



A EUROPEAN PERSPECTIVE ON DIGITALIZATION IN RURAL AREAS

WEBINAR

“TECHNOLOGY AND INNOVATION AS ALLIES FOR
A SMART RURAL ENVIRONMENT”

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Selected framing conditions for the digital transformations in rural areas in the EU

Long-term vision for rural areas (2021)



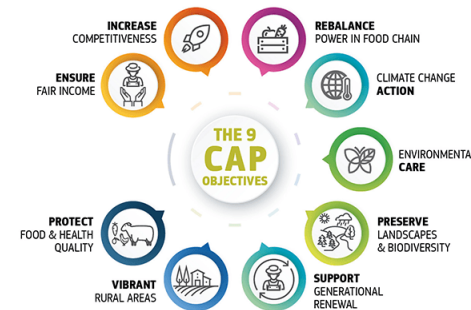
Digital Declaration (2019)



Digital Age & Strategy for Data (2020)*



Common Agricultural Policy post 2020

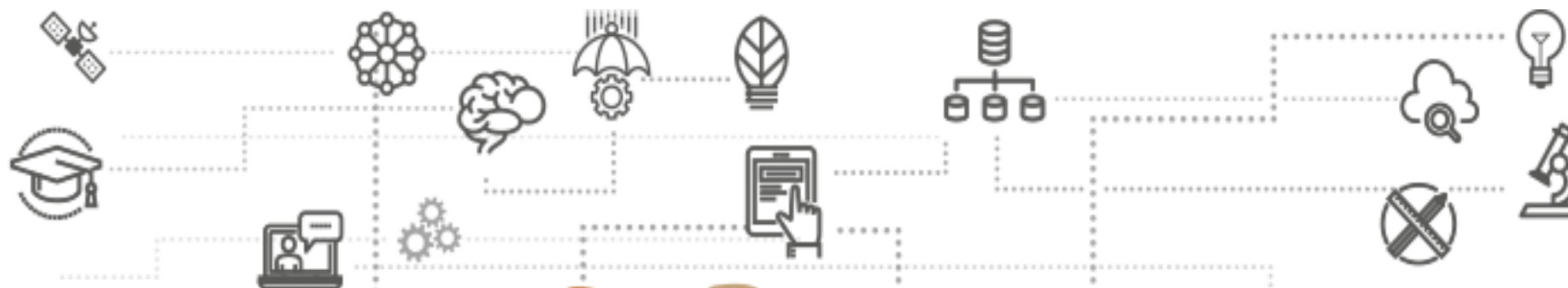


Green Deal & Farm to Fork



*Further strategic documents under the headline ambition “A Europe fit for the Digital Age”, include e.g. The Communication for a Digital Compass

Digitalisation and R&I are key enablers...



| Digital technologies can ...

- help farmers to work more precisely and efficiently;
- increase the sector's competitiveness and sustainability performance;
- make the job of a farmer more attractive to younger generations;
- increase transparency for the consumer;
- can support **all types** of farming;
- increase the competitiveness and sustainability performance of **rural communities**, and increase quality of life.



Digital technologies for rural communities

Digital technologies can support e.g.

- E-services, like eHealth
- Remote working
- Platforms in various fields, e.g. tourisms
- Automation in businesses
- etc



| The role of data and data technologies

- The effectiveness of digital technologies strongly depends on **data and data technologies**.
- Information can also be capitalised without (expensive) digital technologies.
- **Data of higher resolution** tends to be more expensive, e.g. generated through sensors.
- **“Big data” in combination with data technologies** offers huge opportunities to generate information and knowledge.



| Digitalisation as “enabler”

Digitalisation is one key to achieve environmental and socio-economic sustainability ambitions and increase the quality of life.

R&I and the markets offer digital solutions,

but the potential of digitalisation is not fully exploited due to e.g. gaps in:

- Infrastructure (e.g. broadband)
- Awareness of digital technologies
- Digital skills
- Cost-effectiveness of some technologies
- Trust of operators in technology and data sharing



