is growing. At the same time the study connected farmers' successful entrance in the markets with their entrepreneurial orientation and the undertaking collective action. Nevertheless, farmers turn away from the "old cooperatives", which are characterized by government intervention and lack of sense of ownership on the part of farmers. Thus the members of PSYHANTHOS chose the form of a new generation cooperative, focusing on the entirely value chain and farmers' ownership; in parallel, they put more emphasis in the active contribution of the totality of its membership. Thus, the coops' members bind themselves in processes leading to consensus as well as enhancing members' decision making ability - as "each of them may act as the coops' president, at any time". The ultimate goal of the effort is to achieve 'sustainability' at all levels/ dimensions.

The idea of PSYHANTHOS was put forward in March 2013, when ANKA, after informal discussions with farmers who had followed a seminar organized by NAGREF (National Agricultural Research Foundation), took the initiative to organize a meeting for those interested in pulses cultivation. Some farmers responded and discussions were repeated in September 2013 to finally end up with the foundation of the Cooperative in November 2014. The coop harvested its first production in summer 2015. At that point (summer 2015) its members were also intended to buy a warehouse but the implementation of their plan was delayed due to the imposition of the capital controls in the country. During this critical period it seemed that most of the members were going to abandon the venture and only due to the persistence of four of them the coop continued to exist. Nowadays, the coop standardizes and stores its products in rented units, while it is on a search for expanding their storage capacity with a second warehouse. Meanwhile, its members intend to put together an investment proposal in the new local Leader Programme, which is expected to be launched around September 2016.

The Development Agency of Karditsa (ANKA S.A.) helped the coop's first meetings by connecting the interested farmers and, on a later stage, by hosting them in its "Collaboration Incubator" and providing them with technical support. Furthermore, PSYHANTHOS members participate in a series of training meetings dedicated to collaboration and cooperatives values for innovation launched by ANKA in 2015. These meetings aim at building cooperatives executives' capacities and thus enhancing their effectiveness and improving their access in the markets.

PSYHANTHOS is engaged in the Integrated Crop Management and at production level the challenge relates to the adaptation of the varieties to the microclimatic conditions of their fields. For this reason they have developed pilot cultivations and have permanent collaboration with an agronomist, while NARGEF and the Plant Protection Department of the Technological Educational Institute (TEI) of Larissa provide them with advice as well. At marketing level this year (2016)

PSYHANTHOS started collaboration with local supermarkets and minimarkets - with contracts connecting products prices with certain quality standards.

However, the main challenge for PSYHANTHOS concerns the attraction of new members and the development of the cooperative spirit. Currently, the Cooperative has 14 members, farmers who also manage land plots of 30 non-farmers. It should be noticed that around 400 farmers have shown interest in the coop without finally being enrolled. This, according to the coop leadership, owes to the fact that interested farmers find it difficult to sit in all the members' meetings held, which often involve extensive discussions deemed necessary to immediately resolve the issues that arise. At the same time the new legislation on cooperatives does not encourage small groups of farmers being involved in collective schemes.

PSYHANTHOS represents an effort to establish sustainable collective schemes by encouraging dialogue, responsibility and unanimous decision-taking among its members. At the same time it re-introduces (retro-innovation) traditional varieties which had been almost abandoned and which are strongly associated with the traditional diet and "old-fashioned" values for food.

* The word for legumes in Greek is Psychanthes= flower like a butterfly (psyche); see also Papilionaceae.

Quotes

Dimitris Malkas said during the cross visit:

"There is no president as such". "We want equality in both the decision making and responsibility [sharing], equality in all aspects". "We have implemented the 50% of our planning and now it remains the most difficult part of it [which has to do with the product trade and marketing]"

Athanasios Gousiaris said during the cross visit: *"We need active members, not just members",*

Contact data

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Geographical location: Karditsa, Thessaly, Greece

Starting date: July 2014

Funding source: Self –financed

Case 4:Efkarpon-Hellenic Super foods

Efkarpon-Hellenic Super foods is a new generation cooperative (NGC) involved in the cultivation, processing and marketing of four innovative (for Greece) agricultural products (gojiberry, black chockberry, blueberry and sea buckthorn) following organic farming standards.

Efkarpon responded to the needs of innovative smallholders (including new-entrants who joined farming due to the economic crisis) facing financial and land constraints (re: small and fragmented land ownership) by creating the conditions for its members to participate in a vertically integrated production scheme.

Efkarpon was an idea of two friends -a young farmer, Thanassis Georgiou, and an agronomist, John Galatoulas- born in 2005. During traveling in Spain and Austria, John tasted one of the fruits that nowadays the coop cultivates and, urged by professional curiosity, searched to learn more about it. In 2009 the friends decided to develop their idea and then realized that two requirements could turn their investment into a success: acting on purely commercial grounds and being based on a collective/ cooperative scheme. In order to meet the first requirement they decided to organize their efforts around a group of fruits of similar characteristics able to support the same marketing strategy. Then, they decided to avoid all problems related with the old type of cooperatives and build a new generation one; thus, in 2011 the two friends contacted the Development Agency of Karditsa (ANKA S.A.) to help them in attracting members. John had contacted Vassilis Bellis, ANKA's Director General, for first time in a seminar organized in the Agricultural University of Athens (AUA) for the purposes of a competition for youth entrepreneurship – a competition that John's team had won – and had always kept in mind the innovative ideas developed and implemented by AN.KA. Moreover, Thanassis lives in Karditsa and ANKA is well-known in the area.

It should be noted that around 2011 there was growing interest in alternative cultivations and a considerable number of cultivators, especially among the new entrants in farming, started cultivating super-foods. However, no organized attempts regarding super-food's cultivation and trading had been made till then. Moreover, though New Generation Coops (NGCs) had been established some years ago in the area - with the Cooperative Bank of Karditsa being the first example - no attempt for introducing such a collective scheme in the agricultural sector had been made. Thus, the seminar that the two friends together with ANKA organized was of significant importance for putting the cultivation of supper-foods in Greece on a solid basis and re-launching the idea of NGCs, this time in the agricultural sector.

The seminar was carried out on 17 December 2011 and two professors from Harokopion University of Athens, Dr. Apostolopoulos (originating from Karditsa) and Dr. Kaminari provided useful information regarding cooperatives and super foods properties. The turnout was high and more seminars followed, making the first super-foods network in Greece a reality. Next year (2012) the cooperative "Efkarpon-Hellenic Super foods" was founded, capitalizing the dynamic of super-foods and becoming the first agricultural new generation cooperative in Thessaly.

Efkarpon was established on the robust belief of its initiators that an innovative initiative in agriculture should focus on special products that, after processing, can be turned into functional foods. It launched its products (fresh fruits) in the market for the first time in 2013 with encouraging results; however relatively small quantities of the cultivated super foods had been produced thus far which were easily absorbed by markets. In 2014 it exported in Cyprus with great expectations for

2015 but the imposed capital controls resulted in the cancelation of its exportation plans. Efkarpon has attracted the interest of both individual consumers and food companies. Nowadays it collaborates with supermarket networks operating at national level. During 2015 its processing unit in Mataraga was completed and thus in 2016 the coop is going to launch new products in the market. The coop plans to engage in both wholesale and retail marketing as well as to operate its processing unit throughout the year (through contracts with non-members). Furthermore, it aspires to contribute to the development of rural tourism in the area.

Nowadays the Cooperative comprises 115 members. All of them are growers but come from different professional backgrounds (free lancers, entrepreneurs, public servants, professional farmers, etc.). Some of them are well-educated professionals, such as agronomists and economists and the cooperative makes use of their knowledge and experience in cultivation and marketing issues, respectively. The members come from all over the mainland Greece in order to counterbalance the risk derived from volatile weather conditions. Growing membership is an informed choice of the coop, aiming at its strengthening until reaching the full processing capacity of its plant, which is for a cultivating area of 100 ha. At present the coop deals with both conventional and organic products of its members since for the new members the conversion to full organic takes three years; this in turn does not allow for the certification of the entire production.

Furthermore, the functioning of the coop is a great challenge for its board and members, given the complex legal framework in Greece and the non-cooperative attitude among farmers. However, according to John Galatulas -who is preparing his doctoral thesis in this field- "cooperatives are the only solution amidst the crisis". He also relates the coop's good functioning, on the one hand, with the development of the cooperative spirit among its membership and, on the other hand, with sound management, not identified with any particular member, and transparency on the basis of technocratic standards.

At production level, the main challenge the coop confronted relates to the cultivation of gojiberry, due to the dearth of information regarding its cultivation, esp. in Greece; to solve the problem the coop carried out its own research.

