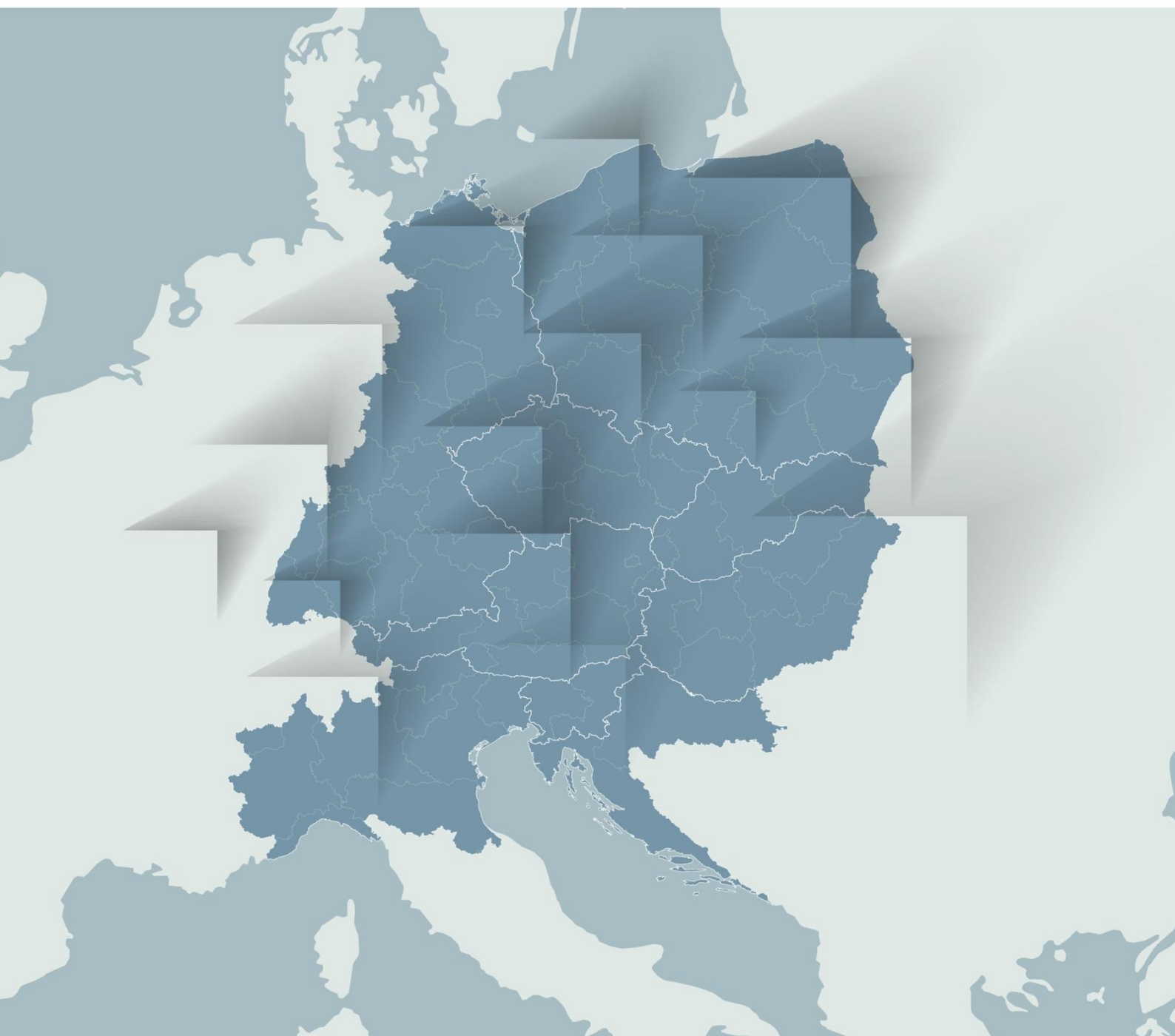# PRECISION FARMING POLICY & ECONOMIC REVIEW ANALYSIS

D.T1.1.2 PRECISION FARMING POLICY ECONOMIC REVIEW ANALYSIS
Italy

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TAKING **COOPERATION** FORWARD

Italy

1. Role of PF industrial sector – Overview about industry/companies

Precision farming is raising interest in the last years among the industries of the North-East of Italy. Particularly, there is a trend among historical agricultural implements companies to update their product portfolio with PF solutions to provide new solutions to the costumers. On the other hand, several start-ups, thanks to the increasing growth of the IT sector are born with the aim to provide intelligent systems to the farms.

