Fondazione Lombardia per l'Ambiente

INNOGROW
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Input paper for the organisation of the study visits to transfer experiences on innovative production

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1 Introduction

1.1 INNOGROW Project and Consortium

"INNOGROW – Regional policies for innovation driven competitiveness and growth of rural SMEs" is an Interreg Europe project that aims to improve partners' policies on rural economy SMEs competitiveness, focusing on the integration of new production technologies and business models that can lead to innovative products. INNOGROW promotes the exchange and sharing of practices/experiences between regions and relevant actors, so as to integrate lessons learnt into regional policies and action plans.

The adoption of innovative solutions, new business models and the modernisation of production is a determining means of increasing productivity and expanding into new markets. Territorial capacity building and policy innovation involving all regional actors are critical factors for promoting the diffusion of innovation, to maintain and strengthen SMEs' competiveness and consequently regions' growth.

Regions in rural areas can play an important role in the modernisation of existing SMEs and the proliferation of innovative start-ups, providing incentives to promote the adoption of technological innovations, such as organic farming, functional food, crop resistance systems, selective breeding and feeding processes to boost livestock resistance to local conditions. At the management level, incentives need to be provided for mixed production of crops and livestock products, and new business models and coalitions that lead to innovative business ideas.

The INNOGROW Consortium consists of 9 partners from 8 different European countries namely Bulgaria, Czech Republic Greece, Italy, Latvia, Hungary, Slovenia and the United Kingdom. The organizations' that it includes are local, regional and national authorities, higher education institutions and one Chamber of Commerce.

Table 1: INNOGROW Partners

Country	Organisation
	Region of Thessaly (RoT)
	Lombardy Foundation for the Environment (FLA)
	Zemgale Planning Region (ZPR)
	The University of Newcastle upon Tyne (UNEW)
	Stara Zagora Regional Economic Development Agency (SZREDA)
	Regional Development Agency of the Pardubice Region (RRAPK)
	Chamber of Commerce of Molise (CoC – Molise)
	Regional Development Agency of Gorenjska, BSC Business Support Centre Ltd, Kranj (BSC)
	Pannon Novum West-Transdanubian Regional Innovation Non-Profit Ltd (PANOV)

The project's main type of activities and expected outcomes throughout its 5 year (2016-2020) duration include:

- Exchange of experiences through interregional thematic seminars/workshops and study visits.
- Public dialogue and consultation with regional stakeholders and the public on key issues.
- Development of stakeholder groups and meetings with stakeholders.
- Identification of good practices and building up knowledge capital through thematic studies/surveys/analyses.

- Development of regional action plans to improve the relevant policy instruments.
- Dissemination activities, such as the development of online transferable tools and resources to promote benchmarking and policy learning.

The expected outcomes of the project are summarised as follows:

- Increased capacity of the regional administrations to effectively implement SMEs' competitiveness policies.
- Increased stimulation of rural economy SMEs to adopt new technologies and innovative techniques and procedures.
- Improved implementation processes for SMEs competitiveness and innovation policies, as well as the promotion of vertical and horizontal cooperation between rural economy SMEs, with regards to the production and commercialization of products.
- Increased awareness among policy makers regarding the influence of regional policy measures.
- Development and realization of innovation support services to rural SMEs in order to facilitate the adoption of innovation.

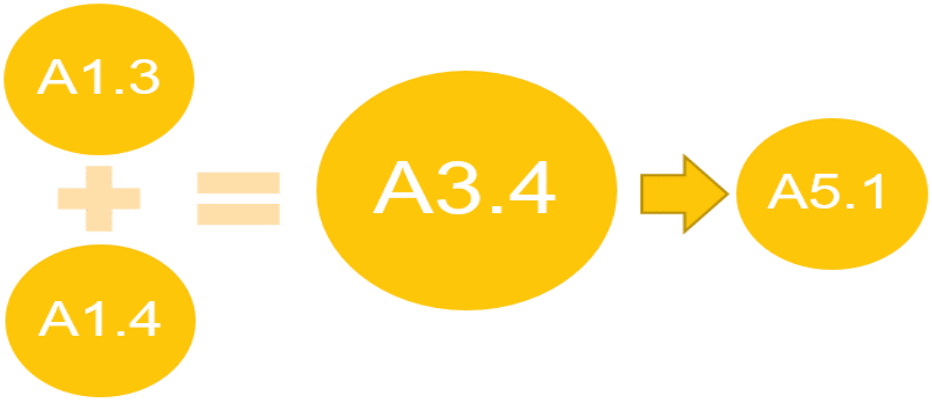
1.2 INNOGROW Activity A3.4

The principle objective of this input documentation is to provide the basis for the organisation of the two A3.4 study visits, by FLA in Lombardy, Italy (4th semester) and by the Region of Thessaly (RoT) Greece (5th semester). The study visits' target is primarily to present good practices and examples of investments on new technologies adopted by rural SMEs to modernise their production processes, and to encourage the exchange of these experiences.

Furthermore, this paper aims to facilitate the implementation of A3.4 by providing:

a) **Relevant issues/topics** to be discussed and addressed by regional authorities
b) **Guidelines and directions** based on needs and challenges of each region, derived from the project analysis phase (A1.3 & A1.4)