However, in seeking to achieve its goals, Efkarpon received vital support from a range of organizations. First, the Harokopion University of Athens helped in building the statute of the coop and searching super foods' nutritional properties. Second, Eukarpon was the first new generation agricultural cooperative hosted in the Collaboration Incubator of ANKA; thus ANKA, besides helping the coop initiators to organize their information campaign/ seminars, provided them with technical-economic support as well. Third, the Cooperative Bank of Karditsa played a significant role in the development of the coop by providing them with financing facilities, as "in its absence, the coop should have never succeed in overcoming certain obstacles", according to its initiator. Moreover, the coop benefited from participating in the European project "Improving skills for Smart farming as an innovative tool for rural development and economic growth" (project number: 2013-1-CY1-LE005-03114) by gaining experience and improving skills and competences on Strategic Planning and Marketing, Organic Farming and Quality Schemes, and -what seems to be most valuable - by getting in contact with different ways of thinking in relation to cooperatives and cooperative attitudes.

Efkarpon-Hellenic Super foods took an innovative initiative and invested at the peak of the financial crisis, making full use of every available source of support. Its endeavor contributed to the revival of collaborative schemes in the Thessaly region, setting an example for all smallholders.

Quotes

John Galatoulas said:

"We collaborate to achieve more!"

"We adopted the following series of question in decision making: what do consumers want? How do we go about it? What shall we cultivate?

Contact data

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Geographical location: Mataraga, 433 00, Thessaly, Greece

Starting date: 2009

Funding source: The processing unit was included in the local Leader Programme and funded with 209.500 euros (accounting for 1/3 of its total cost; the remaining amount was obtained through self-financing). The overall cost of the investment exceeds 2 million euros and – except from the Leader financing – it has been covered by self-financing.

Websites

https://www.facebook.com/Efkarpon/

http://www.smartfarmerproject.eu/index.html

https://twitter.com/efkarpon

http://www.adam-europe.eu/adam/project/view.htm?prj=11729#.Vy-lfISLRdg

http://www.ellinikifoni.gr/efkarpon.htm

Presentation of the Prefecture of Karditsa and the Development Agency of Karditsa (ANKA)

The Prefecture of Karditsa, located in Central Greece, is a half mountainous-half plane Prefecture covering 2.636 Km^2 (2% of the country). It produces the 12 % of the Regional GDP with its primary, secondary and tertiary sectors contributing 26.15%, 12.47% and 61.36% respectively.

The primary sector is organized around small and medium- sized farms. The cultivation of cotton prevails, covering the 45.5% of the cultivated areas and the 66.7% of the irrigated ones, while the contribution of the stock farming is low. Wheat, corn, tobacco and vegetables complete the Prefecture's primary production profile.

At organizational level the primary sector in Karditsa -as well as all over Greece- is characterized by the absence of a structured support service (extension) system[1] and the collapse of the traditional cooperatives. Iliopoulos and Valentinov (2012) identify the reason for the collapse of the Greek agricultural cooperatives in the "market- and incentive-distorting government interventions, along with organizational failures ignited by the rent-seeking behavior of cooperative leaders". As a result many cooperatives do not offer the services farmers need (Papachristou 2009) and the most progressive farmers have been seeking new tools in confronting challenges (such as the intensified competition in agricultural markets, the declining EU subsidies and the increased consumer demand for high quality products) and achieving their goals. Although challenges are quite similar with the ones farmers in other Mediterranean countries face (Bijman et al. 2004), in Greece, due to its agricultural sector structure and the financial crisis in the last few years, initiative to tackle them are urgently needed/ sought after.

The Development Agency of Karditsa (ANKA S.A.) was established in 1989 by the Union of Local Authorities, the Municipalities and the Union of Agricultural Co-operatives of the Prefecture of Karditsa. Since then it aims at enhancing local development through the coordination of initiatives/ projects, the provision of technical support to local authorities and businesses and the implementation of integrated projects, on the basis of co-operation and self-government/ autonomy

[1] http://www.proakis.eu/sites/www.proakis.eu/files/Country%20Report%20Greece%2003%2006%2014.pdf

(Koutsouris 1999, 2000). ANKA operates as an integrated, flexible and task-oriented structure based on action-learning and adaptive management; in parallel, it is an action-oriented network that is a linking–pin structure (i.e. center of communication, general services, co-ordination/facilitation and 'drive' towards the achievement of tasks in which more than one actor is involved, even in an informal way) (Koutsouris 1999). The operational mode of ANKA is based on teamwork (multidisciplinary project teams) and the development of relations and cooperation with educational and research institutes. It employs development teams according to the undertaken tasks; teams consist of the appropriate personnel, following a horizontal operational structure. ANKA is funded mainly through European projects; the municipalities of the Prefecture are a further source of funding which has been exhausted in recent years due to the crisis.

ANKA during its quite long history has been active in the provision of technical support as well as of capacity building courses/ events, has established and operated in the take-off stage a number of structures which on a later stage were left to operate either autonomously or under the auspices of local authorities, participated in various European and national programmes and projects as well as designed and managed local development projects, and introduced innovations in Karditsa (see, for example, Koutsouris and Segi 2008). ANKA bridges the gap owing to the lack of extension services and contributes to tackling the challenges farmers face, particularly by promoting the adoption of collective schemes, especially of the type "of producer -owned, -controlled and -benefited business organization" (Iliopoulos 2005). The latter correspond to the so-called new generation cooperatives (NGCs), and ANKA actively disseminates the idea and supports their establishment. According to Iliopoulos (2005) the development of NGCs is related to the accessibility to favorable credit as well as to knowledge and technical support.

In this respect, ANKA's intervention mostly concerns the operation of the Collaboration Incubator and its collaboration with the Cooperation Bank of Karditsa, a local, "ethical bank" playing crucial role in the development of the Prefecture.

The Collaboration Incubator aims, on the one hand, at facilitating the "debate" among actors involved in collective schemes and, on the other hand, at eliminating the start-up costs of such schemes by hosting them for the first 1-4 years of their operation, that is until starting implementing their business/ investment plan. Within the Collaboration Incubator a social enterprise obtains support on technical issues and the drawing up of its business plan as well as on organizing information-dissemination activities and various meetings, while it also has the opportunity to participate in training related to its activities. Moreover, with the collaboration of the Cooperative Bank of Karditsa – which is one of the first collective schemes hosted by ANKA and indeed a very successful one - the scheme can obtain access in guarantees as well as to a financial tool derived from the European Investment Fund (EIF). This tool is an essential element of the 'ecosystem' approach of ANKA in relation to local development. According to the "ecosystem" approach all the cooperatives of the Prefecture will share network functions and technical support, training and information dissemination services. ANKA highlights the necessity for establishing such an ecosystem by organizing events such as the Innovation Academy- which is an one-week summer school - aiming at enhancing knowledge and engaging the (regional and central) government and local stakeholders in a debate on policies and measures conducive to innovations.

Methodology

The research approach adopted by the Agrispin Project is based on the examination of selected innovation cases during 13 cross visits (CVs) exchanged by the project partners. Specific aims of the CVs are:

- *A deeper understanding of innovation processes.*
- *A method for exploring innovation practices and the role of support service providers.*
- *Inspiration for improvements in the services being offered.*
- *A professional network of innovation support agents*

(Wielinga 2016).

In the CV which took place in Karditsa, Greece, the visiting, for a five-day-period, team carried out field visits, unstructured observations and semi structured interviews with innovators and ANKA, the support service involved in the selected innovation cases. These interviews took place in consecutive sessions for each innovation case, i.e. first the farmers' representative(s) was(were) interviewed and followed the ANKA representative (after the farmer(s) had left).

The role of the host partner during the CV was to observe and record the processes and provide the guests with access to the actors involved in the selected cases as well as relevant information. Short descriptions of the cases had been provided, as foreseen by the CV methodology, to the visiting team members before their travel to Greece.

All interviewees had been informed about the goals of the project. Furthermore, ANKA had been asked to make a presentation including information regarding the area (Karditsa Prefecture) and its own activities while farmers had been asked to deliver a short story of their innovation cases. Both had been reassured that the visiting team would guide the discussions through questions focused on innovation processes, the obstacles they faced, their needs and the support they received during the whole process.

All interviews and discussions were facilitated by a member of the visiting group, designated at the beginning of the CV. Then each team member had to choose two (2) out of the eight (8) observation cards containing a minimum of core questions highlighting different aspects of the innovation process and make use of these questions during interviews (Annex 1). Extensive discussions during internal CV team's sessions in combination with the use of various tools of analysis helped the assimilation of the information and reflections on the studied cases.