| Exploiting the potential of digital technologies

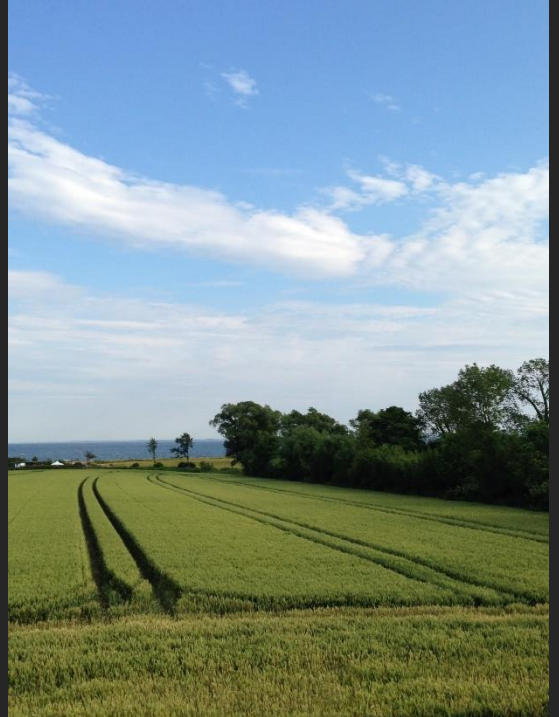
- Strengthening broadband capacities
- Supporting the development of digital skills
- Enabling the exchange of information and experiences
- Providing advisory services
- Facilitating investments
- Promoting targeted Research & Innovation
- Providing data and facilitating data sharing

Additional challenges

- **Avoiding a digital divide** between regions and types of farms.
- Prepare rural communities for **changes in employment structures**
- **Strengthening monitoring capacities**

→ ***A comprehensive approach is needed to boost digitalisation***





Objectives of the Common Agricultural Policy post-2020



→ Digitalisation Strategies
in National CAP Plans

Cross-cutting / horizontal objective:

Modernising the sector by fostering and sharing of knowledge, innovation and **digitalisation** in agriculture and rural areas, and encouraging their uptake



| Digitalisation in the CAP SP

(Potentially) Relevant interventions

- Farm advisory services: SPR (Art. 13) stipulates that digitalisation has to be covered
- FaST is to be offered by Member States to farmers
- Knowledge exchange & information
- Investment support
- EIP AGRI
- Young farmers
- Cooperation
- AECM
- Eco-schemes



| Digital Declaration

Declaration of cooperation on 'A smart and sustainable digital future for European agriculture and rural areas'

- signed by most Member States since 2019;
- self-commitment by Member States to joint action;
- fosters synergies between policy programmes and instruments, including **Common Agricultural Policy, Digital Europe Programme, Horizon Europe;**
- aims at stimulating cooperation between Member States and various stakeholders;
- points to **concrete actions** and initiatives in agri-food, such as support to a Common European Agriculture Data Space.



Selected policy instruments post 2020 beyond the CAP

Horizon 2020/ Europe

- Successful Horizon 2020 projects, including large-scale demonstration projects
- Tailored Horizon Europe themes
- Horizon Europe Candidate Partnership “Agriculture of Data”

Digital Europe Programme

- Common European Agriculture Data Space/ Data Space for Smart Communities
- Testing and Experimentation facilities for AI in agri-food/ for smart communities
- Digital Innovation Hubs
- Support to advanced Digital Skills

Recovery and Resilience Facility

- Digital and Data infrastructure



| The role of R&I in digitalisation

R&I in Agri-Tech has pivotal role to boost effectiveness, acceptance, and uptake of digital technologies, e.g. by

