



REPORT

Digitalisation and New Technologies in Agri-food Agri-food 5th Working Committee Meeting 3-4 December 2019 Malaga, Spain

ABOUT THE EVENT

Digitalisation and New Technologies in Agri-food event was co-organised by JRC, Junta de Andalusia and Enterprise Europe Network. 167 people registered for the 2-day event. Participants came from all over the EU (16 EU MSs) as well as Turkey and Monte Negro.

The event was composed of four different parts:

1. 2019 Autumn Working Committee Meeting (3 December 2019)
2. Exploring synergies between Digital Innovation Hubs and Agri-food Partnerships (4 December 2019)
3. Field visit (4 December 2019)
4. B2B event (3-4 December 2019) organised by EEN

Each time, we addressed different topics linked to interregional collaboration in agri-food smart specialisation domains. This event was dedicated to the topic of digitalisation and new technologies in agri-food because all Partnerships have expressed their interest in this horizontal topic. Also some of the Partnerships have already developed their business cases and they deal specifically with the issues of open data and data sharing, or application and uptake of new technologies in agriculture.

The objective of the first day was to showcase activities related to exploration, exploitation and deployment of digital services and technologies by the AF Partnerships. What is added value and contribution of the Partnerships? How important new technologies are for AF Partnerships and how the AF Partnerships go about their mapping and use? In the morning the AF Partnerships hold their regular technical meetings.

Focus was also on specific technologies (not yet) used by the Partnerships, market needs and matching demand with offer. Significant space was given to companies (7) that pitched successful collaboration within AF Partnerships, successful uptake of technologies by agri-food sector, possible technological solutions for agri-food and promising new emerging technologies for agri-food. The last session was devoted to the roundtable of EC services and other EU institutions. The colleagues working at DG Agri, Connect, Grow, Regio and RTD as well as a representative of KIC Food discussed the needs and support for the period 2019 – 2021.

The second day focused on Digital Innovation Hubs. Four Digital Innovation Hubs presented their overall and specific strategies and activities addressed to help the digitisation of agri-food industries and businesses in their own regions and beyond borders. Two H2020 transversal projects presented their efforts to help creating a pan-European community of DIHs that may ease interregional collaboration with AF Partnerships. The DIHs presentations were followed by roundtable discussions on challenges related to agri-food digitisation that were pre- defined by the AF partnerships. The five topics were:

1. AgriFood Living Labs
2. DIH models for AgriFood
3. Collection and handling of big data for partnerships goals
4. Consumer Involvement in AgriFood innovation
5. Business models for interregional joint funding

In addition, a B2B event was organised by the Andalusian branch of the Enterprise Europe Network (EEN). Short pre-scheduled meetings will take place simultaneously to the main event. In the afternoon of the second day three field trip(s) were organised. For the first time, I combined forces with the Enterprise Europe Network to ensure that private companies including start-ups, SMEs as well as large companies are integrated in the process of the development of interregional business cases since the very beginning. We are convinced that the role of private sector is essential in steering the innovation and co-investment effort in Europe. The following sectors were covered:

- Automation and robotics
- Artificial Intelligence and predictive systems in agrifood
- Autonomous vehicles
- Big data
- Food safety
- Agrifood blockchain
- Logistic chain
- Cybersacurity in the agrifood chain
- Open data
- Sensorization
- Food traceability



Thematic S3 Platform on Agri-Food Working Committee Semi-annual Meeting 3 December 2019

CONTRIBUTION OF AF PARTNERSHIPS TO DIGITALISATION AND TECHNOLOGY DEPLOYMENT

Five Agri-food Partnerships presented their activities and plans related to exploration, exploitation and deployment of digital services and technologies. What is added value and contribution of the Partnerships? Focus was also on specific technologies (not yet) used by the Partnerships, market needs and matching demand with offer. Also, the Partnerships talked about the support that is needed and is currently lacking. Finally, the Partnerships reported from their technical meetings.

PARTNERSHIP	PROGRESS towards business and investment projects	FUTURE PLANS
Consumer Involvement in Agri-food Innovation	Network of "meeting points": food centres (WFC, Matlandet Östergötland). Applications to projects with common relevance. Ongoing discussions, building trust and knowledge. Strategic potential not utilised yet (gap) in the support system.	From "finding" to "creating" synergies. Project workshop 16th of January, planning 2020.
High-tech Farming	Two Interregional Business Pilots – FRESHFRUIT and PODUR - active and well alive (both submitted under first TAF cut-off: rejected) with business model developed. One more Pilot under development and other many ideas in the pipeline. Established methodology to initiate new interregional business cases dealing with the farming sector. Business model under finalisation for the FreshFruit Pilot Discussion to adopt a business model at the level of S3 HTF Partnership (Interregional Service Platform).	Continuing the development of existing pilots and establishing new ones. Supporting the collaboration of pilots with relevant cascading funding initiatives. Setting up a legally based governance for the Partnership.