Figure 1: Interdependency of Activity A3.4 with other INNOGROW Activities

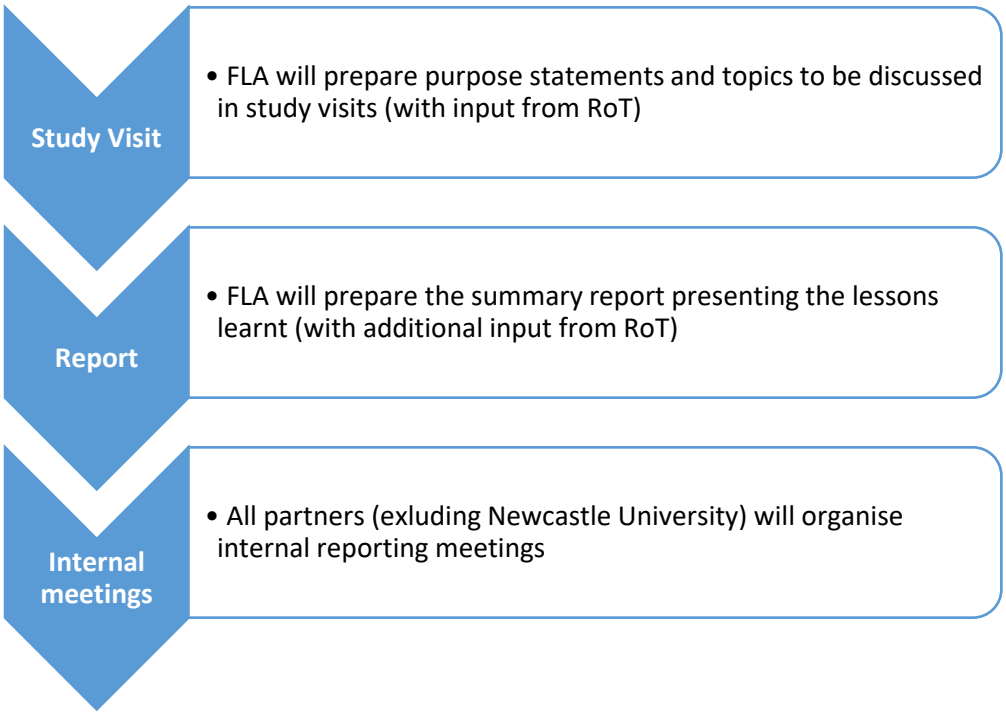


Activity A1.3 consists of a comparative analysis of existing policies to foster the adoption of innovation by rural economy SMEs, and the development of policy recommendations for policy makers. **Activity A1.4** comprised a survey-based research to investigate and analyse the factors that influence rural economy SMEs as concerns the adoption of innovation.

Following the implementation of the study visits (A3.4) a summary report will be produced, compiling the lessons learnt. All Partners, apart from the University of Newcastle, will then organize internal reporting meetings to diffuse lesson learnt within their organisations. The results of A3.4 will contribute to the development of the regional action plans foreseen to be delivered before the monitoring phase of the project (Activity A5.1).

The timeline of events is represented in Figure 2 below.

Figure 2: Timeline of Activity A3.4



2 Added value and strategic orientation of INNOGROW Study Visits

The organisation of study visits provides valuable practical experience to participants (i.e. partners, key stakeholders and external experts), enhancing the exchange of experience process based on existing, successful cases studies. The INTERREG Europe programme encourages this type of exchange and suggests that the sharing knowledge and expertise should be an indispensable component of regional authorities' efforts in order to drive sustainable policy development.

A3.4 study visits are anticipated to foster capacity building in relation to investments and implementation of new technologies exploited by rural economy SMEs. Alongside the respective workshops organised by INNOGROW, study visits are one of the main catalysts to understand and come to terms with the policy change requirements that will allow SMEs to modernise their production processes.

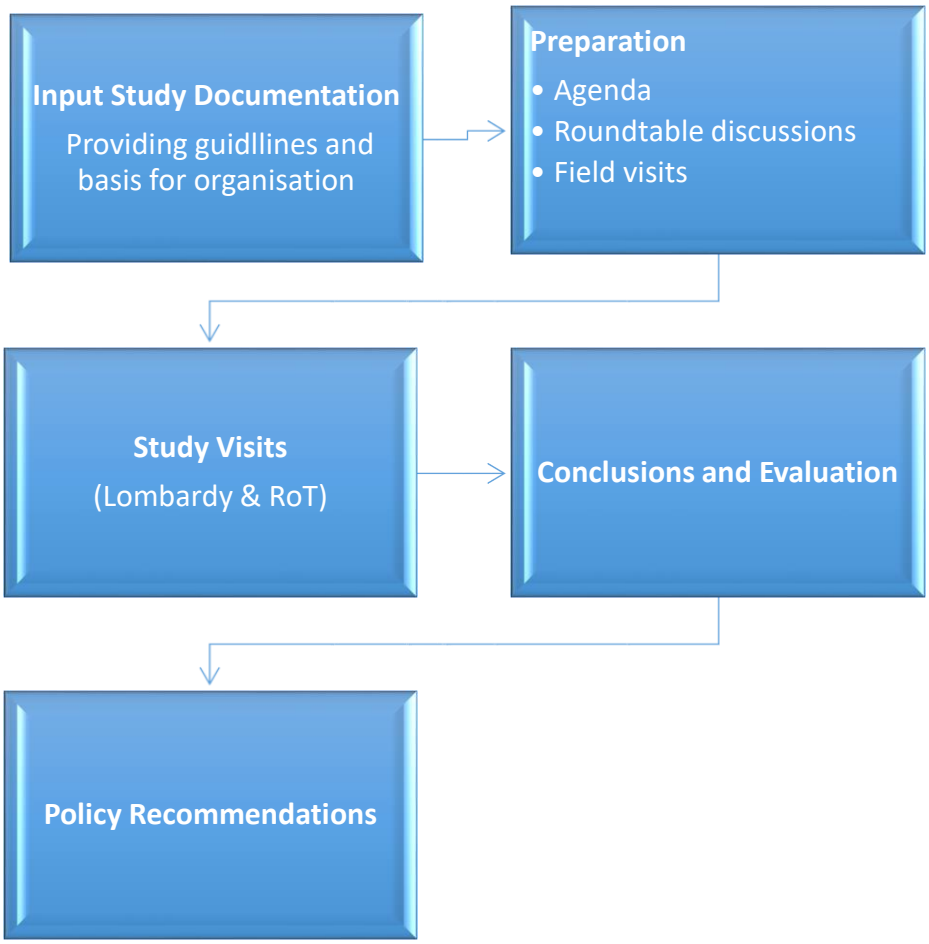
In addition, study visits are an opportunity for regional level stakeholders, policy makers and experts to communicate, exchange ideas, discuss the regional issues and

examine potential solutions for various social, economic, environmental or other challenges in relation to policy development. This type of experiences can therefore play a crucial role in policy making and the implementation of potential advancements and/or change. These discussions and hands-on experience can facilitate the involvement and possible contribution of key stakeholders in future action plans, and in the long-run after the project's completion.

Essentially, study visits are an opportunity for mutual exchanges of experience, and therefore a two-way beneficial process. Local actors will benefit from the participation of the international experts, who in turn will have a unique opportunity to exchange and discuss ideas in a direct and efficient manner with local stakeholders, with whom they do not have the opportunity to regularly meet.

Figure 3 presents an overview of the suggested structure of the INNOGROW study visits.

Figure 3: Structure and Processes for the study visits



3 Defining Innovative Production

Innovation

Innovation, in general terms, is the process of transforming an idea or scientific research into a good or service that creates value for which customers will pay. In order for a process to be considered innovative the concept must be replicable at an economical cost and must satisfy a specific need[1]. Often an innovative process involves deriving greater or different values from resources, in order to deliver more efficient solutions and further satisfy customers' needs and expectations. Innovation has also been described as the specific instrument of entrepreneurship, acting as an enabler to create wealth.