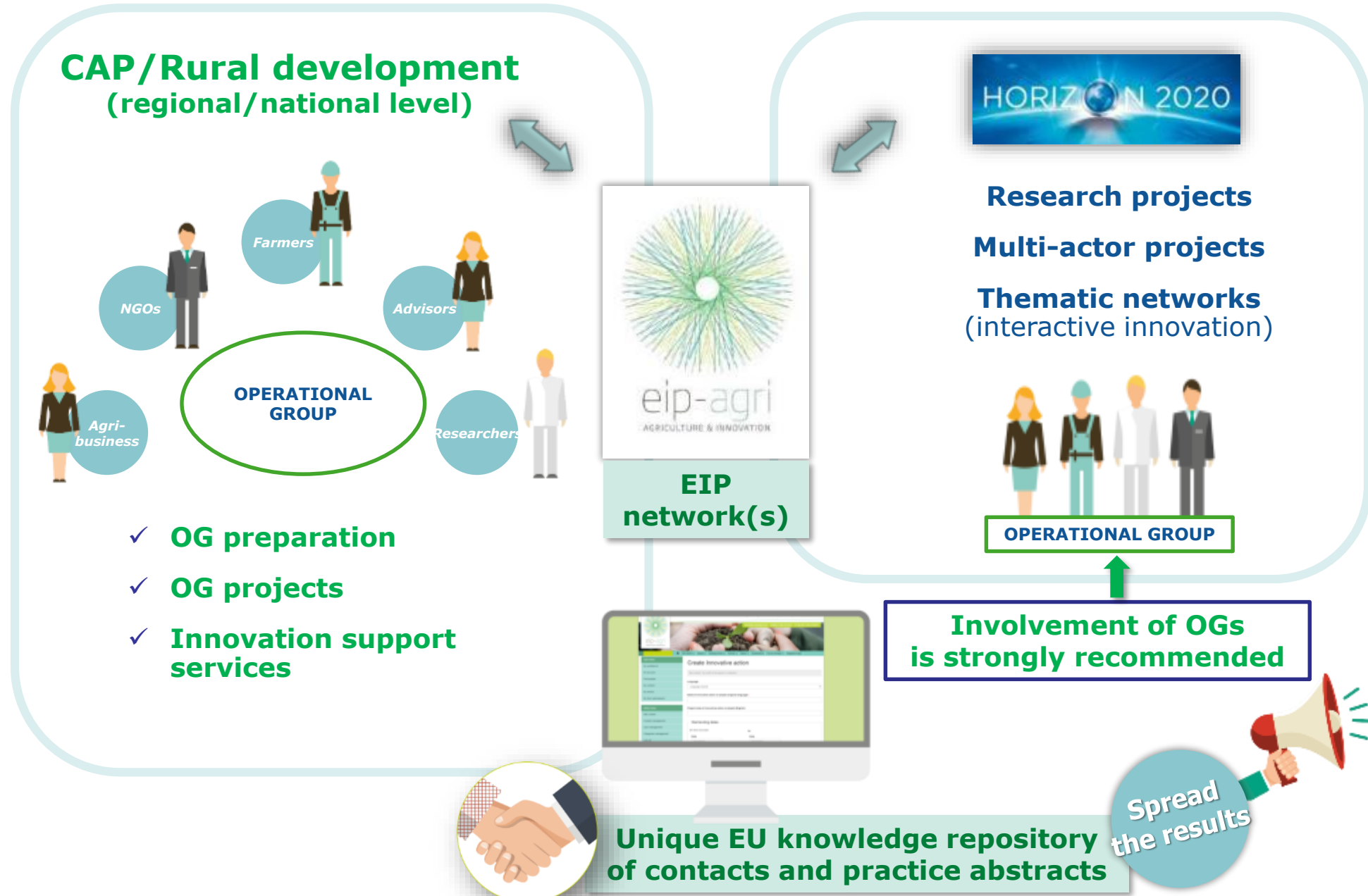
- increasing cost-effectiveness of digital solutions,
- enhance performance assessment opportunities,
- developing technical solutions facilitating trust in data sharing.

Important aspects

- Demonstration effect (e.g. through pilot projects)
- Need-driven and end-user orientation
- Technical innovation in combination with business models and social innovation



Connecting policies: the bigger EIP picture



Digital and data technologies as enablers for sustainability transition in agriculture and food systems



Selected calls from the Cluster 6 Work programme 2021/22

2021

- Smart XG, last-mile and edge solutions for remote farming, forestry and rural areas
- Research & innovation roadmap for blockchain technologies in the agri-food sector
- Potential of drones as multi-purpose vehicle – risks and added values
- Assessing the impacts of digital technologies in agriculture – cost, benefits and potential for sustainability gains
- Development of the markets and use of digital technologies and infrastructure in agriculture – state of play and foresight: digital and data technologies for the agricultural sector in a fast changing regulatory, trade and technical environment
- Data economy in the field of agriculture – effects of data sharing and big data

2022

- Smart solutions for the use of digital technologies for small- and medium-sized, farms and farm structures
- Upscaling (real-time) sensor data for EU-wide monitoring of production and agri-environmental conditions