Nutritional Ingredients	<p>Innosup -> deposited in April – rejected in July</p> <p>Scoping note -> waiting for official approval but considered as “finalized”</p> <p>Worked on a proposal for a Governance structure</p> <p>Meetings/contacts/discussions between partners</p>	<p>Governance structure: proposal and action plan was approved → should be finalized by march 2020</p> <p>Scoping note will be updated with focus on competencies/projects → gap identification – new partners</p> <p>Regarding possibilities to concretely work together : overview potential calls for the Partnership: → Re-deposit Innosup (April 2020)</p> <p>BBI : regular/strong synergies for partners in our Partnership</p> <p>Seek into the Horizon Europe Program</p> <p>European Innovation Council</p> <p>Send regular intention to deposit/interest for specific calls to all partners of the partnership.</p>
Smart sensors for agri-food	<p>2 approved and running projects:</p> <p>Connecting smart sensor systems for the food industry COSME 1/11/'18 – 31/10/'20</p> <p>Smart sensor systems for food safety, quality control and resource efficiency in the food processing industry INNOSUP 1/05/'19 – 30/04/'22</p> <p>Study visits → involving companies</p> <p>Ideation sessions: Seeding collaborations between agri-food companies and technology & digital solution providers</p> <ul style="list-style-type: none"> ○ Voucher calls ○ Different types of voucher projects <p>Preparing matchmaking events + launch of voucher calls:</p> <ul style="list-style-type: none"> ▪ Communication towards companies (what's in it for them?) <p>Working on demonstration cases and generic business models.</p>	<p>Continue the good work linked to Connsensys & S3FOOD</p> <p>First Steering Committee meeting of 'Smart Sensors 4 Agri-food':</p> <ul style="list-style-type: none"> ▪ Feb '20 ▪ Annual workplan will be prepared prior to the meeting
Traceability and Big Data	<p>Current TBD funding: Smart Agrihub, Regions4Food, DIVA, TRACK</p>	<p>Work Plan implementation, management and Monitoring:</p> <p>Transition of all regional nodes into</p>

	<p>Agreements: EIT Food, ICT Agrifood</p> <p>All participating regions are devoting their own resources to participate in the Partnership.</p>	<p>DIHs</p> <p>Identification of funding opportunities – lack of support from the EC</p> <p>Promote pilot projects among regions</p> <p>Communication actions, eg. twitter, youtube.</p> <p>Webinars</p>
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ROUNDTABLE EC SERVICES AND OTHER EU INSTITUTIONS

EU institution representatives and KIC Food talked about the needs and support for the period 2019 – 2021. The speakers were:

- **Nikos Pantalos (via videolink)**, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, European Commission
- **Wim Haentjens**, Directorate-General for Research and Innovation, European Commission
- **Alexia Rouby**, Directorate-General for Agriculture and Rural Development, European Commission
- **Magdalena Szwochertowska (via videolink)**, Directorate-General for Communications Networks, Content and Technology, European Commission
- **Valentina Pinna**, Directorate-General for Regional and Urban Policy, European Commission
- **Elvira Domingo**, EIT Food

Alexia Rouby, Directorate-General for Agriculture and Rural Development, European Commission:

1. Large-scale initiatives to keep in touch with

- IOF2020: Internet of things in agri-food
- SMARTAGRIHUBS: digital innovation hubs in agriculture
- ATLAS: Agricultural Interoperability and Analysis System
- DEMETER: Building an Interoperable, Data-Driven, Innovative and Sustainable European Agri-Food Sector
- ERANET ICT-AGRI-FOOD: Call expected soon
<https://www.ictagrifood.eu/>

2. R&I Horizon Europe (coming in 2021)

Cluster 6 consists of 7 interlinked Intervention Areas:

- Environmental observation
- Biodiversity and natural capital
- **Agriculture, forestry and rural areas**
- Sea and oceans
- Food systems
- Bio-based innovation systems
- Circular systems

IA3: Agriculture, Forestry and Rural Areas:

- **Sustainable management and efficient use of natural resources**
- **Climate mitigation and adaptation**
- Plant health
- Animal health and welfare

- Use and delivery of ecosystem services
- Sustainable forest management
- EU plant protein production
- Sustainable land use, rural development and **territorial linkages**
- **Digital innovations**
- **AKIS**; advice, building skills, **participatory approaches** and information sharing
- International partnerships for sustainable agriculture for food and nutrition security