Specifically, the visiting team initially visualised the innovation process by drawing significant moments of each case on a timeline. In a second step the team further analysed their observations by focusing on the particular phases of change as described in the spiral of initiatives (Wielinga 2016). During the second day of the CV two tables were prepared and put forward by team members as working frameworks corresponding to the spiral of initiatives. The table of initiatives TI (Table 1) accurately depicts the spiral, while the table of the needs and purposes TNP (Table 2) can additionally serve as a complementary tool to help team members fill in the Cross Cutting Questions. The team was divided in two sub-groups, and each one examined the same cases by making use of one of the tables. It was thus found out that the main difficulty in filling in Table 1 (first sub-group) concerned the transitions between the different innovation stages but as soon as these were defined team work went on smoothly. The second subgroup initially worked on a draft version of Table 2 relating to needs, which was consequently amended and completed for the ESEK case). The main difficulty this sub-group faced relates with the description of the actors' goals and needs in the initial stage.

Based on this first analysis of their observations, the team members also analyzed the positioning of the involved actors, the common points and the differences of the cases, and the main characteristics

and the environmental factors affecting the innovation processes. This information was grouped in 4 thematic frameworks:

1. The innovation process
2. Actors involved and networks
3. The ecosystem
4. The characteristics of the innovation cases

The well done points (the pearls) and the questionable ones (puzzles) along with the team's proposals for improvements constitute the main findings of the cross visit, which were presented in the final symposium, There, the visiting team members and local actors discussed the findings of the CV team.

After the completion of the CV the host partner got once more in contact with the local actors in order to get their opinion on the whole process and its final conclusions as presented in the last day's symposium. Also, each of the visiting team members during the CV or shortly after it had to fill in a questionnaire (SGQs) and post it to the Scientific Group - with possible notification of the CV host. All elements emerged from the abovementioned processes were recorded and form the basis of this report.

4. Results

4.1Thematic frameworks

The analysis concerning the four thematic frameworks is depicted in Tables 3, 4, 5 and 6 addressing the innovation processes, the actors and networks, the fair winds and obstacles in the ecosystem and the characteristics of the cases, respectively.

Based on this information the visiting team discussed and ended up on the "pearls" and the "puzzles" of all the four cases visited and also made proposals for improvement as follows:

4.2 Pearls- Puzzles and Proposals

(*The CV team members are kindly asked to further elaborate, if necessary, the bullets/ issues included in the presentation*).

Pearls:

- Enthusiastic farmers
- Karditsa diaspora
- Interaction with a lot of different actors
- Willingness to cooperate
- Concrete actions and investments
- "Retro-innovation"
- Patience from the sponsors
- New coops helps small farmers to produce and sell

- Doing and thinking
- Awareness on health and quality
- Members as investors

Puzzles

- Focus on marketing
- Clear budgets and business plans
- Cultivation is not a problem? – production planning
- Certainty without to be sure of the future
- Advisory service? – no knowledge from other possible advisory service providers than ANKA
- Unbalance Public vs. Private actors
- Non material investments are not stimulated
- Transferability of solutions?
- People warring multiple hats – can this be a problem?

Proposals

- Invest more in formalising - marketing strategies
- Move forward step by step
- More external consultation on business planning
- Involve consumer representatives in the innovation processes
- Make social media for "Karditsa diaspora"
- Organize local events to present the coops and theirs products and services
- Keep ANKA going
- Networking cross border could give inspiration for new ideas
- Installing regional marketing advisory service
- Establish advisory service by EuRDP
- Establish operational group in EuRDP
- Establish network for innovators bu EuRDP
- EIP finances innovation projects (tests, research, trials) and working groups

4.3 Sharing Knowledge with local stakeholders

As aforementioned, in the last day of the CV a symposium was organized with the participation of the following local stakeholders:

Sotiria Bakalakou, Vice Mayor of Economics, Municipality of Karditsa.

Stavros Messinis, Owner of "the Cube Athens", Incubator Services for start-up businesses

Petros Bourazas, Vice Mayor of Rural Development & Primary Sector, Plastiras Municipality

Giannis Tolias, Innovation Consultant – Free lancer

Dimitris Malkas, farmer, PSYHANTHOS

Lamprini Triantou, Business Consultant, ANKA

Vassilis Bellis, General Director, ANKA

It has to be noted that almost forty representatives from the regional government, local authorities, farmers' coops, research institutes and local chambers and organizations had been invited. However, the symposium coincided with another event organized by the Prefectural authorities. The later became known after finalizing the program of the CV and resulted in many of the local guests not being able to show up.

The purpose of the symposium was for the visiting team to share its conclusions with local actors, exchange opinions and together reflect on the innovation processes and the possible enhancement of the existing support system.

During the symposium the team gave a short description of the AGRISPIN Project and the main conclusions of previous cross visits to continue with the outcomes of the current CV in Karditsa - as previously described in terms of thematic frameworks, pearl, puzzles and proposals. In the discussion that followed both parties (CV team and local actors) further elaborated their points of view.

First the visiting team remarked that they had not had enough information to evaluate the business plans and the marketing strategy of the NGCs. The General Director of ANKA pointed out that building a marketing strategy is an important part of the training program that ANKA organizes with the participation of the local coops and it is planned to put more emphasis on this issue in the near future.

Other issues referred to during the discussion concerned the emergence of the NGCs and the necessity of specific policies that will help in the creation of an integrated network, i.e. an extended "ecosystem" providing innovators with the support they need in the different stages of their endeavors. Specifically, local actors highlighted the obstacles emerging from the complex legal framework and bureaucratic processes regarding the establishment of coops and emphasized the need for simplifying them. In addition, according to the local participants the structural features of the Greek agricultural sector make NGCs a rather straightforward option for farmers. On the other hand, the essential role of mutual trust as an absolutely necessary element for the formation of collective schemes was stressed. In this sense, trust developed between and around a core of actors who already know each other can lead to initiatives that have the potential to move forward. Moreover, local actors pointed out that different types of innovation require different types of support. This highlights the need for a central policy that will allow for a broader "ecosystem" to be built, with each of its parts being organically connected with all the others; such a policy cannot be developed by local actors like ANKA. Furthermore, local actors took notice of difficulties and opportunities related to the implementation of the new policy instruments for so-called Smart Specialization and initiated a discussion which representatives of both guests and hosts are eager to continue.

4.4 Take home messages

The members of the visiting team proposed a number of worthwhile messages to take home as follows:

- "I have been working a lot in developing countries and Greece presents many similarities with developing countries… What I see… you are trying to do something, to invest … and this is for me a good message. But, you have to be open".
- The spirit of cooperation among farmers involved in the cases examined, their enthusiasm and their participation in considerable numbers is very encouraging.
- Cooperation and strong belief in their projects are the main characteristics of the involved farmers.
- The farmers involved in the innovation cases are convinced that they will succeed in doing things better, based on their own efforts. They are not interested only in money but are willing to engage in tasks (work) for doing things better.
- "Do not blame the crisis! The crisis brought back this fantastic present of having a supportive community, which is unique and it does not exist anywhere else. These new coops may work here only because of the crisis".
- New Generation Cooperatives may be the starting point for attracting young farmers also in other European countries and making the cake bigger for them.
- The encouraging presence of motivated actors, with strong personal drive comprising not a different society but a functioning society.
- Team and locals actors share the willingness to continue this conversation and put the right things forward; support services examined in CVs can contribute in the dialogue by putting forward the right questions in order to be properly supported in their mission and this actually can turn the AGRISPIN project into a success.

Discussion

a. The concept behind the cases

The cases studied in Karditsa represent a bottom up approach for rural development involving farmers who are trying to meet (notwithstanding trade-offs) environmental, financial and social criteria for sustainability.

All cases were built around different versions of the New Generation Cooperatives (NGCs) adopted by farmers in response to their specific needs and priorities. NGCs represent, on the one hand, an innovative 'tool' utilized by ANKA in its efforts to promote rural development and, on the other hand, a new organizational method/ for farmers/growers and citizens through which they attempt to overcome the structural shortcomings of the Greek agricultural sector (collapsing coops, small and fragmented farms, need to restructure the cropping system, etc.) and environmental problems. The introduction and adoption of NGCs implies a change in the values, mentality and vision of the local actors, who appear more willing to collaborate and actively engage in common decision making processes and initiatives. They also appear more willing to undertake risks and thus to innovate, an attitude lacking in the years before the financial crisis - despite the existence of innovative ideas at those times, too. The selection of all the four cases, and especially the cases of Efkarpon -which

precedes and has set an example- and PSYHANTHOS – the members of which specify more precisely and rigidly the terms of their co-existence - underlines this rationale and aims at provoking discussions that highlight the strengths and weaknesses of the support service system while also suggesting effective ways to assist innovative endeavors.