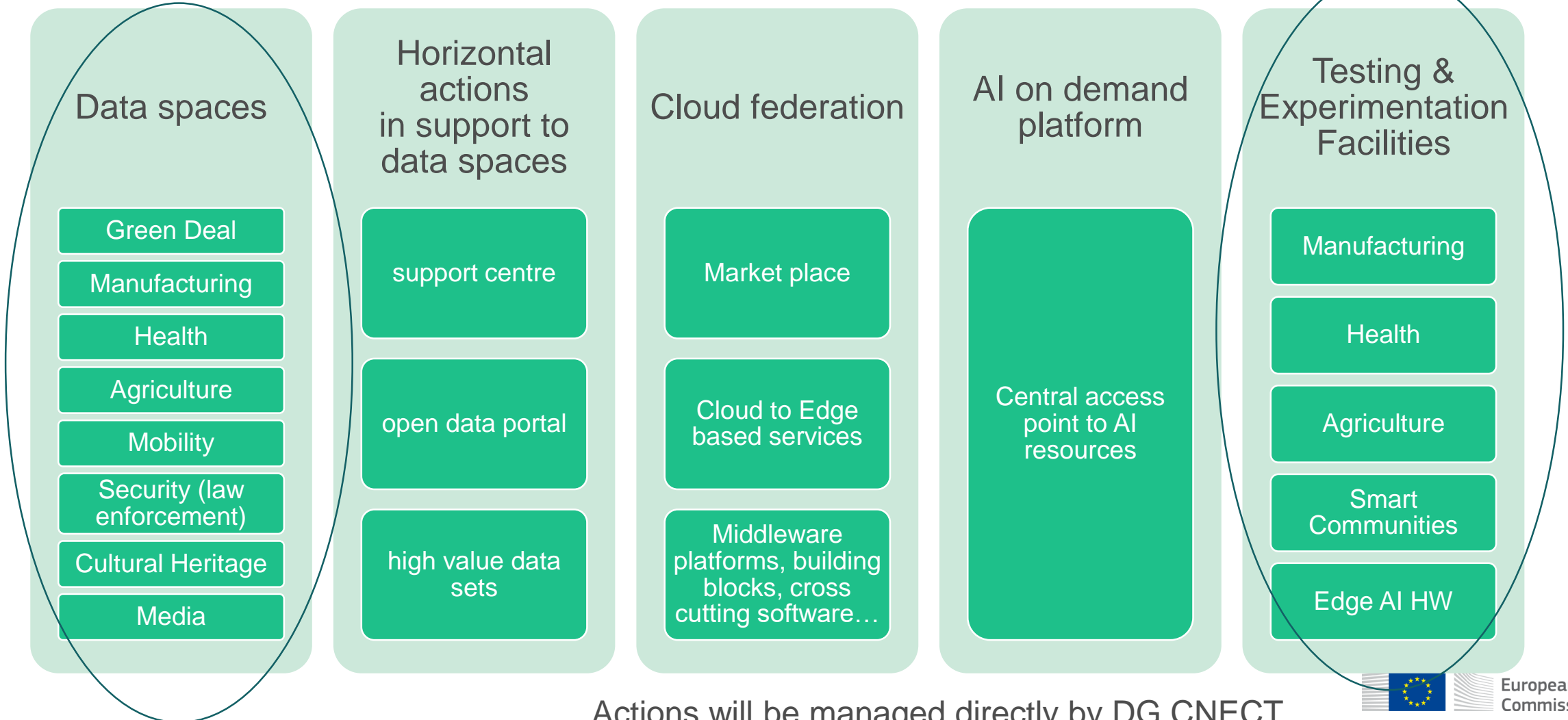
Supporting the digital transformation of agriculture, rural communities and policy systems

| Digital Europe Programme

- “New programme”
- First work programme published in November 2021
- Measures particularly relevant to boost digitalization in agriculture and rural areas:
 - Testing and Experimentation facilities for AI in agri-food
 - Testing and Experimentation Facilities for AI for Smart Communities
 - Digital Innovation Hubs
 - Support to advanced digital skills
 - Common European Agriculture Data Space
 - Common European Data Space for Smart Communities



DEP: Artificial intelligence, data and cloud



| TEF for AI in agri-food

- Testing and Experimentation Facilities (TEF) for Artificial Intelligence (AI) in agri-food are planned for the first Work Programme of the DEP;
- to pave the way for deployment of AI and to boost up-take;
- greater efficiency and uniformity of testing, experimentation and validation;
- large-scale, world-class technology infrastructure for testing and experimentation;
- a kind of “Trial farms” or “Trial fields”;
- exchange of experiences, visits by experts;
- links to Digital Innovation Hubs, and eventually to Common Agriculture Data Space.

→ **Capitalization of data.**



| The concept of Digital Innovation Hubs

Digital Innovation Hubs (DIHs)

- operate at region level
- serve the upscaling of innovation
- Link “innovators” and “end users”
- build the capacities and networks in a region to effectively deploy digital solutions, including e.g. financial modelling, and legal advice.



Concept of DIHs has been piloted in the agri-food sector among others within the project SmartAgriHubs.

DIHs and a network of DIHs (including in agri-food) will be supported under the Digital Europe Programme and link up to EIP-AGRI.



Complementarity of EU programmes – Examples related to Innovation in Digital and Data technologies

Policy instrument/ Programme	Scope	Examples	Comments
Horizon Europe	Research & Innovation	Dedicated calls Partnership “Agriculture of Data”	Under Horizon Europe Cluster 6 (and Cluster 4)
Digital Europe Programme	Innovation & Deployment Capacity building	Digital Innovation Hubs Advanced digital skills Testing and Experimentation Facilities for AI Common European Data Spaces	Network of Digital Innovation Hubs in agri-food expected to establish links to network of EIP OGs
Common Agricultural Policy	Application Capacity building Innovation	Advisory services Training Investment support Smart villages LEADER AKIS EIP AGRI	Link to Horizon 2020/ Horizon Europe through EIP-AGRI

Thank you



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