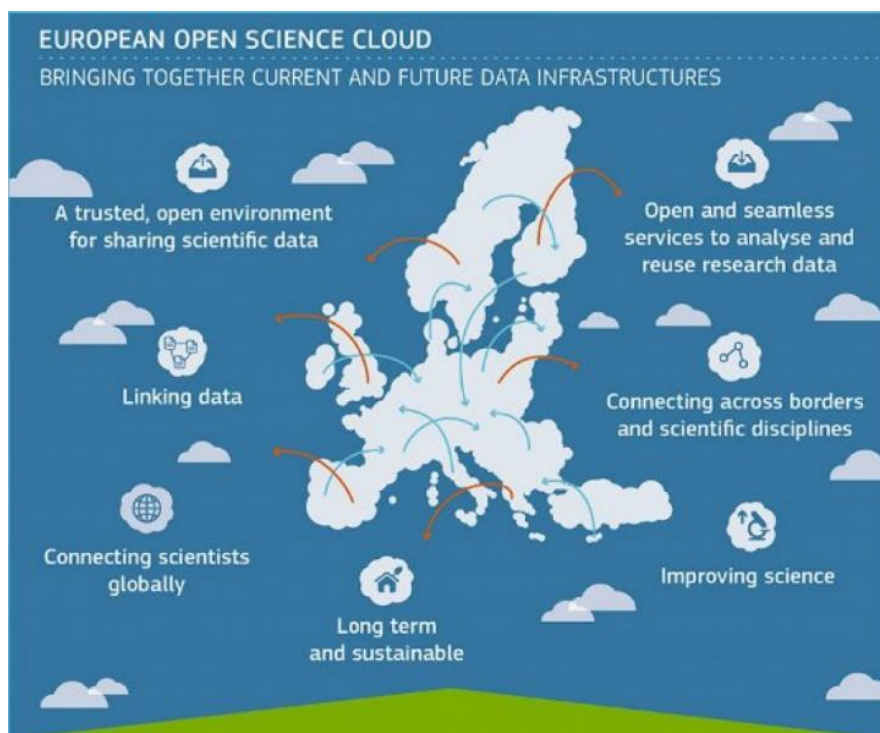
3. EIP Agri

- EIP-AGRI Seminar: '**New Skills for Digital Farming**', 5-6 February 2020, Madrid. Contribute to the design and implementation of approaches and tools that can help farmers and farm advisers develop the **skills** they need in the face of the digital transition in agriculture.

Wim Haentjens, Directorate-General for Research and Innovation, European Commission

1. European Open Science Cloud (EOSC) - Enabling the digital transformation of research: data-intensive, collaborative and cross-discipline

EOSC will provide 2 million EU researchers and innovators an environment with services for data management, analysis and re-use across disciplines, increasing the creativity, productivity and reproducibility of research.



2. R&I Horizon Europe (coming in 2021)



Valentina Pinna, Directorate-General for Regional and Urban Policy, European Commission

1. Interregional Innovation Investment Instrument (2021-27)

WHAT

Interregional innovation investments through the **commercialisation and scaling up** of interregional innovation projects having the potential to encourage the development of **European value chains** (component 5) (ETC Art 3.5)

HOW MUCH

11.5 % of ETC Resources (i.e., a total of **EUR 970m**) for interregional innovation investments (Interreg component 5) (ETC Art. 9.2)

HOW

It shall be implemented under **direct or indirect management**. (ETC Art 16.1)

FOR WHOM

At the initiative of the Commission, the ERDF may support interregional innovation investments, as set out in point 5 of Article 3, bringing together **researchers, businesses, civil society and public administrations involved in smart specialisation** strategies established at national or regional levels (ETC Art 61)

See Interreg Regulation 2021-27- Fiche 9 – Interregional Innovation Investments ,Art. »(5), 9(2), 16(1) and 61 - Working Paper - WK12138/2018 INIT

Strand 1 - Actors coming from at least 3 different Member States

- Target: “mature” regional innovation ecosystems
- Multiregional consortia cooperating in common S3 areas
- Mutual benefit, European Added Value, global value chains

Interregional innovation projects

- Demonstration, uptake of innovative technologies
- Overcome barriers to innovation (standardisation, certification, IPR, data issues, etc.)

Support

- Financial & advisory support for investments along EU value chains
- Develop, connect or make complementary use of testing and demonstration facilities to accelerate market uptake and scale up of innovation solutions in shared S3 priority areas.
- Development of a portfolio of investment projects by selected partnerships.

Strand 2 - Actors coming from at least 2 different Member States

- Target: “less mature” innovation ecosystems
- Building preconditions for successful international or interregional collaboration, supporting:
- Innovation ecosystem , Integrating local SMEs in value chains of multinational companies, engage local businesses & researchers in the European value chains

Outcomes:

- Co-Investment (Public Private) to build
- European globally competitive value chains

What

1. Analytical support

- Mapping of capacities and opportunities in less developed regions to engage in global value chains
- Strategic advisory to support innovation ecosystems and innovation intermediaries

2. Capacity building

- Activities aimed at developing capacity to engage in international activities
- Building international networks and contacts to explore common opportunities

3. Project implementation

- Implementation of joint S3 innovation investment projects involving ecosystems (research, business & other ecosystem's actors)

PRIVATE COMPANIES PRESENTING EXISTING OR PROMISING TECHNICAL SOLUTIONS FOR AGRI-FOOD

Private companies talked about their successful collaboration within Partnerships, uptake of technologies by agri-food sector, possible technological solutions for agri-food and promising new emerging technologies.



AF PARTNERSHIP 'CONSUMER INVOLVEMENT'

NAME OF THE COMPANY:	AGRICAM AB
WEB PAGE:	www.agricam.se
SPEAKER:	ELLINOR EINEREN, M.Sc. CEO/Co-founder

SHORT DESCRIPTION OF COMPANY AND OF TECHNOLOGY:

Agricam is a software company based in Sweden, specialized in image analysis, machine learning, deep learning and big data.