In this context, all the four cases are characterized as organizational innovations including an institutional innovation angle. Also all cases except PSYHANTHOS (retro-innovation) are product innovations. In addition, the case of stevia represents a process innovation owing to the introduction of a totally new method for stevia processing. At the same time the knowledge available in the area changes. In the case of ESEK various technical improvements have occurred while in the rest of the cases organic and integrated cultivation practices have been implemented with local knowledge regarding new cultivations been enhanced as well.

Table: Type of innovation cases

Case	**ASYST**	**ESEK**	**PSYHANTHOS**	**EFKARPON**
Type of innovation	**Institutional** New way of interaction among actors in agribusiness (a change in values become visible)			
	Product –Technical Steviol glucosides of considerably improved quality [New at national level as well]	**Product** –Technical Utilization of biomass for energy production [New at national level as well]	**Product** - 'Retro-innovation' (& integrated farming)	**Product** - Technical New fresh, Greek organic products in the market; processed products (organic)
	Process New production method (in the process of being patented)	**Process** Adaptation, technical improvements in the process		**Process** Experimentation with new processed products for the market
	Organizational NGC	**Organizational** First NGC in the sector	**Organizational** NGC and new decision-taking process	**Organizational** First NGC in the sector

b. The discussions *during and after the examination of the cases*

During the CV the visiting team identified the need of making use of more comprehensive and at the same time robust tools in its exploration of the innovations under study and worked towards the development of such methodological tools in the form of two tables (used for the analysis of the cases). However, the analysis of the cases -and thus the outcome of the cross visit- was marked by the fact that the discussions were focused on the evaluation of the viability of the studied innovations as business ventures rather than on the innovation processes per se and the (engagement and role of the) support services. Therefore, the visiting team largely missed the opportunity to in-depth explore the support service provider(s) structure, characteristics and methods and, in parallel, the type of support services which innovators need(ed) at various stages of the innovation process. Some interesting points relating to the exploration of the innovation cases and the conclusions drawn by the visiting team follow.

First, the cross visit reveals the role of diaspora in local development, the significance of which was overlooked, given that strong bonds with home towns are not considered as rare elements of the Greek society. The impact of the informal group that took the initiative to organize the first meeting for ASYST and the fact that it presents organized voluntary efforts, found elsewhere in Greece too, deserved further investigation. In this respect, it might have been an omission on the part of the Greek team that a representative of this group was not invited in the discussion.

Second, all studied innovations involve ANKA in the role of the support service and this resulted in questions, on the part of the cross visitors, regarding the sources of knowledge that the innovators had utilized. In this respect, all cases are characterized by multiple sources of knowledge with universities/research being involved while ANKA mainly played a 'linking' role. Additionally, the lack of a public or centrally managed extension service in Greece is known[2] and had been stressed in the introductory session of the CV.

Third, there is a contradiction regarding the transferability of the innovations studied in the final presentation (symposium) between, on the one hand, the paragraph outlining the main characteristics of the cases (Table 6) and, on the other hand, the relevant reference in the puzzles where transferability is questioned. Nevertheless, all cases are transferable. The cultivation of pulses is not new in the area (thus its characterization as a 'retro-innovation') and the cultivation of stevia (crop) is transferable. On the other hand, the processing unit is more difficult to be replicated due to financial and patent constraints. Moreover, ESEK triggered the establishment of two more energy cooperatives founded in the islands of Sifnos and Crete with which ESEK is in close contact. Efkapron has been a pioneer regarding both the adoption of the NGC idea and the cultivation of super foods and both innovations have been emulated.

Fourth, during the work that followed the interviews on each of the innovation case, it turned out that, as shown in Tables TI and TNP, not all the innovation phases (realization, dissemination) could be/ were identified. The narrow interpretation of the definitions of the phases of the spiral - as described in the CV Manual- made the exercise more difficult. For example, the phase of realization is defined as "implementation at full scale" but "full scale" is not defined; therefore, according to the visiting team none of the cases examined have reached the realization stage, although in the cases of Psyhanthos and Efkarpon products are already on the shelf. Moreover, it has been difficult to make clear the multidirectional relations between Planning, Development and Realization i.e. to treat them as levels/ stages with upward and downward movements. Indeed, approaches relevant to human activity and/or learning systems underline the iterative nature of soft processes, while transition theory, esp. Strategic Niche Management, stresses reflexive experimentation processes and the

[2] http://www.proakis.eu/sites/www.proakis.eu/files/AKIS_characterisation_briefing_final.pdf

(social; double-loop) learning that occurs out of such processes as fundamental features of transition (Kemp et al. 1988; Weber et al. 1999). In this respect, the tables represent static pictures, in which each phase neatly follows the other; thus the dynamics of innovation processes are overseen, as does the volatile interaction with the changing (favourable or not, at times) environment within which innovations are nurtured.

Fifth, the visiting team often focused on questions that did not contribute to the achievement of the targets of the CV and thus of AGRISPIN. Persistent questioning, for example, concerned details regarding cultivation practices, prices, production costs and marketing strategies, as clearly reflected in the team's puzzles presented in the symposium. On the other hand, crucial questions concerning the innovation processes were not adequately dealt with as, for example, the training program that ANKA has launched for coops' members - although the issue was mentioned rather often by many participants, or, in the case of ESEK, the informal meetings organized at Prefectural level, the reasons it stopped and the recent effort of ANKA to re-initiate them.

After the end of the CV some of the participant farmers were asked about the interview and the symposium process and, in short, they described their experience as follows:

"What surprised us is that they [the visiting team] were surprised that there were so many people willing to help us", G. Kolossoussas, ASYST

"It seems that they [the visitors] had both the questions and the answers [to their questions]", D. Malkas, Psyhanthos.

Conclusions

On methodology:

- ♣ The studied cases present some degree of complexity requiring analysis at various dimension/ levels.
- ♣ Though all questions allow for the access to useful information, not all information is equally suited to the project's specific objectives.
- ♣ On the part of the host, the selection of innovation cases that were rather recently launched and not well established in the market made the members of the visiting team prone to focus on the innovations' viability instead of focusing on the innovation processes and the support services.
- ♣ The tools used are only means; for a deeper understanding of when and how a support agent should intervene to support innovators, effort, focus and empathy are needed. Confusing means and purposes - and paying more attention to the former at the expense of the later, jeopardizes the CV exercise during the Agrispin Project. Instead, the focus should be the in-depth description of the cases as detailed Learning Histories.

On innovatory processes:

- ♣ The adoption of NGCs is deemed to be a viable solution for Greek farmers. ANKA actively promotes the dissemination of such a scheme.
- ♣ Core groups of actors who trust each other can become the initiators (re: reflexivity) of innovation processes and /or play a strategic role in their evolution.
- ♣ The financial crisis in which the country is immersed has triggered the quest for new ideas and mobilized actors to take risks. However, the imposition of capital controls brought about a liquidity crisis put to the test the innovators' persistence and responsive capacity.

- ♣ The most frequently barriers of innovation processes referred to by interviewees, besides financing, concern the complex legal framework of the country and bureaucracy. Concerned people within bureaucracy are important to facilitate the finding of solutions, but structures should be improved.
- ♣ ANKA has been found to play the role of 'demand articulation' in only one case (ESEK) with 'network formation' predominating (present in all cases); 'innovation process management' was dealt with in the framework of the 'Incubator'. The Incubator -an innovation per se- is an informal (thus far) scheme designed, operated and (self-)supported by ANKA in order to foster innovations in Karditsa Prefecture through the provision of a wide range of support services to start-ups.
- ♣ ANKA facilitate initiatives' funding (e.g. LEADER) and mediates between the interested group and the Cooperative Bank of Karditsa (created with similar processes, facilitated by ANKA, as the innovations examined during the CV). This is extremely important for innovations requiring investments, esp. under the current financial crisis in Greece.
- ♣ The link between ANKA and universities/ research institutes is of paramount importance for the success of innovative initiatives.
- ♣ Different types of innovation require different types of support. For this reason, the need for a central policy that will allow a broader "ecosystem" to be developed is a prerequisite for the establishment of a pro-innovation environment. ANKA can be an integral part of such an "ecosystem" and an expertise center which the 'ecosystem' will take advantage of.
- ♣ Cooperation is needed for taking advantage of the opportunities and potentials of the innovative policy instruments available at the EU level.