Innovation includes the adoption of new technologies, but also new processes, products, markets, services, behaviours, and networks. Through the introduction of this type of innovation and new technologies, SMEs essentially aim to increase their economic benefits in order to survive and strive in a competitive environment. This process allows them to capture value from technological innovation and economies of scale, which in turn with lead to increased competitiveness and productivity.

There exist three main types of innovative technologies relevant to production: a) innovative production technologies, b) technologies supporting products' distribution and c) technologies supporting products' safety; this input study is concerned with innovative production technologies, further discussed below.

Innovative production techniques

In rural economy SMEs the process of innovative production and innovative production techniques is a relatively new solution to the challenges faced in rural areas. This type of techniques aim to deliver solutions to use resources more efficiently in production, and ideally result in increased profitability, customer satisfaction and access to new markets. Innovative production techniques also contribute to job creation and encourage the introduction of new skills in the workplace. Innovative production techniques also stimulate the competitiveness of the rural society by taking advantage of the economies of scale and the industry's comparative advantages as a business ecosystem.

[1] http://www.businessdictionary.com/definition/innovation.html

Some of the typical examples of innovative production technologies are briefly described below:

- **Organic agriculture/Farming[2]:** According to Food and Agriculture Organization (FAO) organic agriculture is an approach of sustainable agriculture and part of a larger supply chain which encompasses food processing, distribution and retail. The basic rules of organic production are that natural inputs are approved and synthetic inputs are prohibited. In the EU there are a number of objectives and principles which are followed and aim to minimize the human impact on the environment such as wide crop rotation and strict limits on chemical synthetic pesticide and synthetic fertilizer use amongst others.

  The European organic sector is rapidly growing and currently consists of over 186 000 farms[3]. The area of organic farmland in the EU increases on average by half a million hectares each year.

- **Renewable energy[4]:** the European Commission defines energy from renewable sources' means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.

- **Precision agriculture:** is an approach to farm management that uses information technology and can be applied in a range of agricultural enterprises. It involves the observation, impact assessment and strategic response to fine-scale variation in causative components of an agricultural production process. Precision agriculture is commonly used in arable and large farms in the main growing areas of Europe. The enterprises that implement precision agriculture aim to secure high profitability, sustainability and protection of the environment.

- **Functional foods:** are typical foods that have specific nutrients added, such as vitamins or minerals, fiber, or probiotics or prebiotics. In general, this includes anything added for a specific functional purpose. This type of food provides health benefits beyond basic nutrition and in generally terms have an addition function. In recent years the functional food industry (which includes the food, beverage and supplement sectors) has experienced fast growth rates.

[2] http://www.fao.org/docrep/meeting/X0075e.htm#P86_4004
[3] https://ec.europa.eu/agriculture/organic/organic-farming_en
[4] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0028&from=EN

4 Links to INNOGROW Activities

The major results of Activities A1.3 and A1.4 form the basis of the topics to be discussed at the study visits, as follows:

4.1 Activity A1.3

Activity A1.3 is a comparative analysis report of selected policy measures promoting the adoption of innovation by rural economy SMEs in INNOGROW partners' regions. The report offers an overview of policies measures, and of supportive evidence, enablers, and impacts to allow partners to understand the policy dynamics and potential in their regions.

In total, 15 case examples of policy measures have been identified across 6 INNOGROW partner countries. Czech Republic contributes to the highest number of the selected cases with 4 cases, followed by Bulgaria and Italy (3), Slovenia and Hungary (2), and Latvia (1). Regarding geographical focus, of the 15 cases, 7 are focused at the national level, 4 are local, 2 are regional, and 2 have both a national and regional focus.

The comparative analysis concludes that the most significant outcomes or benefits from implementation of the selected policy measures were perceived to be an increase in job opportunities (employment), followed by enhanced research and innovation capacity, cost reduction/annual savings and increased productivity for the participating businesses. Stimulating employment, improving productivity and enhancing innovative capacity are therefore key challenges for rural areas across Europe.

4.2 Activity A1.4

Activity A1.4 was based on a survey questionnaire, used to gather information on the factors the influence rural economy SMEs to adopt innovation within the INNOGROW Consortium regions (Greece, Italy, Hungary, Slovenia, Bulgaria, Czech Republic and Latvia).

In total, 86% of 97 respondents replied that they have adopted some form of innovation in their businesses. According to the activity's main findings, the most common type of innovation in the INNOGROW partner regions is the "use of new

production technologies and processes", corresponding to more than 50% of the sample, followed by "development of new products/delivery of new services".

Nonetheless, the survey concludes that most of the innovative rural economy SMEs adopted low intensity of innovation (approximately 63%). 28% of rural SMEs had a moderate degree/level of innovation adoption, while approximately only 1 out of 10 rural SMEs can be characterised as innovation intense, having adopted more than four types of innovation.

The survey also examines the **different motivations** behind the adoption of any type of innovation. The results indicate that the following five main motivations mostly encourage rural SMEs' to adopt innovation, presented below in order of importance:

a) Improve operational efficiency
b) Access new markets
c) Gain competitive advantage
d) Increase client satisfaction / satisfy customer's needs
e) Increase profitability.

The survey also examined **constraints and barriers** to innovation, common to most SMEs looking to engage in innovation or to adopt an innovative process. The lack of financial resources and difficulty in accessing funding from external resources was the most prominent barrier (reported by 70% of respondents). Regulation and lack of regional support and uncertainty over business benefits were also found to be determining barriers that hinder the adoption of innovation. Weakness in networking and lack of cooperation between regional stakeholders, as well as lack of internal research, were also found to be influential factors.

Correspondingly, the survey explored different **enablers to innovation**; the most pronounced drivers for innovation in the INNOGROW regions and key prerequisites for successful innovation were: a) a favourable regulatory framework (such as provision of incentives for the adoption of innovation), and b) the availability of internal capital and relevant knowledge and skills of the employees.

The survey's last section examined the **benefits derived and the expected organizational impact** from the adoption of innovation. Increased operational efficiency, greater customer base and access to new markets were the top three expected benefits from the adoption of innovation. Better quality service, higher productivity and cost reduction were comparatively of secondary importance.

5 Topics to be presented and discussed during the study visits

The main topics to be discussed during the study visits in Lombardy and the Region of Thessaly (primarily derived from the results of INNOGROW activities A1.3 and A1.4 presented in the previous section) are listed below:

- Territorial background

Previous to the implementation of the study visits and the discussion on the topics presented below, it would be useful to brief the participants on the background and characteristics of the selected cases. The aim is to inform participants about the environmental and landscape characteristics of the cases presented, and enable them to fully understand and examine the topics addressed. This will encourage participants to identify any territorial similarities and differences that need to be taken into account for transferring best practices.