Agricam has a patented system solution that classifies bacteria in milk (for all lactating animals such as dairy cows, camels, sheep etc) using image analysis and deep learning. In addition, the solution provides automatic standard operating procedures and treatment suggestions to the farmer and the veterinarian based on the bacteriological findings that reduces the usage of unnecessary antibiotic drugs. Agricam is co-operating with SVA and their state-of-the-art laboratories.

AF PARTNERSHIP TRACEABILITY AND BIG DATA

NAME OF THE COMPANY:	APPLIED DRONE INNOVATIONS (ADI)
WEB PAGE:	HTTPS://APPLIEDDRONEINNOVATIONS.NL
SPEAKER:	MAARTJE BAKER

SHORT DESCRIPTION OF COMPANY AND OF TECHNOLOGY:

Applied Drone Innovations (ADI) is operating an “eye in the sky” service for growers in the horticultural sector, using drones and other robotic platforms to gain an advantageous aerial perspective. The product they actually sell to growers is the addressable data sets, which allow them to become more efficient and effective. ADI supplies an end-to-end service, from Data Collection, Data Interpretation to the final Data Presentation.

Their first customers are benefiting from Fusarium detection and localisation maps, these maps enable the growers to find and remove infected crops in 25% of the time it takes without ADI’s technology. In other greenhouses, they are working on harvest and inventory management software to enable a smart supply chain. There are currently no solutions, which provide a similar end-to-end service for greenhouse horticulture. The project has an average TRL level of 8. The Fusarium detection and localisation maps are already being provided as a service; they have been demonstrated and sold successfully to the industry (TRL 9). Automation and machine vision to remove the human in the loop has been demonstrated but is not yet ready to be fully implemented in operations (TRL 7).

AF PARTNERSHIP HIGH TECHNOLOGY FARMING

NAME OF THE COMPANY:	DRONEBEE SMART AGRICULTURE
WEB PAGE:	https://www.dronebee.it/
SPEAKER:	DR. NICCOLÒ BARTOLONI, AGRONOMIST

SHORT DESCRIPTION OF COMPANY AND TECHNOLOGY

DroneBee | Smart Agriculture is an Italian company founded in 2018 that offers high-tech services of precision farming and agronomic advices to farmers, farmers' cooperatives, research institutions and agronomists. We offer a range of products for precision farming such as drones, sensors, photogrammetry software and decision support systems. We also give assistance and training both on theoretical and practical side of precision agriculture. The technical manager of the company is Simon-Paolo Kartsiotis, aerospace engineer with several experiences in the industrial sector. The business development manager is Niccolò Bartoloni, an agronomist with twenty years of experience in wine company management.

Various researches with University of Pisa using uav and remote sensing for vigor and water stress assessment (vineyards, pear orchard), biostimulant verification and chlorophyll content assessment (corn, potato, wheat);

AF PARTNERSHIP TRACEABILITY AND BIG DATA

NAME OF THE COMPANY:	EC2CE
WEB PAGE:	
SPEAKER:	RICARDO ARJONA ANTOLÍN

SHORT DESCRIPTION OF COMPANY AND TECHNOLOGY

The company has developed an A.I. technology to support the decision-making process in the agro sector, optimizing productivity, pest control, logistics and everything improving sustainability. ec2ce is included within the best ten companies in the Agro-tech arena in the main reports about the sector:

- https://cbi-blog.s3.amazonaws.com/blog/wp-content/uploads/2017/07/AI_robotics_Agriculture1.png
- <https://www.cbinsights.com/research/agriculture-tech-market-map-company-list/>

ec2ce is providing services to main olive oil producers, berries producers, horticulture producers and commercialization companies, oil refiners, hops, etc., and operating in Europe and South America, with plans to start selling in USA and South Africa.

Their sophisticated artificial intelligence algorithms and methodologies are embedded into an operative platform, creating a standardized tool that is easily customized for real-world applications.

AF PARTNERSHIP HIGH TECHNOLOGY FARMING

NAME OF THE COMPANY:	GREEN PROJECTS SA
WEB PAGE:	
SPEAKER:	NIKOLAOS TSOTSOLAS

SHORT DESCRIPTION OF COMPANY AND TECHNOLOGY

Green Projects SA analyses and develops integrated software systems supporting the implementation of complex multi-sided operations by using cutting edge approaches and technologies. During the last six years we are focused on developing software platforms and IoT solutions in the field of agriculture and agro-logistics.

Green Projects SA has developed an electronic platform, named KalaΘos, which aims to facilitate online B2B collaboration between sellers of fresh produce and traders focusing on quality and traceability from farm to fork. It fully supports the implementation of full-path tracing through the whole distribution channel from farm to trader following GS1 standards. Furthermore, the platform shares important information concerning the products with the consumers providing a unique experience of transparency concerning food safety and traceability. KalaΘos incorporates also a module called “KalaΘos – IoT Module”. Towards the automatic capturing of “big data” directly from the farm, but also from other points of the fresh produce supply chain, KalaΘos infrastructure is consisted of open APIs, which have been developed using JSON and REST services as part of a telemetry system, developed also by Green Projects SA, called GP CoreIoT.

