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INNOGROW
Interreg Europe

POLICY BRIEF 9

**Improving competitiveness
Investing in technology**

OVERVIEW

This policy brief examines technological investment as a driver for fast-track rural growth. It explores a selection of case studies of investments in technology by rural SMEs and provides useful policy recommendations for fostering rural business environments conducive to technological innovation. To this end, policy interventions aimed at linking investors with SMEs and reducing uncertainty through administrative arrangements, training and research support, are mostly crucial. The question of technological investments was the topic of the **INNOGROW study visit in Lombardia**, Italy, where project partners were introduced to the everyday operations of SMEs which invested in restructuring their business model towards a more technology-intensive direction.

EU Agriculture Commissioner Phil Hogan:

“Each member state will have to explain what they intend to do to stimulate the use of farm advice, improve the uptake of innovation and digitisation (think of precision farming and satellite use). [...] To emphasise the Commission’s commitment, we have increased the budget for agricultural research of €10 billion, much of which will be invested in the area of digital farming.”



Decision support systems

The case of GAIAG

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. This system has 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 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.*

- ✚ *The end product is a structured and user-friendly web Decision Support Systems that is a source of key environmental information.*

Difficulties encountered during the project:

- ✚ *Limited interest in the new technology from various stakeholder groups such as SMEs' owners farmers and public bodies.*
- ✚ *Internal capital*
- ✚ *Retrieving additional resources from public and private funds.*
- ✚ *Employees with the necessary training and skills.*

IOT agriculture applications

The case of AGEvoluzione

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. The company develops smart meters and IoT mechanisms for agricultural SMEs.

Investment funding sources:

- Public funding from the Lombardia Region
- Internal capital
- Private, external funding including loans and venture capital

The study visit in Lombardia, as well as the cases presented here, constitute a very small but representative sample of innovative companies that respond to rural operational needs through technology-oriented business interventions. What is clear however, is that technological investments are often capital-intensive and would normally depend on a plurality of sources, including own funds and third-party, public or private funds.

In this section of the policy brief we present a number of recommendations to regional and local authorities in a checklist format on how to make use of the regulatory framework of agriculture investments.

- **Clear investment policy** communicated across the administrative chain. Already available EU and public funding opportunities should be clearly and coherently addressed, especially at the level of regions. Post 2020 Common Agriculture policy will finance digital farming but leaves to member states the decision of what particular projects they will support. Local authorities are advised to take up initiatives to learn the investments-for-technology and if possible co-shape them in collaboration with central authorities.
- Designate regional institutions responsible for **investments promotion** and informational campaigns. Accordingly, apply specific measures to attract investors and pairing them with matching types of SMEs
- Increase efficiency of **rural infrastructure** (transports, irrigation networks and storage systems) to attract investors. Align infrastructure development with investments within technology-specific objectives.
- Align **regional education & training priorities** with rural realities and needs as well as with specific technological diversifications for which investments are highly likely (e.g. digital & smart agriculture)
- Promote and facilitate **horizontal & vertical synergies**, for instance between big agriculture companies and SMEs to minimize R&D costs through scaling down of existing transferrable technologies.
- Develop regional development policies based on incentive structures for **investing in new technologies**, for instance, secure neutral arbitration between foreign and domestic investors, redesign taxation tools so as to encourage through deductions the adoption of key technologies.
- Couple **environmental priorities** (e.g. carbon emissions reduction, sustainable land use) with corresponding technological innovations and funding schemes for SMEs

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