The **City of Mantua** is the capital city of the Province of Mantua, located in the Lombardy Region. The region is bounded by several rivers, a number of natural reserves and protected natural areas. Mantua's landscape is primarily agricultural, however its economy is historically known to be strongly industrialised. More specifically, the industrial sector accounts to more than 30% of the local GDP, while the primary sector accounts for only 6% respectively.

The **Region of Thessaly** is a traditional geographic and modern administrative region of Greece, located in central Greece, one of the country's largest regions in size and population. The region is agricultural based and contributes significantly to the national economy's agricultural production, particularly for the production of grain and cattle. In recent years the Region of Thessaly has managed to successfully integrate modern and innovative techniques in its regional agricultural production processes.

The topic of territorial background should focus on the particular/specific characteristics of the selected territory that have significantly contributed to the adoption of innovation by rural economy SMEs, and the development of policies that have boosted innovation and resulted in growth. The presentation should also include any other environmental/landscape characteristics which have played a determining role in the growth of the region and its SMEs. The suggested locations are presented in Chapter 8.

The presence and role of the involved stakeholders is an additional factor that should be mentioned to participants prior to the implementation of the study visits, to help them obtain a global outlook on the presented cases.

➢ Policy-making priority areas to promote innovative production

The factors that typically motivate rural economy SMEs to adopt innovation in their production processes vary widely, according to the type of business activity. However, due to their relatively common economic structure, multiple similarities exist, which can be identified and successfully targeted through policy-making.

Efficient innovation policies should support the adoption of innovative production methods by facilitating access and providing external sources of finance, as well as a simple regulatory framework. Fostering operational efficiency can result in numerous advantages for any type of business; in the long-run, cost reductions and improved profit margins can result from avoidance of unnecessary steps, which tend to slow down production time and increase the costs of production.

A business that can produce and deliver products faster can experience increased business activity and opportunities. Higher quality is another positive outcome of increased operational efficiency from adopting innovative production procedures, since it often improves the employees' performance by increasing overall productivity and total output. This can also result in higher customer satisfaction and increased ability to respond to consumer needs. Consequently, increased efficiency leading to increased business activity results in the higher demand and creates the need for new jobs and opportunities.

Policy makers should therefore focus on implementing policies that encourage the creation of jobs, which are directly related with the skills required for the introduction of advanced technologies in the workplace. The type of skills required for the newly created employment opportunities will also differ according to the type of business activity where innovation has been adopted. Overall, higher qualifications and levels of education will be required with particular emphasis on ICT and interest-based skills. Development of such policies which will encourage the development of required skills is a therefore another focus point.

Due to the structure of rural economy SMEs, policy makers should also focus on protection the natural environment. Their high dependency on natural resources for their input in production, protection of the environment is therefore significant factor to consider when developing an efficient policy or regulatory framework which will encourage the introduction of advanced innovation processes.

Overall, the implementation of these factors can contribute to the development of polices which will encourage the introduction of innovative processes and improve competitiveness. Further developing and/or advancing such policies can enable SMEs to take their businesses one step further into regional, national and even international markets, therefore giving the opportunity to rural economy SMEs to grow and survive in a competitive environment.

- Lifting barriers, challenges and constraints that hinder innovation

Policy makers are advised to shape their priorities by factoring in the significance of the different barriers and constraints that rural economies SMEs are facing; according to INNOGROW results (Activities A1.3 and A1.4), the most common barrier is the difficulty in accessing funding from external/private resources. Policy makers should consider how to improve access to new financial resources and capital, since this factor plays a determining role in the way a business will grow and expand.

External capital can facilitate the process of innovation production, by providing smaller businesses the opportunity to invest in new (usually expensive) machinery, which could not be afforded otherwise. Likewise, external finance also allows businesses to invest in growth projects.

Often, even when this external finance is made available by the state of other private financial institutions such as banks and funds, high interest rates continue to hold back businesses from investing in innovation, thus hindering the introduction of such techniques and more advanced methods of production. Additionally, some sources of external financing may require investors or shareholders to give up part of their ownership in exchange for the funding.

The lack or insufficiency of required skills from existing employees (human capital), as the production processes change and advance, is another common constraint. Especially for employees of a lower educational level, additional training should be introduced, along with hiring additional qualified employees (if required). Targeted policies should encourage lifelong vocational education and the development of the required skills.

Effective policies should also aim to minimise business uncertainty and create a positive environment with political and economic stability. Business uncertainty can inhibit a small business's decision to invest in innovative technologies. The development of a simple and efficient business regulatory framework is positively correlated to the adoption of innovation and competitiveness. This is of particular importance in certain European economies (such as Italy and Greece) which have recently suffered greatly since the beginning of the financial crisis in 2008; economic depression led to political and regulatory instability, significantly hindering business activities and development at all levels.

Finally, due to their location, rural areas frequently lag behind in terms of non-financial resources such as infrastructure and transport links. Lack of efficient transport links act as a barrier when attempting to obtain access to new markets and qualified human capital; limited infrastructure limits access to advanced machinery and/or equipment.

Policy reforms to improve transport links and promote the development of (cross-sector) infrastructures can significantly contribute to the diffusion of innovation.

- Expected transformations derived from the adoption of innovative production

It would useful for policy makers to develop a good understanding of how the adoption of innovative production techniques can benefit the operation of rural economy SME. Though the benefits may vary between different business activities, there are many common specific goals to be taken into account when developing policies targeted at the operation of SMEs:

- Increased operational efficiency and productivity
- Increased productivity of workforce
- Cost reduction
- New product development
- Access to new markers (e.g. niche markets)
- Increased quality of offerings
- Conforming with legal regulations and requirements (i.e. environmental provisions)
- Solutions to current problems/issues
- Greater customer base
- Accelerated delivery of goods and services to customers

6 Good Practice Cases on Investments on new technology by rural SMEs

The following cases have been identified as best practice examples in the respective regions, thus recommended to be included in the study visits:

6.1 Good Practice cases in Lombardy, Italy

A. GaiaG – Internet of Things

City: Cesena

Industry: Information Computer Technology

Year of adoption: 2016

Number of employees: less than 10

Website: https://www.gaiagsat.eu/

GaiaG provides effective Decision Support System of Systems (DSSoS) able to monitor remotely, in continuous and in near real time more than 50 environmental variables all over the territory of interest selected and set up by users. In January 2016 GaiaG launched a new Software as a Service, which enables users to monitor more than 50 environmental variables all over the Earth, including solar radiation, wind, air, vegetation, land, soil, weather, sea & oceans, ice, cloud and security (fire, inundation, extreme weather events); factors evidently useful for agricultural activities. The project's main aim is to increase profitability and revenues after having identified a new market opportunity, by developing new decision support systems utilizing data collection through satellites.