AF PARTNERSHIP TRACEABILITY AND BIG DATA

NAME OF THE COMPANY:	HISPATEC
WEB PAGE:	
SPEAKER:	JOSÉ LUIS MOLINA ZAMORA

SHORT DESCRIPTION OF COMPANY AND TECHNOLOGY

Integrated solutions of management software for the agri-food sector (pre and post-harvest) both in operational processes and advanced analytics/ AI:

- 30 years of experience in software for the Agri-food sector, with special focus on fruit, vegetables, olive crop and vineyard.
- More than 400 Agro clients (businesses and cooperatives) and their ecosystem of technicians and farmers.
- More than 10.000MM € of agriculture production/ commercialisation managed with solutions from Hispatec.
- More than 100 professional experts in ICT and agro solutions.
- Leader in Spain and with operational and commercial presence in Mexico, Peru, Chile, Portugal and Morocco.
- Part of the business group Smart Agro de AMETIC (CEOE).

AF PARTNERSHIP SMART SENSORS FOR AGRI-FOOD

NAME OF THE COMPANY:	MORTOFF LTD – REACH SOLUTIONS LTD
WEB PAGE:	
SPEAKER:	ZOLTAN BEKE

SHORT DESCRIPTION OF COMPANY AND TECHNOLOGY

Mortoff is a mid-sized IT service company in Hungary, mainly focus in Manufacturing, Financial and Telecommunication industries. Mortoff has more than 170 employees. REACH solution is a spinoff of Mortoff focusing on using BigData, Machine learning and other innovative technologies in smart factories. REACH is a pioneer in Industry 4.0.

REACH Solution (a spinoff of Mortoff) has a Real-time Event Based Collaboration Hub (REACH), which is a real-time data collection and analytical platform for manufacturing and food industry. With collecting and analyzing machine data we are able to recognize anomalies in the working conditions, product quality and process as well. Visualizing the real-time performance of the factory / line / machine is also help improving the Overall Equipment Effectiveness (OEE) even of the entire factory.

Exploring synergies between Digital Innovation Hubs and Agri-food Partnerships Workshop & Field Visit 4 December 2019

For Europe to remain competitive internationally, its companies must be able to benefit from digital opportunities. This will lead to higher value products and smarter processes.

The digital revolution brings opportunities for big and small companies, but many of them still find it difficult to know in which technologies to invest and how to secure financing for their digital transformation. Small and Medium Sized Enterprises (SMEs) are particularly slow in integrating digital technologies: **only one out of five SMEs in the EU are highly digitised**, yet they represent over 90% of all businesses in Europe.

To bridge the current divide the European Commission launched on 19 April [2016 the first industry-related initiative of the Digital Single Market package](#). Building on and complementing the various national initiatives for digitising industry, the Commission will act to trigger further investments in the digitisation of industry and support the creation of better framework conditions for the digital industrial revolution. One of the more important pillars of the Digitise European Industry effort is the activity to develop a network of [Digital Innovation Hubs](#) (DIH).

Digital Innovation Hubs are **one-stop-shops** that help companies to become more competitive with regard to their business/production processes, products or services using digital technologies. They are based upon technology infrastructure (Competence Centre - CC) and provide access to the latest knowledge, expertise and technology to support their customers with piloting, testing and experimenting with digital innovations. DIHs also provide business and financing support to implement these innovations, if needed across the value chain. As proximity is considered crucial, they act as a first regional point of contact, a doorway, and strengthen the innovation ecosystem. A DIH is a regional multi-partner cooperation (including organizations like RTOs, universities, industry associations, chambers of commerce, incubator/accelerators, regional development agencies and even governments) and can also have strong linkages with service providers outside of their region supporting companies with access to their services.

The rationale behind this initiative is to help European Industry, small or large, high-tech or not, to grasp the digital opportunities. It is the Commission's ambition that all companies should have a DIH within their region, through which they should be able to access competences in order to digitise their organisations and their products and services. Furthermore, the services provision by existing Hubs can be strengthened by the establishment of a pan-European network of DIHs.

The [Digital Innovation Hubs catalogue](#) tool hosted under the S3P (Smart Specialisation Platform) serves as "yellow pages" of DIHs listing more than 250 fully operational DIHs all over the EU.

DIGITAL INNOVATION HUBS MEETING AGRI-FOOD NEEDS

Three Digital Innovation Hubs presented their overall and specific strategies and activities addressed to help the digitisation of agri-food industries and businesses in their own regions and beyond borders. Two H2020 transversal projects presented their efforts to help creating a pan-European community of DIHs that may ease interregional collaboration with AF partnerships. The following presentations were delivered:

- DIH Andalucia Agrotech (**Judit Anda Ugarte**, Andalusia, Spain)
- DIH Agrifood – ITC Cluster (**Daniel Copot**, Slovenia)
- DIH Agro Poland (**Łukasz Łowiński**, Poznan, Poland)
- AgriFood DIH Lithuania (**Kristina Sermuksnyte-Alesiuniene**, Augustas Alesiunas, Lithuania)
- Smart Agri Hubs, *Unleashing the innovation potential for the digital transformation of the European Agrifood Sector* (**George Beers** –Scientific Project Coordinator, Univ. of Wageningen)
- DIHNet.EU, *Potential synergies between networked DIHs and AF partnerships* (**Begona Sanchez** – Project Work package Coordinator, Tecnalia)

DIH Andalucia Agrotech

The case of a DIH created by the regional government of Andalusia and operating as 3 a public-private alliance activity centre to support innovation and digitalisation of the Agri-food value chain through the adoption of digital technologies and the creation of value from data.