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Table 3: The innovation process

Innovation process				
	Agricultural Stevia Cooperative (ASYST)	**Energy Cooperative of Karditsa (ESEK)**	**PSYHANTHOS- Agricultural Cooperative of Pulses and Food Items**	**EFKARPON -Hellenic Super foods**
Common points, convergences	ANKA gives support for free			
	Universities are involved			
	All cases concern new type of co-ops			
	Mostly individual people had the idea			
	At the beginning farmer meetings were organized by ANKA			
	Leader funds in each case			
	The crisis and capital control had negative effect			
	All looking for niches			
	Not looking for short term returns			
	No formal marketing strategies			
	No worries about production			
	All cases not yet in operational phase			
Uniqueness	• free voluntary help in legal and production advice, building the processing equipment economically with a professor needing piloting	• problems with the license to build the pellet plant on agricultural land, • members as sponsors	• the management of coop (unanimous decisions, no president), • "retro innovation"	• organic production as a goal from the start (no certification yet), • internal experts for almost everything

Table 4: Actors- network

Actors -Network				
	Agricultural Stevia Cooperative (ASYST)	**Energy Cooperative of Karditsa (ESEK)**	**PSYHANTHOS- Agricultural Cooperative of Pulses and Food Items**	**EFKARPON -Hellenic Super foods**
General Characteristics	ANKA has a permanent and stable presence			
	There have been a lot of different actors			
	Local networks have been playing an important and positive role			
	Karditsa Diaspora or the friends of Karditsa is a characteristic unique in Europe that should be cultivated			
	Individual champions not easily identifiable but present in all cases			
	The coops' members constitute the basis on the original way of how cooperatives should work			
External Actors	• Prof. Lolas (University of Thessaly), • Prof. Petrotos (TEI of Larissa) • Informal group of local actors • The group of 4 • The Agronomist in Tobacco Organization	• Informal group • Vassilis Bellis • ANKA	• ANKA • NARGEF	• Prof. Apostolopoulos • ANKA • The Cooperative Bank of Karditsa • The board of the Coop
Internal Actors	• The member of the cooperative	• The board of the cooperative • Yiannis	• The member of the cooperative	• Yiannis and his friend, • Farmers-member of the cooperative • Members as internal experts

Picture1: Actors –Network

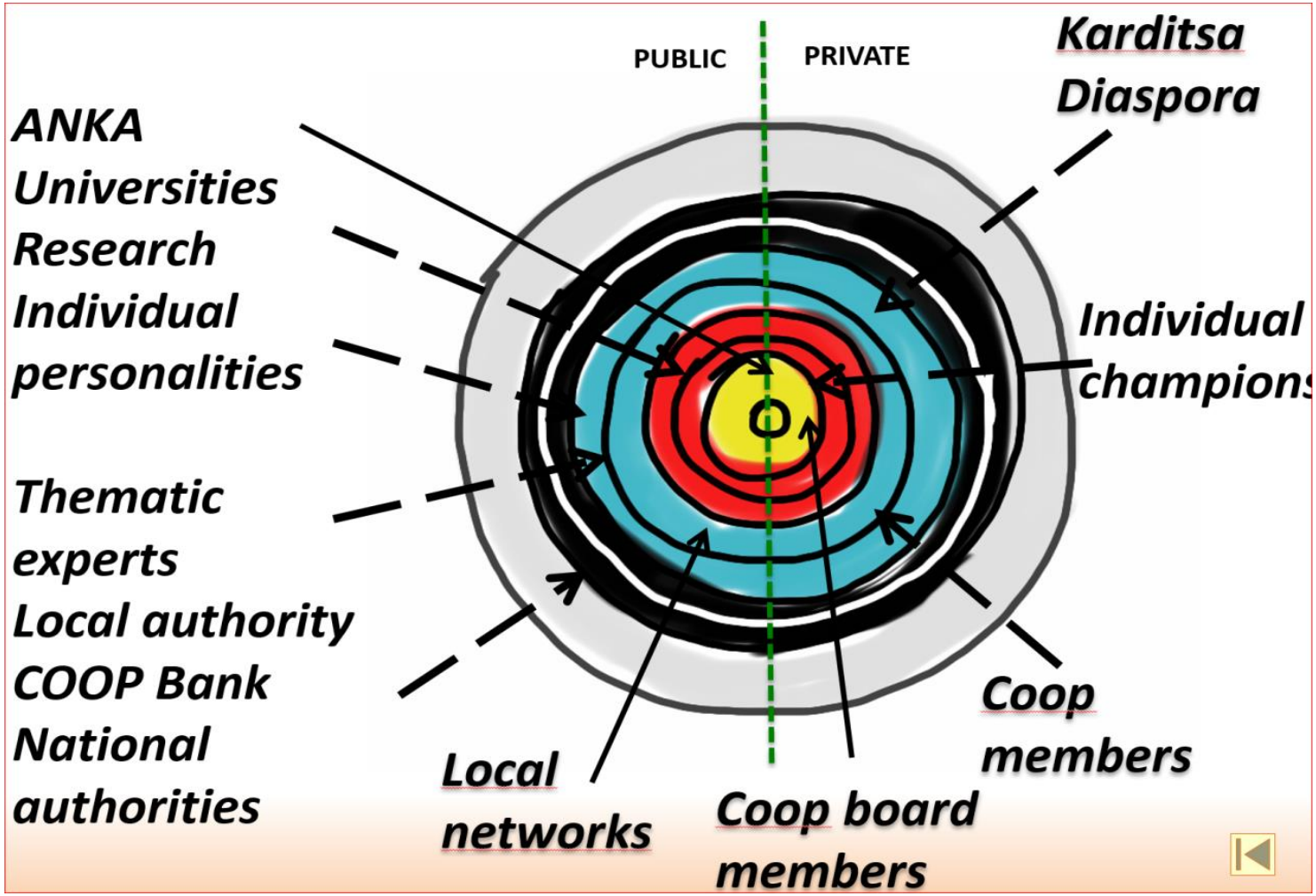


Table 5: The ecosystem

Ecosystem				
Factors	**Agricultural Stevia Cooperative (ASYST)**	**Energy Cooperative of Karditsa (ESEK)**	**PSYHANTHOS-Agricultural Cooperative of Pulses and Food Items**	**EFKARPON -Hellenic Super foods**
Ecosystem: Obstacles in the path				
Financial crisis decreases markets	Inspiration, Planning		Inspiration, Planning	Inspiration, Planning
Capital Control gives extra challenges in payment	Development, Realisation	-Development	Planning, Development, Realisation	Development, Realization
No extension service	Development	Development	Development	Development
Bureaucracy, modifying policy environment	Development	Development Realisation	Development Realisation	-
Bad history of the old cooperatives	Inspiration, Planning ,	Inspiration	Inspiration, Planning	Inspiration, Planning
No experience in coping market volatility	All phases	All phases	All phases	All phases
Helping in Ecosystem: "Fair Winds"				
Searching for alternatives to tobacco and cotton	Inspiration	-	-	Inspiration
"Karditsa Diaspora": Presence of highly motivated people, acting in informal networks	Inspiration, Planning	-	-	-
Organize substitutes for expensive or low quality imported product	Planning	Planning, Development		
Existing practices and knowledge in cultivation	Development Realisation	-	Development, Realisation	Development Realisation
Awareness of human health: • Alternatives for burning • New trends in human diet	- Inspiration, Planning	Inspiration, Planning	- Inspiration, Planning	- Inspiration, Planning
Financial crisis triggers initiatives	Planning	-	Planning	Planning

Table 6: The characteristics of the innovation cases

Innovation process				
	Agricultural Stevia Cooperative (ASYST)	**Energy Cooperative of Karditsa (ESEK)**	**PSYHANTHOS-Agricultural Cooperative of Pulses and Food Items**	**EFKARPON – Hellenic Super foods**
Common characteristics	Crises is strong driver			
	People have strong roots with their birthplaces			
	Volonteer work is essential			
	Always farmers with drive and strong belief			
	Universities are always involved			
	Niche production with the hope for more			
	Possibilities for transferability in other regions			
	Leader money used			
	Support from agencies like ANKA seems critical			
	Crises is strong driver			
	People have strong roots with their birthplaces			
	Volonteer work is essential			
Doing thinks better	• Working in the whole food chain	• Working in the whole food chain	• Working in the whole food chain	• Working in the whole food chain
Doing better thinks			• Pulses of high quality	• New kind of berries
Doing entirely better things	• New technology in the area	• New technology in the area		

ANNEX 1

OBSERVATION CARDS

Innovation

What is new? For whom is it new? What problem does it solve? What is the benefit? Who benefits? Does it affect the interests of other actors? Are there any side effects (positive / negative)?

Innovation process

What was the first spark? Who took initiative? What stages can be recognised in this process? How far is it now? What are the current obstacles? What do key actors expect from the near future?