This system have been developed by combining satellite data with data sources such as ground-based sensors, manned and unmanned aircraft, and by including them in Spatial Data Infrastructure (SDI). The end product is a structured and user-friendly web Decision Support Systems that is a source of key environmental information.

The product is structured and user-friendly, that is web Decision Support Systems that is a key source of environmental information. The company benefited from the development and selling of the new product since it was able to reach new markets, increase profitability and competitiveness. On the other hand, the companies that adopted the innovative decision support systems benefited from improved efficiency since they were able to monitor their environmental indicators.

Despite its success, various difficulties were encountered during the project. These included limited interest in the new technology from various stakeholder groups such as SMEs' owners, farmers and public bodies. The fact that most did not have previous experience with such devices and decision support systems contributed to this. Internal capital was another issue since it was not enough to cover the development costs and the owners had to find additional recourses from public and private funds. The final issue that was faced concerned finding new employees with the necessary training and skills.

B. AGEvoluzione – Smart meters and Internet of Things

City: Pavia

Industry: Information Computer Technology

Year of adoption: 2010

Number of employees: less than 10

Website: http://www.agevoluzione/about-us/

AGEvoluzione is an innovative start-up and R&D Center carrying out research, development and consultancy in the field of the Internet of Things (IoT) offering cutting-edge solutions. AGEvoluzione also acts as an incubator for ideas which are developed and transferred into the market, aiming to promote sustainable business growth and to develop mechanisms to monitor environmental impact and resource efficiency. In this light the company developed smart meters and IoT mechanisms for agricultural and agri-business orientated SMEs.

The company developed, Wi-Node which is a wireless device for remote acquisition of field signals. It is a microprocessor-based IoT device which enables to monitor operation parameters of hydraulic pumps and electro pumps suitable for watering systems in farming activities and manufacture of food and beverages, and to communicate the data detected by the company's control system or the pump manufacturer's or dealer's remote assistance service. The information that it collects can be stored in a database and analysed at a later date or otherwise also made available in real-time. The information stored on removable media and data storage devices can be later transferred to a computer, smart phone or tablet and sent to the help desk or used in-house for troubleshooting or operational statistics useful to optimize production processes. The wireless device is also able to send email alerts or SMS text messages when the set thresholds are exceeded.

AGEvoluzione used public funding from the Lombardia Region as well as internal capital, and private, external funding including loans and venture capital. The

company also employed new staff with relevant knowledge and skills for this purpose. Via the development of this new product the company managed to significantly improve the quality of the products offered in terms of innovation and ease of use, increasing its competitiveness and profitability. Workers' productivity was also essentially improved, thus reducing the company's overall production costs.

In this case the difficulties encountered were again related to the limited relevant skill of the existing employed in Internet of Things, which in turn added extra costs to the project's implementation. Stakeholders' limited interest in sustainable and environmentally friendly technologies which were reluctant to adopt such new solutions with no previous experience was also a difficulty. It was necessary to find funding sources in order to cover the technology's integration costs. This is project has proved to be transferable, since WI-NODE technology has already been adopted in many rural economy SMEs in Slovenia and its benefits have proven to outweigh by fat the investment costs.

6.2 Good Practice case in RoT, Greece

THESGala "Dairy Cooperative"

City: Karditsa

Industry: Manufacture of food products (Animal husbandry)

Year of adoption: 2011

Number of employees: 50-249

Website: http://www.thesgala.gr/

The Cooperative "THESgala" was originally formed in the Thessaly region envisioned to offer high quality milk and dairy products to consumers at highly competitive prices. It aimed to support regional rural SMEs to access new markets and become competitive. The total milk production reaches 120 tons per day, corresponding to 10% of domestic production. Primarily, the association's goal is to reduce production costs, increase productivity and provide access to new markets for regional producers by taking advantage of economies of scale.

The Cooperative "THESGALA" has managed to develop a wide network of collaborations with some of the largest companies in the dairy industry. As a result of collaborations is the favourable quality of milk and ensuring quality feed. The Cooperative nowadays has 44 stores with vending machines in the city of Larissa, Thessaloniki and Athens. The delivery of the dairy products to customers is carried out through automatic milk vending machines, which is an innovative technique for the Greek market. Prior to this, the milk is pasteurized at modern and certified facilities and directly reaches the tanks of the automatic vending machines. In 2013, THESgala implemented an innovative distribution system worldwide by using vending machines to sell milk, allowing consumers to buy fresh milk directly from farms 24/7. The consumer have the opportunity to find whole and light milk and chocolate, fresh and of high quality.

This milk is pasteurized at modern and certified facilities and it reaches directly the tanks of the automatic vending machines. It is a closed system that does not allow the milk to have any contact with the outside environment, which means that it retains as many of its nutrients as possible. The most important problem in the project's implementation was to hire people with the appropriate skills, innovation management, quality check and assurance and networking skills. Difficulties were also

related to integration costs for technology transfer in other Greek regions, i.e. Athens and Thessaloniki played important role in the time needed to penetrate in these markets.

The transferability potential of the THESgala vending machines is high because of the low implementation due to the low implementation risks, deriving from the fact that the achieved benefits and impact in the region outweigh the investment costs by far. Additionally, rural SMEs share common needs regarding their products, i.e. desire to access to new markets and reduce their products' distribution costs.

7 Guidelines for the organisation of the study visits

7.1 Overall Objectives and Themes

The overall objective is to allow the exchange of experiences and ideas in order to facilitate the rural economy SMEs to invest in new technologies and modernise their production processes.

Specifically, both study visits will be thematically structured as follows:

1. Presentation of real life examples/case studies, highlighting the most relevant needs and challenges associated with rural SMEs that have already adopted new and/or innovative technologies.

2. Exploration of how such issues can be addressed through regional policies.

3. Provision of insights to regional authorities on how innovation technologies can positively impact on SMEs' productivity and competitiveness.

4. Collection and exchange of experiences from different regions regarding the investment and adoption of new technologies.