DIH Agrifood – ITC Cluster

The case of a DIH providing specialised services to farms and food producers originating from an ICT cluster organisation. It aims to foster cross-sectoral innovation based upon novel technologies and ICT and operating with the principles of a Technology Transfer Office for Agriculture and Food production with a non-formal network based structure.

DIH Agro Poland

The case of a DIH specialised in Agri sector formed by the alliance between a strong Agricultural Research Network and a Supercomputing and Networking Centre. The main objectives include offering access to e-Infrastructure resources to support pilots, prototyping, scaling-up, testing, demonstration etc. (test before invest services) as well as innovation ecosystem building.

AgriFood DIH Lithuania

The case of AgriFood Lithuania is a Digital Innovation Hub originated from a cluster organisation that brings together major research, business and public stakeholders in Lithuania for the common pursuit of digital transformations in the agriculture, food and associated sectors. The DIH is very active in linking stakeholders with international and

cross-sector initiatives to provide all-round support in the research, development and deployment of AgriFood Tech innovations.

Smart Agri Hubs (George Beers – Scientific Project Coordinator, Univ. of Wageningen)

The SmartAgriHubs is a Horizon2020 funded project (budget 20M€) with an overall objective to consolidate and foster the EU-wide network of AF DIHs to enhance digital transformation for sustainable farming and food production. The SmartAgriHubs Portal will act as a connecting platform for DIHs and Competence Centres, will disseminate good practices and supporting material, organise events and discussions. Moreover, during 2020 a number of flagship innovation experiments will be facilitated by DIHs from nine (9) regional clusters applying a Multi-Actor approach.

DIHNet.EU, Potential synergies between networked DIHs and AF partnerships

The DIHNet.EU is a horizontal support action that aims to create a sustainable European network of DIHs, by developing a set of tools and boosting the collaboration of the different DIH networks, DIHs and other key DIH stakeholders in Europe. Starting from the DIHs JRC Catalogue it promotes active collaboration and communication of DIHs, acts as networking platform for DIHs agents and reinforces specialisation of DIHs. DIHNET.EU Community now hosts more than 370 members, most of them participating in different Working Groups to promote collaboration on specific themes.

