



High Tech Farming partnership

1st Coordination meeting
26.02.2018

Background presentation

Thematic area and partnership composition:

S3 Agrifood Platform

New and High technologies relevant for farming practices: sensing, data acquisition/management, automation/robotics, including ancillary activities such as maintenance & repairing, training and on-farm demo activities.

The partnership is mainly driven by Regional Administrations from 13 EU Countries. Partner Regions:

Flanders, Weser–Ems, Central Macedonia, West Macedonia, Galicia, Extremadura, South Ostrobothnia, Pays De la Loire, Toscana, Marche, Veneto, Emilia-Romagna, North East Romania, East Central Sweden, Northern Netherlands, Gelderland, Noord Holland, Zuid Holland, North-Brabant, Limburg, Northern Ireland, Centro.

Estonia is the only National Government which participates as partner

Partners have mapped main actors as follow:

80 Academy/RTO; 163 Companies; 23 Governments; 160 End-users (farmers)

State of development of the partnership and achievements today

S3 HTF Partnership was established as an informal consortium in October 2016, it officially started its operation at the S3 Agrifood Platform Kick off event (6-7 December 2016).

Focus on 4 Value chains:

Crops; Tree cultivations; Livestock; Protected cultivations

and 5 technology/service oriented areas:

Eyes and touch: sensors and data acquisition

Mind: data processing

Arms: automation and machineries

Services: maintenance/repairing; training and demo

State of development of the partnership and achievements today

Main achievements:

- Scoping Note
- Joint mapping (still ongoing with the JRC expert)
- Submission of INTERREG project Hint4AF
- Submission of the Expression of Interest under DG REGIO call
- Connection with a H2020 funded projects (NEFERTITI)
- Participation to events
- Identification of promising business cases

Actions foreseen to accomplish interregional innovation investment/s

- Improved mapping (ongoing; external expert) – Mar 2018
- Interreg project HiNT4AG - results due in Mar 2018)
- WATIFY B2B Matchmaking events on Photonics and on Precision Farming Technologies (16 and 17 May 2018)
- ERIAFF Conference 2018 (Thematic sessions on High Tech Farming and Big Data and Traceability) – 11-13 June 2018
- Focusing on a reduced number of pilot business cases along 2018:
 - Agriculture warnings for weeds and diseases
 - Technology adoption in small and family farms
 - Integration of sensors to monitor and improve the conditions of livestock
- Improving the Partnership Governance and revising the Action Plan

Expected support through the pilot action

Main bottlenecks against commercialization and scaling up businesses at interregional level: Integration of competences, lack of skills (by end users), post market services, trust and market dimension

Specific focus on:

- Improving administrative capacities of public bodies and cluster management (for interregional interactions in programming tools, procurement and project development);
- Closing the gap between technology providers and primary producers.

To deepen the focus of the business cases

- **Technology adoption in small and family farms**

In Tuscany, several ongoing projects (TINIA, OLIMPOLLI, Oenosmart and Nomadi-App) are focusing on the adoption of new technologies to the needs of small and family farms. Relevant matching initiatives are in Centro Region with IWsense, a pilot offering simple and innovative wireless solutions to monitor abiotic parameters in vineyard, in East Central Sweden, with Agro Sörmland chairing a group of researchers, tech-companies and end-users that patent innovations for farmers, and in Extremadura, with several ongoing projects focusing on the adoption of new technologies for irrigation and fertilization management in small and big farms.

To deepen the focus of the business cases

- **Agriculture warnings for weeds and diseases**

In Flanders, a relevant project is supporting technology improvement for the detection and treatment of toxic weeds in agricultural crops by drones via remote sensing. The project is matching the interest of Pays de la Loire, where companies are collaborating in a PPP to develop an agricultural robotic platform for different application on-field (e.g. weeding), and of Central Macedonia, with established pilot sites to offer advice on Agricultural Warnings for pests and diseases.

To deepen the focus of the business cases

- **Integration of sensors to monitor and improve the conditions of livestock**

In North Brabant, a brand new sustainable farming concept aiming at zero emission by 2025 generated a cluster of innovative projects on livestock (Familievarken, Floating Farm and Total circular farm). This approach offers interesting connections with Centro Region, where a disruptive concept of Community goats herd (FarmReal) allows farmers to follow goats' life through a web platform, based on the data collected from sensorized collars.

Need to go deeper in the identified business cases and select the right partners to define concrete pilot/demo cases at interregional level

Finding also the right tools for (co-)funding:

- European programmes
- National funds
- Regional resources
- Private investments
- PPP models

Define clear bottlenecks to remove

Fragmentation and lack of coordination

Substantial coordination costs will need to be covered. By scaling up activities within the partnership, we can benefit from a) working with experts in Data Analysis and DSS to improve technical solutions, and b) adapting and validating our services and approach to other context (i.e. in terms of geography, climate, etc.). This will help to create an EU value chain containing technical partners, scientists, advisors, farmers and business partners, to expand services in multiple EU countries. This upscaling will required substantial coordination between regions, organisations and governance levels. However, a platform at interregional level to coach and connect existing business initiatives (particularly in their early phases) is considered to be a necessary condition to develop high tech farming for all farms.

Define clear bottlenecks to remove

Lack of training programmes

There is a need for training programmes to develop services related with the demonstration of the added value of the new technologies for the agriculture sector. It is also necessary to overcome the difficulty of perception of the data value by the end users.

In addition, there is a need to increase the awareness of the potential users/customers of the final services - farmers, cooperatives and agricultural advisors/agronomists – regarding the benefits of using innovative Smart Farming solutions.

There is a need to organise trainings to improve the administrative capacities in regional governments to fully exploit the interregional dimension of existing funding programmes and move towards more joint programming initiatives.

Define clear bottlenecks to remove

Lack of public funding for cross-regional demonstration activities

Low margin of the agricultural productions: the initial investment necessary for adopting new technological solutions is considered impossible due to a lack of investment capacity. Hence, there is a need to create funding platforms devoted to support innovative high tech farming solutions. In addition, further support in identifying relevant financing instruments would be highly welcome.

Proposed action plan and timeframe

Relevant issues:

- **Improve the governance around the main pilot business cases – Define clear responsibilities for each activity**
- **Matching interests at business and programming level**
 - Involving and connecting relevant stakeholders
 - Enabling new administrative processes for improving interregional cooperation at programming & funding level
- **Demonstration phase: Need to develop one or more demo cases**

Proposed action plan (short/medium term)

By end of March:

- **Detailed descriptions of promising business pilots and relevant connections with European dimension**
- **Finalizing the mapping and additional info through the questionnaire (to be revised)**
- **Definition of a targeted governance model**

By end of April:

- **Additional interviews to relevant stakeholders**

16-18 May:

- **B2B Matchmaking and partnership meeting in Tuscany**

11-13 June:

- **ERIAFF Conference in Seinajoki (session devoted to the Partnership, possible field trips?)**

By July:

- **Identification of additional tailored support from EC for the identified business cases**

Identify specific services needed

- ***Overall coordination of the implementation of the 8 partnerships (external experts)***
- ***Customised support services on specific needs (internal/external to Commission services)***
 - business plan design
 - financial modelling
 - intellectual property rights
 - standardisation
 - market research
 - etc.