5. Networking between elected representatives of regional public administrations and members of stakeholders' groups, through structured interactions

7.2 Main criteria for selection of the study visits

Further to the cases identified in sections 6.1 & 6.2, certain criteria have to be fulfilled in order for the most representative cases of SMEs in each respective region to be included in the study visits. These criteria will ensure that the field visits will represent the most relevant and up-to-date innovation processes:

- **Geographical Location:** the study visit should be held in a location within the partner's regional boundaries, which will present all the elements of the territory that characterise the landscape, the society and the SMEs (Mantua, region of Lombardy for FLA and Region of Thessaly for RoT).

- **Organisation/enterprise:** The study visit should present successful rural SMEs having adopted innovative production technologies. According to the

INNOGROW project, the term "rural economy SMEs" refers to small and medium businesses, which operate in rural areas and contribute to the GDP of rural areas, connected with rural-specific activities and make use of natural capital / rural environment.

- **Economic activity**: must be in an industry that is directly related with the rural economy.

- **Time of implementation** of new technologies: should be during or up to 5 years previous to the starting date of the INNOGROW project (i.e. 01 April 2016).

- The case study should be successful in **overcoming the challenges** faced by the organisation or achieving its initial objectives, through the implementation of new technologies.

- Practices that demonstrate **high transferability potential** in other regions and relevant industries.

- **Innovation approach** in strengthening visions able to capitalise and valorise in an integrated approach the territorial complex system values and resources, including environmental, landscape, social and cultural (heritage and cultural).

- The case study should have adopted/follow (or at least be in line with) **a territorial synergic strategic vision** as a measure to promote innovation and competitiveness for rural SMEs.

8 Organisational considerations

8.1 Proposed dates and venues

Both study visits (Lombardy and Region of Thessaly) will last 2-days, organised according to the guidelines included in this input documentation paper. This document should be distributed to partners at least 3 weeks before the date of the 1st study visit in Italy, the date of which is yet to be decided (possibly co-organised with the 4th project meeting).

Study Visit 1: Lombardy, Italy (FLA) Preparation & Proposed Venues (February 2018)

The City of Mantua and the territory of Mincio Park (south east of Lombardy)

Mincio Park is located in the eastern part of Lombardy and stretches from the regional confines in the north to the river Po in the south, embracing the valley of the River Mincio. The Province of Mantua lies in the south-eastern part of the Region of Lombardy, wedged in between Veneto and Emilia Romagna. The territory is varied and extends from the hills, to the terraced plains, from the area of meandering riverbeds to the complex of lakes of Mantua, with the exceptional wetlands of the Mincio valleys and the lowland forests of the Bosco Fontana.

Advantages of Mincio Park:

- Presence of Universities, non-profit Foundations and Parks authorities that create a stimulating environment

- The region has the presence of successful cases of innovative SMEs in the field of agrifood:
  -Social agriculture
  - Grana Padano Supply chain valorisation
  - Multifunctionality of agricultural SMEs.

Bonoris Foundation is a local no-profit organization that promotes the development of the regional rural area. Since 1970, the foundation runs the Farmhouse Corte San Girolamo, located within Mincio Park, which consists of Mantua San Girolamo monastery, along with local units of land was in the vicinity of Mantua's Lago Superiore (Lake Superior). Mantua's Lago Superiore is the largest of the three lakes, (in terms of surface, volume and altitude) compared to the Lower and Middle Lakes, found in the Lakes of Mantua, (along the river Minvio). Since 1984 the lakes of Mantova an integral part of the Parco del Mincio.

The San Girolamo monastery was initially founded in 1420, on a bend in waterway in Parcarello, by a small group of monks. After ecclesiastical reforms in the 18th century the monastery was suppressed and the complex sold to one of the wealthiest men in Mantua, who radically transformed the site. In 1806, the monastery of San Girolamo, was sold to the Bonoris family and the estate became a major agricultural enterprise. The Bonoris foundation took over the property after his death.

Local Campus of Polytechnic of Milan (Polytechnic University of Milan)

The Polytechnic University of Milan established in 1863, is the largest technical university in Italy with about 42,000 students and the oldest university in Milan, specialising in higher education courses in the field of engineering (ranked among the top universities in Italy), agriculture and design. The Polytechnic has two main campuses in Milan city, where the majority of the courses and research are located, however the smaller campuses are also found in five other cities in Lombardy and Emilia Romagna (i.e. Como, Lecco, Mantua, Cremona and Piacenza).

The **Leonardo** and **Bovisa** campuses are both found in the city of Milan, the former of which being the oldest. The Milano Leonardo campus has expanded over the years, to encompass new campuses and give rise to a real and genuine university quarter. This campus has the central administration offices. The Milano Bovisa campus (further divided into two campuses) is located in the north of Milan and has sustainably expanded as the result of international competition.

Study Visit 2: Region of Thessaly, Greece (RoT) Preparation

Proposed Venues (Semester 5, exact date to be defined)

The Region of Thessaly is found in central Greece and has four administrative units namely Larissa, Magnesia, Trikala and Karditsa. It is one of the country's largest regions both in terms of population and geographical size.

The economic structure is largely fragmented and small units in all the sectors of the economy are characteristic of the region with small scale productivity[5].

Thessaly is a vital agricultural area and its economy is largely based on rural activities and related industries and particularly for the production of cattle, sheep and grain.

Thessaly is a region whose SMEs mostly operate in the agro-food sector (specifically known for its cultivation of dried nuts such as almonds, pistachios and almonds) and is currently increasingly encouraging innovation processes. The threat and increasing presence of large enterprises makes the agricultural policies and the development of SME competitiveness vital to the region's advancement.

Larissa: the capital of the region and is a principal agricultural centre and a national transportation hub.

Magnesia: the second largest city in Thessaly and the third busiest commercial port in the country. It economy is largely based on agricultural activities and the production of grapes, olives, wheat and cotton.

Trikala: is also greatly reliant on the agricultural economy and produces agricultural products which are exported to other European and international nations.

Karditsa: borders with Trikala and Larisa and has three rivers running through it (Megdovas Pineios, and Enipeas)

[5] Dimitri Economou, The Region of Thessaly, 2000

8.2 Participants

The INNOGROW Application Form foresees that INNOGROW partners, members of regional stakeholder groups and external experts, will participate in the study visits to be held in Lombardy, Italy and in the Region of Thessaly, Greece.

During the study visits, apart from the visiting regional sites of interest, roundtable discussions and networking activities will also take place. These activities will allow participants to discuss the benefits, issues and challenges directly linked with the investment of new technologies in rural economy SMEs.

ANNEX A provides a list of key regional stakeholders per project partner as they appear in the Application Form. This is only an indicative pool of regional stakeholders, identified at an initial stage; it is expected that other participants will be invited through organising partners' networks and list of contacts. ANNEX B provides a participation list that can be used by the hosts to keep a list of all participants.