Some of the companies that are providing PF solutions to the farmers are:

-Maschio Gaspardo, a global implement producer with headquarters in Veneto. They are specialised in the production of implement for both arable crops, fruits and vegetables. In their product portfolio there are intelligent implements, completely compatible with ISOBUS standards for an easy and fast control by the farmer, such as ready-to-use VRA fertilizer spreaders, sprayers, precision planters and seed drills for the translation of prescription maps into zone-specific management strategies;

-MC Electronics, an industry that provides solutions to upgrade implements into a PF logic. They provide sensors, controllers, monitors all compatible with ISOBUS standards. Their solutions can be applied in almost all the implements used in agriculture;

-Sfoggia, a company that is specialized in the manufacturing of seed drills and precision planters complying the ISOBUS standards, providing VRA seeding applications for arable and vegetable farms;

-Dal Cero, a company that produce fertilizer spreaders upgraded with the VRA technology to apply nutritional zone-specific management, both in extensive crops, or orchards and vineyards;

-AgriCAD, a company that deals with GPS systems. They produce and sell solutions for parallel guidance, autonomous driving and field geo-referenced measurements;

-Free Green Nature, a start-up recently established with the aim to build autonomous rovers that are guided trough sensors and a GPS system to bring sustainable disease control;

- NETAFIM is a company specialized in digital farming and precision irrigation solutions aimed at optimising crop yields and minimise the use of fertilizers

- CAFFINI is a company that produces sprayers equipment, and they offer also digitized solutions. They also are part of a formal company network dedicated to Precision Farming.

2. Impact of PF – Status in the region

The Veneto Region is characterized by an agricultural sector that produces on average 6,1 gross billions per year, namely the 11% of total national production, and generates an added value of 3 billions euro. These important numbers are due to the typical and protected productions of the region, especially successful PDO, CDO and CGDO products. One of the most famous products is Prosecco DOC and DOCG wine, which have an important impact for the regional agricultural gross revenue. Just to give some numbers, Prosecco wine ecosystem has a turnover of about 600 million bottles with an average gross amount of 3 billions of €, which is an important cash flow for the region.

However, the impact of PF in these production chains is still moderate and, according to our experience, at a basic level. Farms start to use systems such as parallel guidance systems, ISOBUS ready tractors or weather stations, but in only few cases are applied advance PF technics, such as variable rate application or decision support systems for farm management.

Among farmers there is an interest on these technologies, but lack of experience, low skilled people on PF and high costs retain the investments in this sector.

However, the regional government is committed towards the introduction of PF trough incentives policies to favour the investments. This will be important especially in order to achieve the sustainability goals, such as reduction of production costs with more revenues, reduction of energetic impact of agricultural production and improve of environmental sustainability increasing the application efficiency of agricultural inputs.

3. Support PF at Policy level in Italy

Among the commitments of the Italian agriculture minister agenda PF is not lacking. In fact, one of the main goals of the government is to promote the technology advancement of the sector to augment yields and quality of the food productions. For sure, PF entails a technological solution valuable for farmers to improve their production processing. For this reason, the government have set an ambitious plan in 2016 providing the objectives and the guidelines to reach a diffusion in the 10% of the total Italian agricultural surface within 2021.

This will be achieved thanks to a subside policy adopted by the government. In particular, 13 italian regions have planned EAFRD (European agricultural fund for rural development) measures to favour the investments on PF by the farmers. Additionally, in the last years the government have incentivised the digitalisation of Industry via a measure called "Industria 4.0", where digital technologies investments are favoured with a plan for the reduction of tax credit of 40%.

Other kind of national investments for PF can be provided also by ISMEA, which is a public institution for the agricultural and food market and it provides facilitated equity for farming investments.

4. Subsidies schemes supporting PF in Veneto

Veneto region have promoted the adoption of innovative investments in agriculture setting up the priorities on its EAFRD program. In particular, among the priorities there are the promotion of transfer-knowledge and innovation, strength the farm competitiveness and revenues, preserve, valorise and restore the ecosystems, reduce CO_2 emissions and incentive the efficiency use of resources. Although PF is not directly specified for the achievement of these goals, the chosen of investments allocation for the EAFRD funds privilege technological solutions giving more points in the final ranking for funding applications.

5. EIP-AGRI Projects in Veneto

5.1. EIP AGRI operational groups in Veneto

The EIP AGRI program of Veneto region is composed by 56 financed groups in the program 2014-2020. They can be consulted at https://www.regione.veneto.it/web/agricoltura-e-foreste/gruppi-operativi-regione-veneto. Within this program it is possible to find 5 projects dedicated to PF, the projects involve many sectors of the agriculture:

BoDi is developing a DSS that integrates the existing decision support systems to offer a more accurate tool using big data management to support;

PEI IRRIVISION that improves the efficiency of the resource water using PF;

PEI PV sensing, whose intent is to develop DSS using data obtained from sensors mounted in the farms;

Rovitis 4.0 whose aim is to develop 2 robots with sensors and integrated DSS, the prototypes will be able to perform the treatments on the vineyard;

Smart AP Smart Aquaponic, that develops smart monitoring system to control aquaponic systems and support farmer's decision;

Smart FIT Smart Fertilization, Innovation e Technology, whose aim is to develop a DSS to support farmers in the decisions reducing the negative impact on the soil;

Smart PEST Smart Pest control, that has the goal to reduce the use of pesticides using DSS and the pollution connected to them.