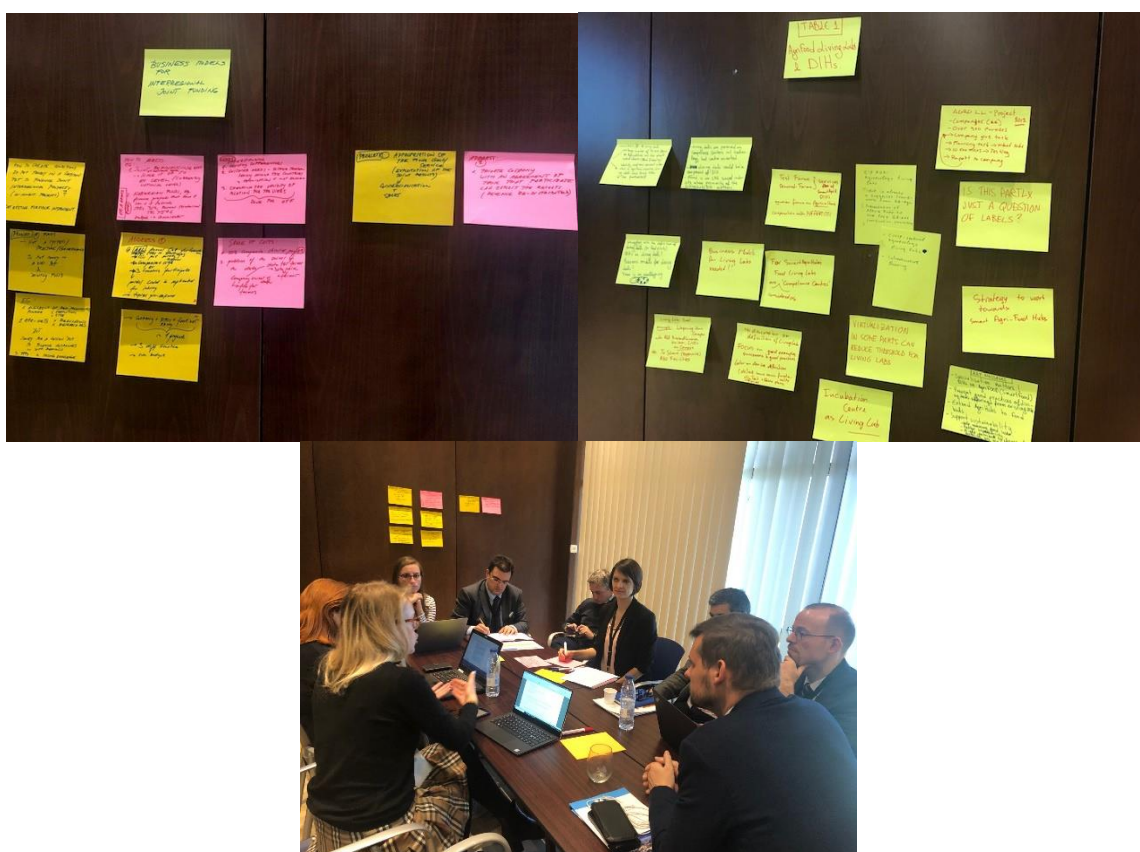


DIH PARALLEL DISCUSSION GROUPS

Participants were organised in five groups around pressing agri-food digitisation challenges posed by AF partnerships. A facilitator led each group to deepen the challenge and envisage possible solutions, solution providers and DIHs ready to facilitate the process from end to end. Rapporteurs (the representatives of the Lead Regions) reported in plenary the outcomes of the discussions.

The five topics were:

1. AgriFood Living Labs
2. DIH models for AgriFood
3. Collection and handling of big data for partnerships goals
4. Consumer Involvement in AgriFood innovation
5. Business models for interregional joint funding



Evolution of Topic 1

TOPIC

AgriFood Living Labs



DISCUSSION OUTCOMES

- When building a network of living labs for the digitalization of the agri-food industry it is important not to re-invent the wheel, but build on what is already there. First map what is available and start from that.
- Living labs are not the same as DIHs. They can form a part of a DIH, like the physical backbone and take up specific tasks à test before invest, provide vocational trainings and seminars, etc.
- Agricultural DIH and DIH for the agri-food industry are 2 different things with a different focus. Of course, they are linked and in the long run they could merge and become 1 DIH focusing on the value chain.
- Defining what we understand under a living lab for the agri-food industry is difficult; better to showcase best practices and demonstrate what we see as a good example of a living lab for the digitalization of the agri-food industry. But always start from what is already available in the different regions!

Evolution of Topic 2

TOPIC

DIH models for AgriFood



DISCUSSION OUTCOMES

- The Business Model for Agrifood DIH have to be focused on a joint system that directly links the needs of the stakeholders and the expertise of the DIH. A self-financing system was agreed as the best option through a membership fee and by "consultancy as a service" for higher expertise services, as well as the participation of public funds when possible.
- The legal figure proposed for an Agrifood DIH is a non-profit organization.
- The generation of synergies between DIHs are crucial to ensure that existing DIHs with specific skills and technologies can support to other DIHs that must be focused on a wide range of technologies, as the agrifood DIHs are. Working along this line, Agrifood DIHs should work on the creation of a common catalogue to point out the wide range of services that they can offer through the commented specialised DIHs.
- The creation of DIHs networks is a key factor to support the previous point about the generation of synergies. Networks have to act as cross-sectorial and multi-technological agents across Europe, regardless the technological domain and removing any constraints linked to regional capacities. Within this framework, projects like SmartAgriHubs or DIHNET become an example of the perfect platform to promote the commented creation of a pan-European network of DIHs.
- Thus, it is important to promote collaboration and exchange spaces between specific DIHs and/or partnerships, both at national and international level, as well as to facilitate common tools for cross-border collaboration such as trainings, benchmarking, learning scheme and communication tools to facilitate information and knowledge exchange.

Evolution of Topic 3

TOPIC

Collection and handling of big data for partnerships goals



DISCUSSION OUTCOMES

- The challenge discussed was around the different types of data/info available or needed at different levels of the value chain involved in this Partnership (Nutritional ingredients/Personalised nutrition).
- A DIH is considered as a trusted entity that could act as a data aggregator for its domain to which the Partnership could turn to when needed.
- It is not possible to consider a single DIH as enough for this role.
- Availability is a must for the different types of data needed: from consumers, technological and ingredients sources, etc.

Evolution of Topic 4

TOPIC

Consumer Involvement in AgriFood innovation



DISCUSSION OUTCOMES

- Experienced centres could be used to analyse data from producers and consumer behaviours.
- Info on producers needs to be validated, traceability is very important. How we can influence consumers and how this affects producers?
- We should find tools to bring producers and consumers closer, shorten the physical/mental distance between the two worlds. A way to do that is by data sharing and increasing interaction.
- Success cases supporting small producers could be used to inspire others.