8.3 Structure of the study visits

8.3.1 Field visits

A field visit aims to help the participants obtain first-hand observations of the studied topics. In the case of this particular activity, the participants will visit and examine rural economy SMEs that have already successfully launched innovative processes in their production, and have achieved their goals and expectations through this type of innovation. The main objective is to present practice evidence and results, anticipated to function as inspiration for the participants. In this capacity, field visits are considered very effective as concerns the direct transfer of knowledge and experience.

Field visits are foreseen for both study visits, where rural economies and SME activities share a number of similarities, as well as differences. It will also be interesting to make a comparison and identify the similarities and differences presented between the two field visits, in order to further encourage and develop versatile policy recommendations.

8.3.2 Round table discussions and presentations

Prior to onsite excursions, it would also be useful for participants to be introduced to the topic's general framework (concepts, definitions, challenges, national or regional legal basis), to obtain a clear and more in-depth understanding of the presented case study. This may be achieved either by presentations or via round table discussions, to encourage interaction and cooperation between participants, as well as the exchange of ideas, knowledge and good practices further to that to be obtained from the field visits.

Presentations can provide an overview of the existing policy measures towards innovation-driven business development in rural economy SMEs; discussions, due to their flexible nature, will allow participants to explore relevant issues in-depth and obtain a better understanding of the overall business environment, prior to the visit.

8.3.3 Networking

Networking is an essential part of the activity, because it facilitates cooperation and opens new opportunities for development and growth. During the two-day field visits, networking is expected to be a continuous process. Apart from the interaction during the presentations and field visits, other networking activities (such as dinners and coffee breaks) will be organised by the hosting organisations, in order to give participants enough time to develop and/or strengthen ties that can encourage policy changes and European cooperation.

Networking activities are also greatly encouraged within the INNOGROW project, both between the Consortium and stakeholders (aiming to build consensus for policy-making), and on a wider European level to encourage rural economy cooperation.

8.4 Evaluation

The evaluation of all project outputs (including the results of the A3.4 study visits) sets the basis for improvements and further development of future project activities. The evaluation of project activities is therefore essential for steering the project towards success, effectiveness and sustainability.

The evaluation suggested for the study visits foresees both qualitative and quantitative analysis, based on the use of a questionnaire distributed to participants; the following aspects of the activity will be examined:

1. Field visits to SMEs (good practice cases) – relevance, interest and transferability
2. Organisation and logistics
3. Content of discussion and applicability to own region/industry
4. Relevance of territories and topics presented to the issues faced in the other regions
5. Other comments/general suggestions for improvement

The qualitative aspect will additionally focus on:

- Practical gains from the field visits
- Transferability potential of best practice cases
- Added value of discussions and lessons learnt
- Applicability and potential to improve policy-making

Participants will evaluate the success of the study visit on the last day, after its completion, using the feedback form provided in ANNEX D. If necessary partners can modify the evaluation form they will distribute to the participants, so that it is relevant to the discussions that took place in each study visit.

8.5 Study Visits Agenda (Lombardy)

INNOGROW 4th PROJECT MEETING

Local Campus of Mantua of Polytechnic of Milan,

Via Angelo Scarsellini 15

Action 3.4: Study visit to transfer experiences

on innovative production policies

Mincio Park, Piazza Porta Giulia 10

21st – 22nd – 23rd February 2018

Tuesday 20th February	
All Day	Arrival in Mantua and guests accommodation
Wednesday 21st February	
09.00 – 13.00	Internal Project Meeting. Local Campus of Polytechnic of Milan, Via Angelo Scarsellini 15, Room "Pozzo"
13.00 – 14.00	Lunch Break
14.00 – 18.00	Internal Project Meeting. Local Campus of Polytechnic of Milan, Via Angelo Scarsellini 15, Room "Pozzo"
Thursday 22nd February	
09.00 – 13.00	Presentation of policies, measures and research projects to improve competitiveness or rural SMEs and promote the sustainable development of the territory. Mincio Park, Piazza Porta Giulia 10
13.00 – 14.00	Lunch break
14.00 – 18.00	In-field visit to successful cases of rural SMEs introducing innovations to improve competitiveness. Visit to 2/3 rural SMEs. Further details will be specified.
19.00	Social Dinner
Friday 23rd February	
09.00 – 13.00	In-field visit to successful cases of rural SMEs introducing innovations to improve competitiveness. Visit to 2/3 rural SMEs. Further details will be specified.
14.00	Return to Mantua. End of the Study Visit. In the afternoon, guided visit to the city and the surroundings.

9 Guidelines for the preparing of the summary report

After the completion of the study visits, the next and final stage of activity A3.4 is the preparation of a summary report, which is in fact the activity's main output. This document aims to present the outcomes and conclusions reached by participants, to be used by all partners for the purposes of diffusing the lessons learnt and developing policy recommendations.

To achieve the abovementioned objective, the following aspects need to be included in the summary report:

- The case studies presented, and the reasons for their selection
- Main observations and lessons learnt from field visits
- Key discussion points and conclusions from topics discussed
- Brief presentation of policy recommendations for the development of action plans, based on the interventions of the participants and the conclusions drawn
- Summary/statistics, such as the number of participants and the type of organisations represented
- Evaluation of the field visits based on participants' feedback

An indicative structure of the field visit summary report is presented below:

1. Introduction

2. Background and objectives of the study visit

3.Field visits/ best practice cases description

4. Key discussion points

5. Main conclusions, outcomes and findings

6. Policy recommendations

ANNEX A: Agenda

ANNEX B: Participants list

ANNEX C: Qualitative/quantitative evaluation

10 References

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Poole Nigel, Chris Penrose Buckley, Innovation Challenges, constraints and opportunities for the rural poor, 2006

http://smallbusiness.chron.com/pros-cons-increasing-efficiency-operating-activities-47694.html

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11 ANNEX A: List of Key Stakeholders/external experts per project partners

PARTNER	COUNTRY	KEY REGIONAL STAKEHOLDERS
RoT		- Ministry of Economy, Infrastructure, Maritime Affairs and Tourism - Regional Association of Municipalities of Thessaly - University of Thessaly, Department of Regional Development - University of Applied Sciences of Thessaly - Association of Thessalian Enterprises and Industries - Technical Chamber of Central and Western Greece
FLA		- Lombardy Region - Sondrio Province - ISPRA Institute - ERSAF – Regional Agency for Agricultural and Forest Services - Politecnico di Milano - Università degli Studi di Milano - Università degli Studi di Milano Bicocca - Università Cattolica del Sacro Cuore - CRASL – Centro di Ricerca sull'Ambiente, l'energia e lo sviluppo sostenibile - CNR, JRC, ARPA - Milan Chamber of Commerce - A.R.I.B.L - AIEL – The Italian Agroenergy Association
ZPR		- Ministry of Economics of the Republic of Latvia - Latvia University of Agriculture - Union Farmers Parliament - Rural consulting and education centre of Latvia - Rural support service
SZREDA		- Ministry of Economy Economic - Promotion Policies Directorate - Stara Zagora Regional Administration - Municipality of Stara Zagora - Municipality of Kazanlak - Municipality of Gurkovo - Municipality of Nikolaevo - Municipality of Gurkovo - Municipality of Opan - Municipality of Radnevo - Municipality of Bratya Daskalovi - Faculty of Economics, Trakia University - Faculty of Agriculture, Trakia University - Chamber of commerce and industry – Stara Zagora - Bulagro Group Holding Agroconsult Ltd.