Innovation support

What is the contribution from the host partner? What would not have happened without this support? What is the potential for the near future? Do the key actors have wishes regarding the support they can obtain?

Actors and networks

Which actors play a key role in this innovation process? Who are the main drivers?

Are there any actors who actively resist the changes? Which networks are important for this innovation process? What is their importance? Who keeps these networks healthy?

Environment

Which external factors play a role here? Which changes in the environment influenced the actors to take initiative? What external factors were helpful? What external factors were obstacles?

Critical incidents

Has there been any crisis in this process? What was the cause? Who did what to overcome this crisis? Have there been big surprises in this process? What have been the consequences? Has there been a turning point in this process? How did it change the course of the process?

Dissemination

What is the influence of this innovation on the environment? Do others show interest in what is happening here? Do others change their practices because of what they see here? Is dissemination being actively promoted? By whom?

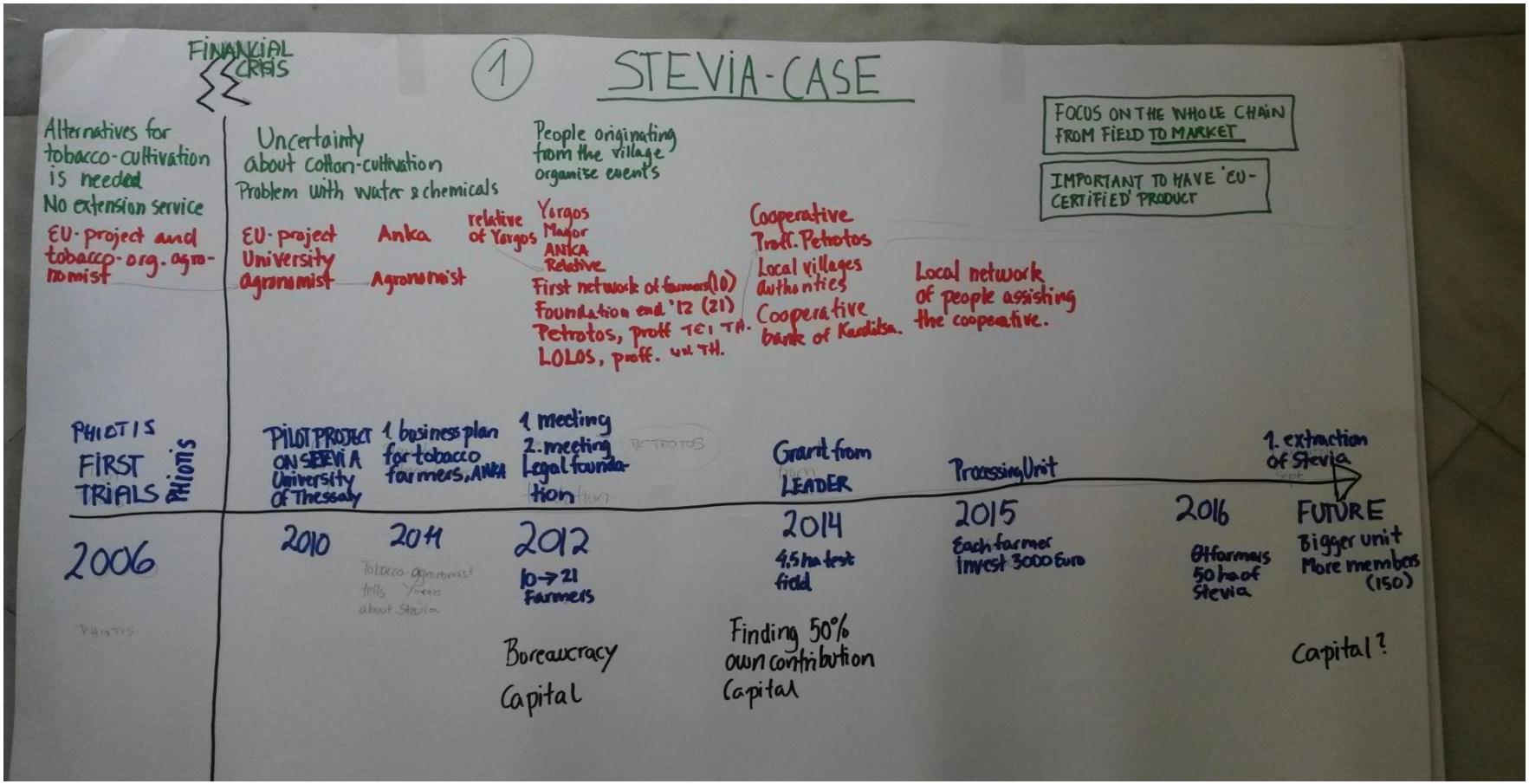
Future perspectives

Suppose all their dreams come true, what will be the situation after a few years? What will be the main challenges to overcome, for realising this dream? What will be their strategy to do so?