Evolution of Topic 5

TOPIC

Business models for interregional joint funding



DISCUSSION OUTCOMES

- The challenge raised by the S3 HTF Partnership is about the definition of the best option to set up a business model that allows the partners to share financial resources to run services and operations through an interregional platform devoted to the development and deployment of agritech investments.
- Existing models, such as ERANET, Joint Programming, etc., do not seem suitable for a service and investment oriented platform. PPP models could be a solution, and they are adopted by the European Commission but there is no reference for Interregional PPP models and there is also scarce use of this model at National and Regional level.
- Two examples of funding model were suggested:
 1. In Norway there is a National fund which allows Norwegian companies to team up with non-Norwegian partners to deploy investments. 30% is devoted to SMEs. Research can be allowed (TRL >5).
 2. The Active Assisted Living (AAL) Programme¹ could also be a referral for a joint funding at interregional level. This programme supports investments based on the collaboration of RTOs, SMEs/Start-ups and end-users from at least three Member States.
- Participants agreed that companies, particularly SMEs, can benefit from such kind of interregional funding when it is based on real needs from potential end-users. New solutions, particularly in agriculture are very much bound to trust and facilitation by local innovation agents.
- Business facilitation at interregional level could speed up the uptake of innovative solutions, and currently there is no such facility for a European company.
- In that respect, participants had the possibility to get the example of a Swedish start-up which is looking to export (and further improve) its agritech solution in other European Countries and would be very interested in having support through interregional services that connect regional innovation ecosystems, from the discovery to the operation phases.
- Most of the support that SMEs can find in Europe is at very local/regional level (testing and scale up) or for

¹ <http://www.aal-europe.eu/>

internationalisation outside the EU, while intra-EU support to consolidate the business in the European market is not easily available.

SMARTAGRIHUBS' INNOVATION PORTAL PARALLEL SESSION

The goal of the SmartAgriHubs Innovation Portal was to expand and better connect the network of key AgriTech stakeholders across Europe. During the session, the participants were able to learn about and test the Portal.

- Session:
 - Detailed explanation of how the innovation portal looks like at this point in time, page per page
- Feedback
 - Add more information on the general website to attract users
 - Need to connect it to other existing initiatives

THREE FIELD TRIPS ON 4 DECEMBER IN THE AFTERNOON

The Enterprise Europe Network and the Andalusian regional government organised three parallel field trips.

Field Visit 1: Business accelerator “La Farola”

La Farola is one of the hubs of the open innovation network of *Andalusia Open Future*, located in Malaga, as a project to support innovation-based entrepreneurship. The space of La Farola is a meeting point for people, entrepreneurship, companies, ideas and projects.

La Farola provides support for growth (scaling-up) process as well as access to a local, regional and global market. Administrative and traditional services are also given to complete their portfolio of advanced services.

Any team consisting of a minimum of 3 people with 100% dedication of at least 2 people from the team and with development of a business project in Andalusia, has possibilities to access La Farola.

Field Visit 2: TROPS company, producer of mango and avocado

TROPS is a producer organisation specialised in the production and marketing of avocado and mango. They have been selling fruit all over the world since 1979, mainly to Europe. They are a company that operates in international markets successfully competing at a very high level of quality and service. They are located in the Malaga municipality of Vélez-Málaga, capital of the Axarquía region.

With 20,000 m² of facilities, the sorting, selection and packaging plant has incorporated the latest technologies in the different fruit processing areas.

The visits are made throughout the year, although the production season covers from September to May (in September and October you can observe their production plant in

the middle of the mango campaign, from November they start with the avocado), dates on which they will be able to observe the machinery of the warehouse in full operation.

Field Visit 3: DCOOP, agrifood cooperative

Field visit to DCOOP, 2nd degree agrifood cooperative, owned by 75.000 farmers and stock breeders. Dcoop, located in Antequera (Malaga), is the biggest olive oil producer in the world and leading wine producer, in addition to operating supply, stock breeding, nuts and cereals sectors.

Visit Agenda

1 Welcome

2 Presentations: (30 min)

Brief introduction to Dcoop and digitalization projects' presentations

- IOF2020 Project: Internet of Food and Farm 2020 (IA) (<https://www.iof2020.eu/>). Project with more than 100 partners from more than 20 countries that aims to expose the use of IoT technology in the European agricultural sector. Focusing on the Use Case 3.3: Automated olive chain whose objective is to demonstrate the possibility of implementing IoT technology along the entire value chain of virgin olive oil through the use of smart sensors olive groves, agricultural machinery and oil mill.

- MED-GOLD Project: Turning climate-related information into added value for traditional MEDiterranean Grape, OLive and Durum wheat food system (RIA) (<https://www.med-gold.eu/>). Explanation of the project that seeks to prove the concept of climate services in agriculture. Emphasizing the Use Case of the olive grove where an ICT tool of a climate service for the olive grove has been designed, with the aim of adapting to possible changes in the trends of pests and productivity of the olive grove; consequence of climate change. In addition to the presentation of MED-GOLD COMMUNITY, an open community in which anyone can participate and which aims to be a means of communication between farmers and climatologists / researchers.

- DOSAOLIVAR Operational Group: Dosing of phytosanitary products in olive groves (<https://dosaolivar.es/>). Project by which a mobile APP has been developed that connects with a sensor KIT that can be deployed in any atomizer and tract to achieve a correct dosage of phytosanitary products.

- Integraporc Operational Group: Development of a pig farm management tool for cooperative integration (<https://integraporc.grupooperativo.es/>). Its objective is the development of a mobile APP that assists in the decision-making of the pig production through the IoT that allows to know the traceability of the animals and to model the evolution of the growth of the same considering environmental, technical and economic parameters.

3 visits to the Dcoop oil museum (30-60 min). You can visit the museum virtually by clicking on the following link: <https://www.dcoop.es/museo>



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