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DG AGRI

Copernicus ECOSYSTEM WORKSHOP 2018
BRUSSELS, 9+10 OCTOBER

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Farm Sustainability Tool

for Nutrient Management

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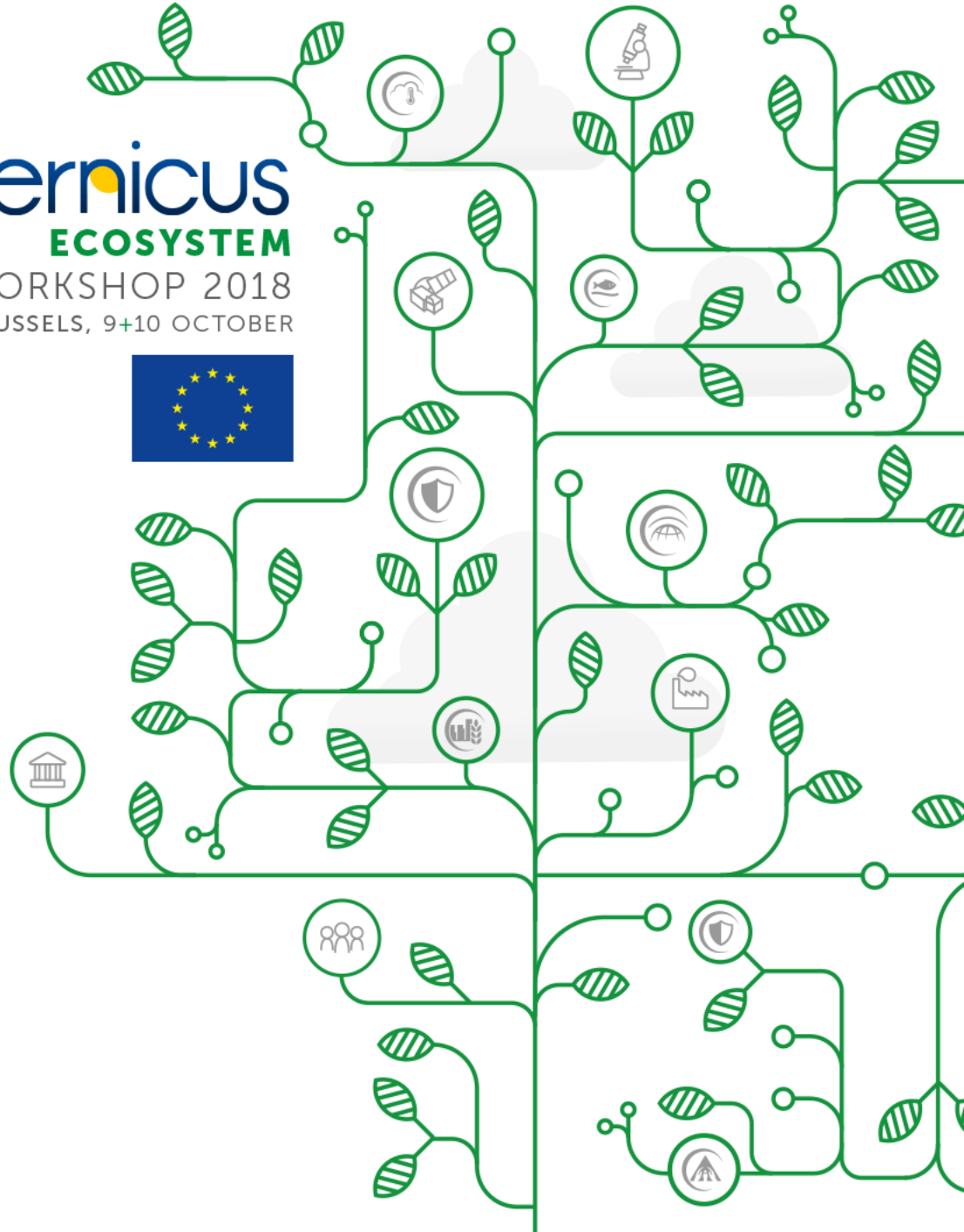
Unit D.4 - Environment, climate change, forest and bioeconomy