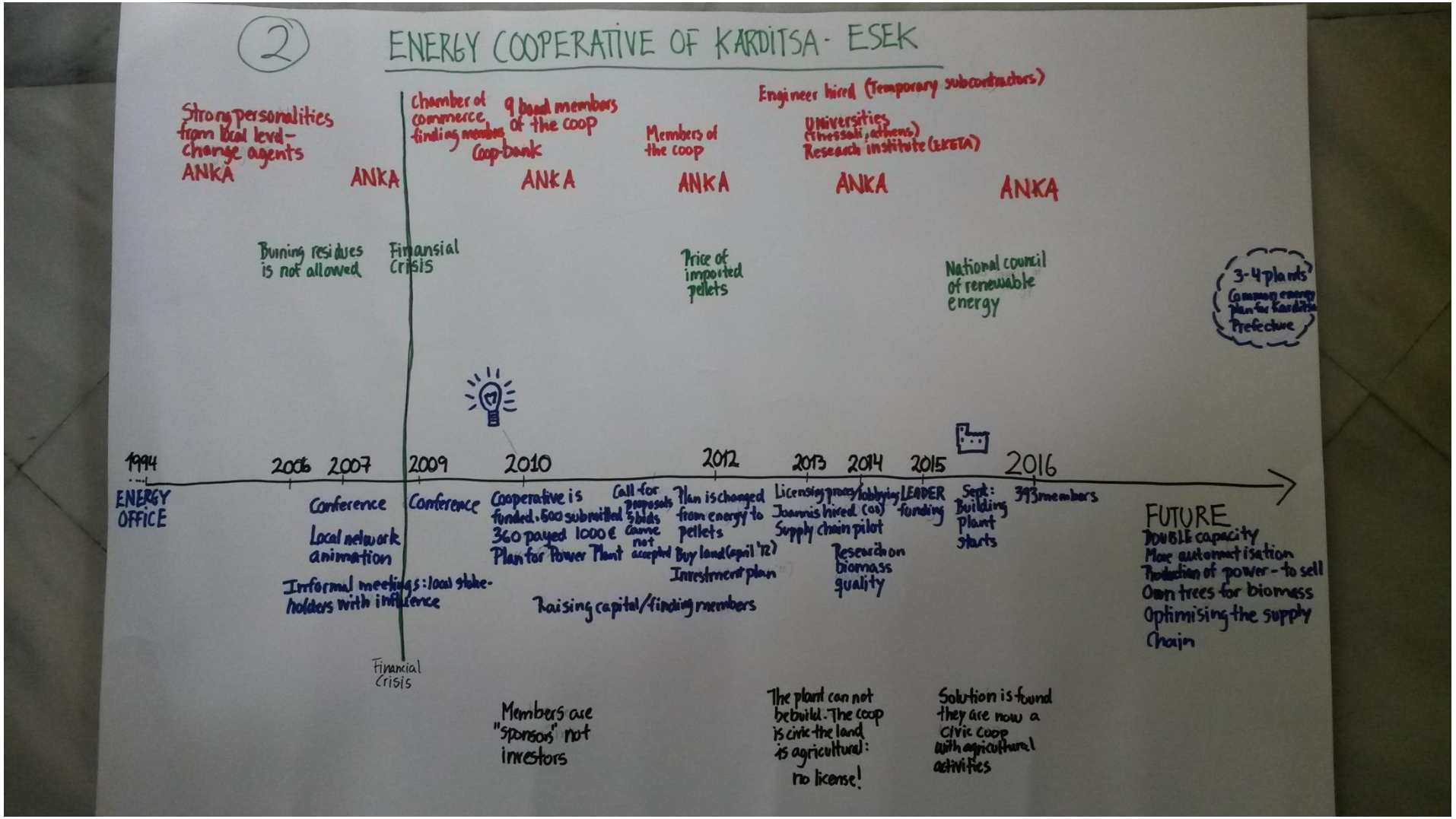
ANNEX 2

TIMELINES

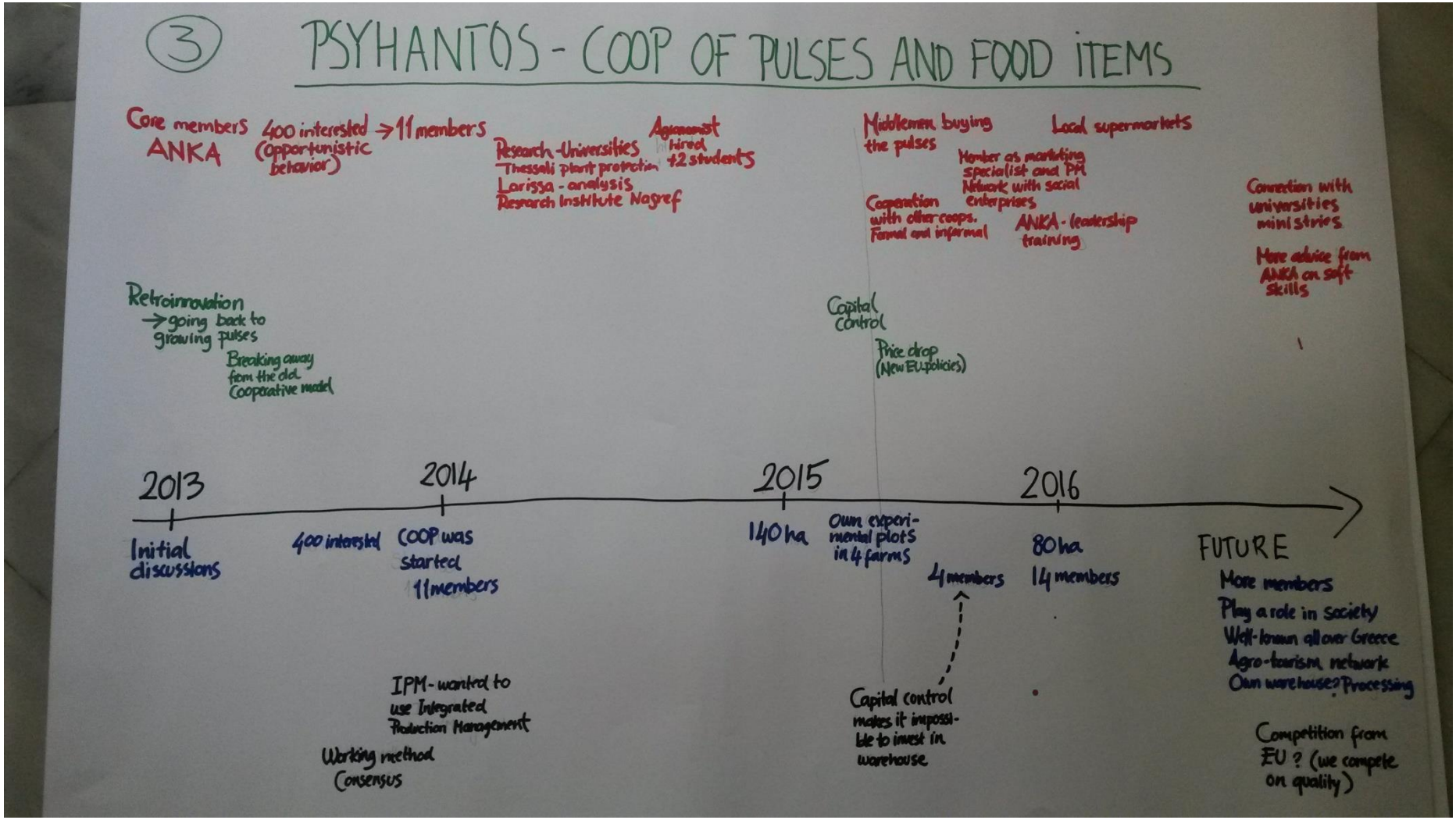
Timeline of the ASYST case



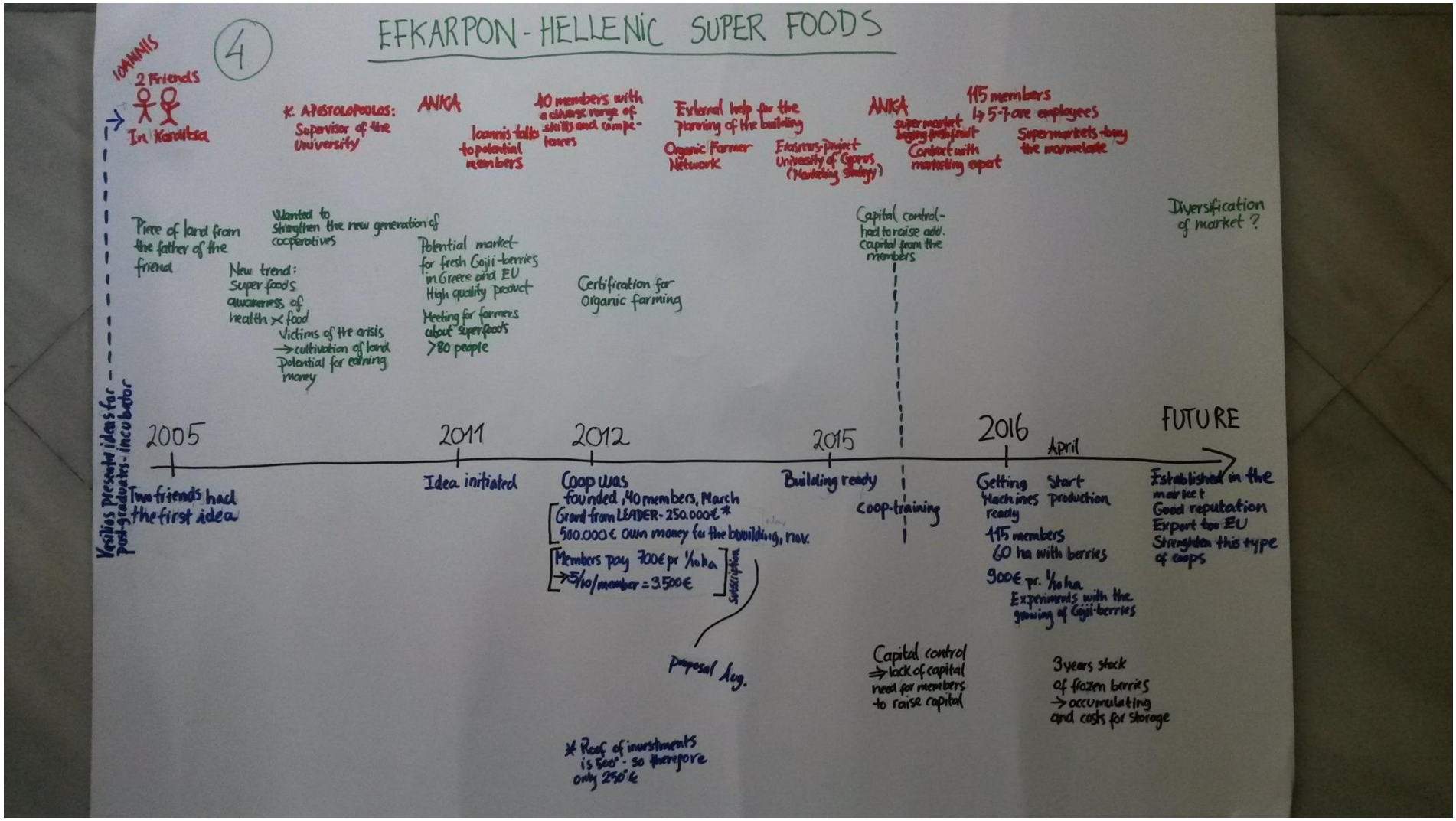
Timeline of the ESEK case



Timeline of the PSYHANTHOS case



Timeline of the EFKARPON- HELLENIC SUPERFOODS case



ANNEX 3: Tables of Needs and Purposes (TNP) and Tables of the initiatives (TI)

Table 1: The table of the initiatives

who	who	what	what	phase		date/year	event	remark	support	support	comm with	with	by
pioneer		idea/ challenge		1	**initial idea**				look beyond the usual				free actor
informal network		get inspired by idea		2	**inspiration**				communicate with peers		peers		change agents
providers of room		plans & space €,		3	**planning**				task division, submit plas		gatekeepers		managers
exper/t/ ienced		to feasible practice		4	**development**				search& learn		enabling community		experts, suppliers
practice network		implement in real life		5	**realisation**				make position, negotiate		rep of stakeholders		managers, gatekeepers
similar interest		copy		6	**dissemination**				access to experience		users		Advisors?
managers		spread & in structures		7	**embedding**				trigger change in structures		policy makers		Managers?