		- First Investment Bank - United Bulgarian Bank - Somoni Financial Group
RRAPK		- Ministry of Industry and Trade of the Czech Republic - Pardubice Region - University Pardubice - Regional Chamber of Commerce of the Pardubice Region - Agrarian Chamber of the Pardubice Region - Energy Technical - Innovation Cluster
CoC-Molise		- Molise region - Unioncamere - Università degli Studi del Molise - Sviluppo Italia Molise - Finmolise - 360° Olive Cluster, Compagnia del Molise Cluster - Pignatelli Oil, Valerio Wines, Di Nucci Dairy, Cheese factory, Le IFE Truffle
BSC Kranj		- Ministry of Economic Development and Technology, Directorate for Entrepreneurship, Competitiveness and Technology - Slovenian Centre for Competitiveness and Innovation (SCCI) - The Slovenian Rural Network, national support unit (NSU) - Competence Center for Biotechnological Development and Innovation (CCBDI) - Biotechnical centre Naklo - Intercompany education and training centre (MIC) - Centre for Sustainable Rural Development Kranj - Initiative Start:up Slovenia - Agro Biznis - Agro Gorenjska - Datalab - The Slovene Enterprise Fund - The Slovenian Regional Development fund - SID Bank Inc.
PANOV		- Ministry for National Economy / Deputy State Secretariat - of Economic Development Programmes - The National Research, Development and Innovation Office (NRDI Office) - Local Government of County Vas, and Győr MosonSopron - University of West Hungary - Faculty of Agricultural and Food Sciences - University of Pannonia Georgikon Faculty - Pannon Novum Regional Innovation Agency - Chamber of Commerce and Industry of County - Chamber of Commerce and Industry of County Vas - Zala County Foundation for Enterprise Promotion

12 ANNEX B: Participation List Template

The participants attending the INNOGROW study visits will register their name and the organisation they represent, so that a complete list of regional stakeholders that attended can be kept. This will also help in providing contact details for future references and actions which may be needed. This appendix presents a template of the study visits' proposed registration form.

INNOGROW project study visit, (Lombardy/Region of Thessaly)
List of Participants

European Union
European Regional Development Fund

INNOGROW Interreg Europe

	SURNAME – NAME	ORGANISATION/ INSTITUTION	E-MAIL	Comments
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13 ANNEX C: Study visits' purpose statements

This ANNEX presents to readers the purpose statements of the study visits, which consists of the main objectives and targets to be achieved via the organisation of the study visits.

Purpose Statements for INNOGROW study visits
Purpose statement for study visits in Lombardy & Region of Thessaly (4th Semester & 5th Semester)
The main purpose of the study visits (in Lombardy and the Region of Thessaly) is to encourage the exchanges of experiences, ideas between partners, key stakeholders and external experts, in order to give the opportunity to rural economy SMEs in the region to become familiar with new technologies, and to encourage the adoption of modern and innovative production processes. Apart from discussing the most relevant needs and challenges that rural economy SMEs will be faced with when introducing new technologies in production processes, the study visits will also present successful local case studies from the respective regions. Each study visit will be a networking opportunity for regional public administrations and members of the stakeholders' groups, providing them with valuable insights into the current situation, in order to be able to understand the local and regional opportunities and challenges that it entails. This discussion and exchanges of ideas will also provide hands-on experience that can facilitate the possible contribution of key stakeholders in future action plans and guide them to successful influence policy-making. Finally the study visits' participants will have the opportunity to discuss the existing issues which need to be tackled at the current stage of the INNOGROW project. In turn, this exchange can also influence and contribute to the development of efficient regional policies, by covering the current needs and encourage innovation and competitiveness for the rural economy in on a national and regional and local level. The ulterior goal of the study visit, in line with the INNOGROW project, is to influence the policy-making process, via which growth and competitiveness on a regional and national level will be enabled.

14 ANNEX D: Feedback form template

The following template corresponds to the feedback form that attendees will complete in order to carry out the study visit's evaluation process. The form evaluates the study visit in terms of the discussion topics, as well as the relevance and applicability of the case studies presented. INNOGROW partners are welcome to modify it according to the particularity/format of each study visit.

INNOGROW Interreg Europe	**Feedback form for study visit in (Lombardy/Region of Thessaly)**					European Union European Regional Development Fund	
Name:							
Are you a representative of:	**Public administration**	**SME/Business**	**Association**	**Chamber of commerce**	**Innovation Centre**	**Higher Education Institution**	**Other (please specify in the line below)**
Type of organisation (in case of "other"):							
How would you rate the study visit's overall organisation?	1 Very Poor	2 Poor	3 Average	4 Good	5 Very Good	n/a	

Do you think that the time allocated to each discussion/topic was sufficient?	1 Extremely limited time	2 Insufficient time	3 Marginally sufficient time	4 Sufficient time	5 Abundant time	n/a
How would you rate the quality of the presented topics?	1 Very Poor	2 Poor	3 Average	4 Good	5 Very Good	n/a
How would you rate the quality of the discussion during the study visit?	1 Very Poor	2 Poor	3 Average	4 Good	5 Very Good	n/a
How relevant to your organisation's operations were the proposed	1 Very Poor	2 Poor	3 Average	4 Good	5 Very Good	n/a

innovation procedures?						
How would you rate the quality of discussions during the study visit?	1 Very Poor	2 Poor	3 Average	4 Good	5 Very Good	n/a
Do you agree that the study visit will lead to the implementation of innovative production processes?	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	n/a
Overall, has the study visit been interesting and productive?	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree	n/a

Are there any issues related to the discussed topics at the study visits that have not been mentioned? Please briefly describe them.
Do you have any suggestions/improvements for the organisation of future study visits?