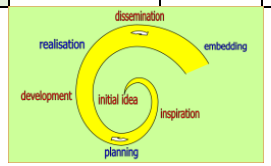


Table 2. a: Draft version of the table of the needs and purposes (TNP) ,used in the case of ESEK.

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Stage & approx. dates	Support received by farmers / innovators	Provided by whom	Received by (beneficiary)	Who does innovate? Who does take initiative?	Environmental influences affecting farmers	Environmental influences affecting support services	Driver of the innovation processes
INITIAL							
DEVELOPMENT							
DISSEMINATION							

Table 2: The table of needs and purposes (TNP), used in the cases of PSYCHANTHOS and EFKARPON-SUPERFOODS.

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Stage & approx. dates	What was (is) being pursued? (goals, etc.)	Who took (takes) part, and who leads (name underline)	What did participants need (or felt was needed) to achieve their goals?	What support was provided? (in response or not to such needs, and in what form & at what moment)	By whom was such support provided? (NB: it can be "nobody" or "own"	How effective was the support provided? (qualitative assessment)	Key environmental factors which influenced the process during that stage? (distinguish + and – influences)	Key results achieved at the outset of the stage	Key challenges yet to be solved, or that emerged
INITIAL									
DEVELOPMENT									
DISSEMINATION									

ASYST (TI)

	phase	date	who	what	event	2nd event	support service provider	support	comm with
1	initial idea	2001	agronomist tobacco industry	searching alternative tobacco	trying& growing stevia		?	EU project 'alternatives tobacco'	?
2	inspiration	2012	ex-inhabitants Karditsa	inspire other people rural areas	1st meeting		Professor Petrotos Professor Lolos, Thessaly	invite additional farmers to meeting	other farmers
		2014	group of 4	making concrete	founding the cooperative		Professor Petrotos	supporting farmers	n.a.
3	planning	2014	board = 4	funding leader	application leader		ANKA	legal advice	bureaucracy, Coop. bank
					funding farmers		University of Thessaly	Trials- University of Thessaly	chemical authority
4	development	2016	board coop	feasibility test of processing	establishment of processing unit	cultivation (well possible)	Professor Petrotos	experiments in processing unit	members in technical workshops
5	realisation								
6	dissemination								
7	embedding								

ESEK (TNP)

Stage & approx. dates	Who does innovate /take initiative?	support service provider	Support received by farmers / innovators	Received by (beneficiary)	Environmental influences affecting farmers/ innovators	Environmental influences affecting support services	Driver of the innovation processes
INITIAL	ANKA	Chamber of Commerce ANKA	networking information	prefectural community	financial crisis and new opportunity of income not burning waste from cultivation	n.a. n.a.	 informal group or local stakeholders and ANKA
DEVELOPMENT		ANKA	attracting membership information network & public funding				
DISSEMINATION							

ESEK (TI)

phase	date	who	what	event	2nd event	support service provider	support	comm with
initial idea	2006	informal group	challenges in Karditsa, new idea	meetings around the table		ANKA	create space for innovation	
	2007+2009	ANKA		conferences at village level		ANKA	Match-making bringing together	citizens in the area
inspiration	2009	ANKA (Vasilis)	got 'green light': support of community	focus groups, 1 on energy		ANKA	location, invitation	officials private & public
	Ιουλ-10	ANKA (Vassilis Bellis)				ANKA	lobbying,	
planning	Ιουν-10	ANKA?	clearing the road in time	foundation of coop		ANKA	helping in bureaucracy	bureaucrats
	Δεκ-07	the board	get money from members	get land, focus on pellets		ANKA	juridical+ project	gatekeepers suppliers
		Joannis + board	test the supply chain	pilot test		ESEK, research institute	funding, running test	suppliers
development		the board + Joannis	planning & building	plant is built		ANKA+ constructor	getting leader supp	local leader group
realisation								
dissemination								
embedding								

PSYHANTHOS (TNP)

Stage & approx. dates	Who does innovate? take initiative?	Provided by whom	Support received by farmers / innovators	Received by (beneficiary)	Environmental influences affecting farmers	Environmental influences affecting support services	Driver of the innovation processes
INITIAL 2013					move from cotton		core group of farmers
till nov 2014	farmers	ANKA, via farmers discussion	information, structure of cooperative / other organisation	farmers	Breaking away from the old cooperative model	n.a.	
DEVELOPMENT	coop	nargef?	technology transfer	coop	CAP direct payments -> greening		
	coop	ANKA	leadership training	coop			
	coop	Thanassis & network	Project management	coop			
	coop	Thanassis & network	marketing	coop			
DISSEMINATION							

PSYHANTHOS (TI)

	phase	date	who	what	event	2nd event	support service provider	support	comm with
1	initial idea	2013	The farmers (core group)	asking support	core members come to ANKA		ANKA	information about coops	n.a.
2	inspiration	2013	farmers (core group)	information, matching expectations	meetings for 400 interested	dissemination Integrated Pest Management	ANKA	hosting and help	400 farmers
		2013	farmers	strategy, values, working method	discussion about decision making in coop		ANKA	juridical, coop organisation	n.a.
3	planning	Νοε-14	11 presidents :)	statute of the coop	coop starts with 11 members	agronomist+ 2 students	ANKA	juridical, coop organisation	specialist
		2015	the 11 members	reacting to capital control (CC)	crisis in the coop		no one?	n.a.	n.a.
4	development	2015	the 4 remaining member	decided to continue no matter what	meeting of 4		no one?	n.a.	n.a.
		2015	4 remaining	informed the others	new members joined		ANKA	hosting	400 farmers
		2016	the coop (again 14)	1st step in marketing	marketing activities		Thanassis (member)	organising events	consumers, retail, horeca
		2016	marketing members	same	planning to sell to retail		same	planning	same
5	realisation								
6	dissemination								
7	embedding								

Efkarpon- Super-foods (TNP)

Stage & approx. dates	when	Who took (takes) part, and who leads (name underline)	What was (is) being pursued? (goals, etc.)	Key results achieved at the outset of the stage	By whom was such support provided? (can be 'nobody' or 'own')	What support was provided (in response or not to such needs, and in what form & at what moment	What did participants need (or felt was needed) to achieve their goals?	How effective was the support provided? (qualitative assessment)	Key environmental factors which influenced the process during that stage? (distinguish + and – influences)	Key challenges yet to be solved, or that emerged
INITIAL	2005 discussion	Yiannis, friend, supervisor			Yiannis, ANKA, supervisor	open presentations in different places	attract members		find new income as response to the crisis	
		ANKA			Yiannis & supervisor (university)	info collection?	obtain information on supply chain			
				establishment of cooperative	ANKA	procedures and advice	legal registration process			
	2011	interested farmers	to get the group to a new generation coop	with members from the country	members	member-ship fees	capital			
DEVELOPMENT	2012 coop, leader	Yiannis, governing board	establish the processing plant	(marketing successes)	Harocopion University	erasmus	marketing		capital control	diversification, marketing
		ANKA	initial marketing channels	(production skills)		learning by doing	production skills			certification organic
				processing plant completed	ANKA (EU money)	guidelines for leader proposal	business plan		euros	cooling, storage facilities
	2016 now			increased membership	the board	new memberships and more contribution	investment capital		euros	
DISSEMINATION	too early									

Efkarpon- Super-foods (TI)

	phase			who		what	event	2		support service provider		support		comm with
1	2	3		4		5	6			7		8		9
1	initial idea	2005		Yiannis and his friend		developed the idea for the study	students get an idea (superfood)			ANKA		introduction about incubator		students
										university		supervising appl for Erasmus		Yiannis
2	inspiration	2011		Yiannis and supervisor		inform about possibilities of superfood	meeting with 100 farmers Karditsa			ANKA		Facilitated meeting		potential growers
							roadshow Greece			university				
3	planning	2012		the board		statute & theory of the coop	Coop established			ANKA		juridical assistance, hosting		members
				the board		planning: production, processing, marketing	leader proposal			ANKA		project support		LAG
4	development	2013		the board		contracting partner	planning the building			external expert		support for design + construction of building		constructors/ suppliers
				experienced members		advice for growth and quality	planting, experimenting: gojii			own experts		agro advice		unexperienced members
		2016		own experts		Fine tuning food processing	designing the food process							
5	realisation													
6	dissemination													
7	embedding													