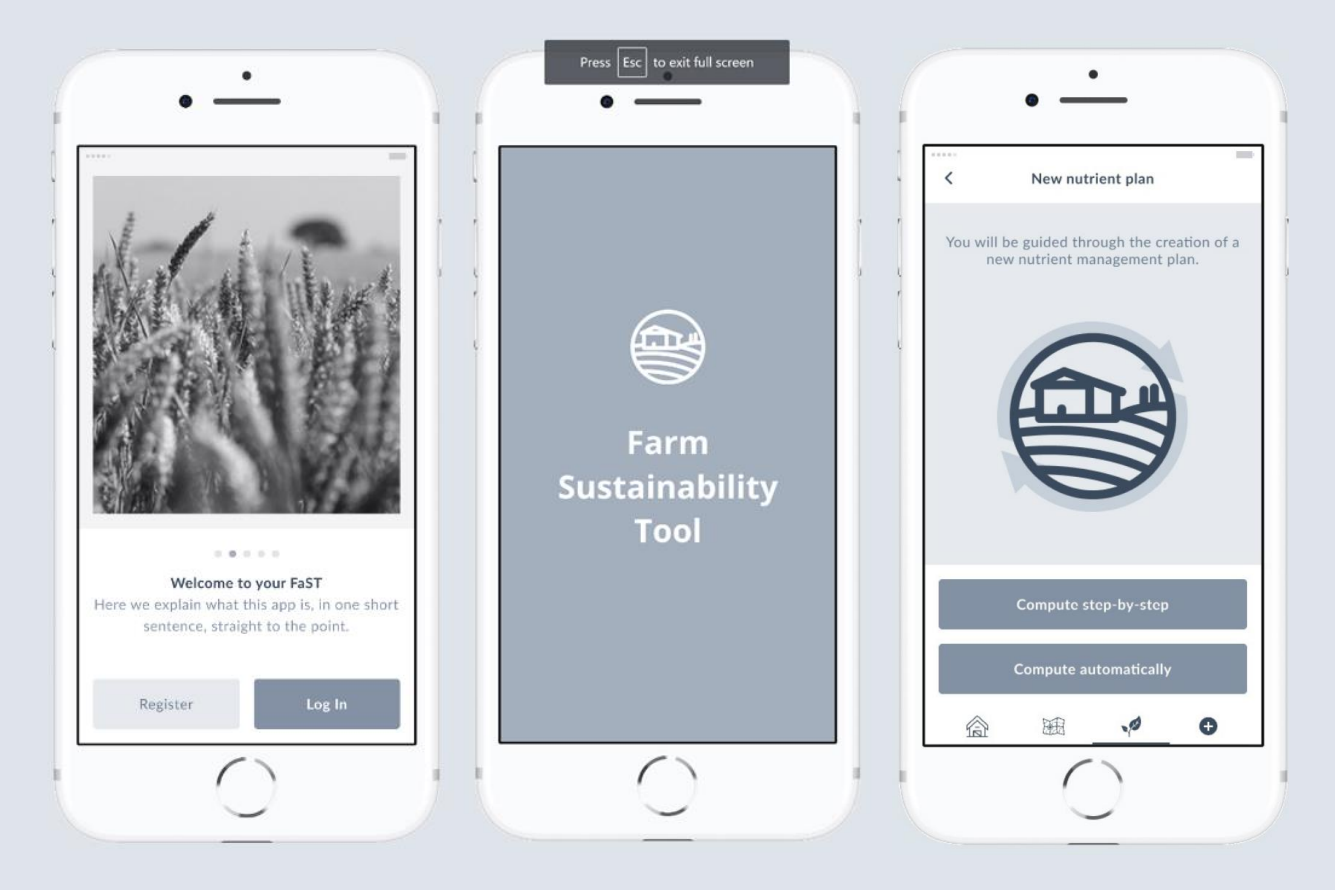


DISCLAIMER

The presentation has been prepared by DG AGRI for the purpose of describing amendments introduced to the Commission Implementing Regulation (EU) No 809/2014 and the Commission's regulatory proposals for the post-2020 period. It has not been subject to an inter-service consultation nor revised by the Legal Service. The views expressed in the presentation cannot be taken as expressing the official position of the European Commission.

A mobile tool for farm-tailored operational advice

>> start with a **functional Nutrient Management** planning core



Live demonstrator mock-up

https://rebrand.ly/fast-demonstrator

made available by Member States to all CAP benificiaries

Commission proposal for a Regulation on the new CAP post-2020

Article 12.3 and ANNEX III

- Article 12.3: “Member States shall establish a system for providing the Farm Sustainability Tool for Nutrients referred to in Annex III, with the minimum content and functionalities defined therein, to beneficiaries, who shall use the Tool.
- The Commission may support the Member States with the design of that Tool and with data storage and processing services requirements.”

MINIMUM REQUIREMENTS IN THE PROPOSAL

a) Elements

- Relevant farm information based on LPIS and IACS;
- Information from the soil sampling , on an appropriate spatial and temporal scale;
- Information on relevant management practices, crop history, and yield goals;
- Indications regarding legal limits and requirements relevant to farm nutrients management;
- A complete nutrient budget.

b) Functionalities

- Automatic integration of data from various sources (LPIS and IACS, farmer-generated data, soil analyses etc.) as far as possible, to avoid data input duplication for farmers;
- Two-way communication between PA/MAs and farmers allowed;
- Modularity and possibility to support further sustainability objectives (e.g. emissions management, water management)
- Respect of EU data inter-operability, openness and re-use principles;
- Guarantees for data security and privacy in line with best current standards."

Why

- EU-wide environmental impact from nutrient use efficiency gains; the tool will be provided by MS to all CAP beneficiaries
- Simplification and digitalization
- Win-win solution beyond compliance model (agronomic and simplification gains for farmers, environmental gains due to scale);
- Create conditions for behavioral changes
- Simplification of farmers' tasks (clear instruction, inclusion of all nutrient-related legal obligations in one tool, no data entry duplication and minimum manual data input;
- Catalyst for on-farm innovation and digitalization;
- Optimising data use and re-use (for policy making, designing environmental measures etc.).

MAIN CHARACTHERISTICS

- **User friendly interface**

Open source customizable structure

- **Automatic integration of data**

Visualising the LPIS farm boundaries, IACS data and other existing information.

Locally available source of data, public records, soil analysis data, satellite imagery, etc.

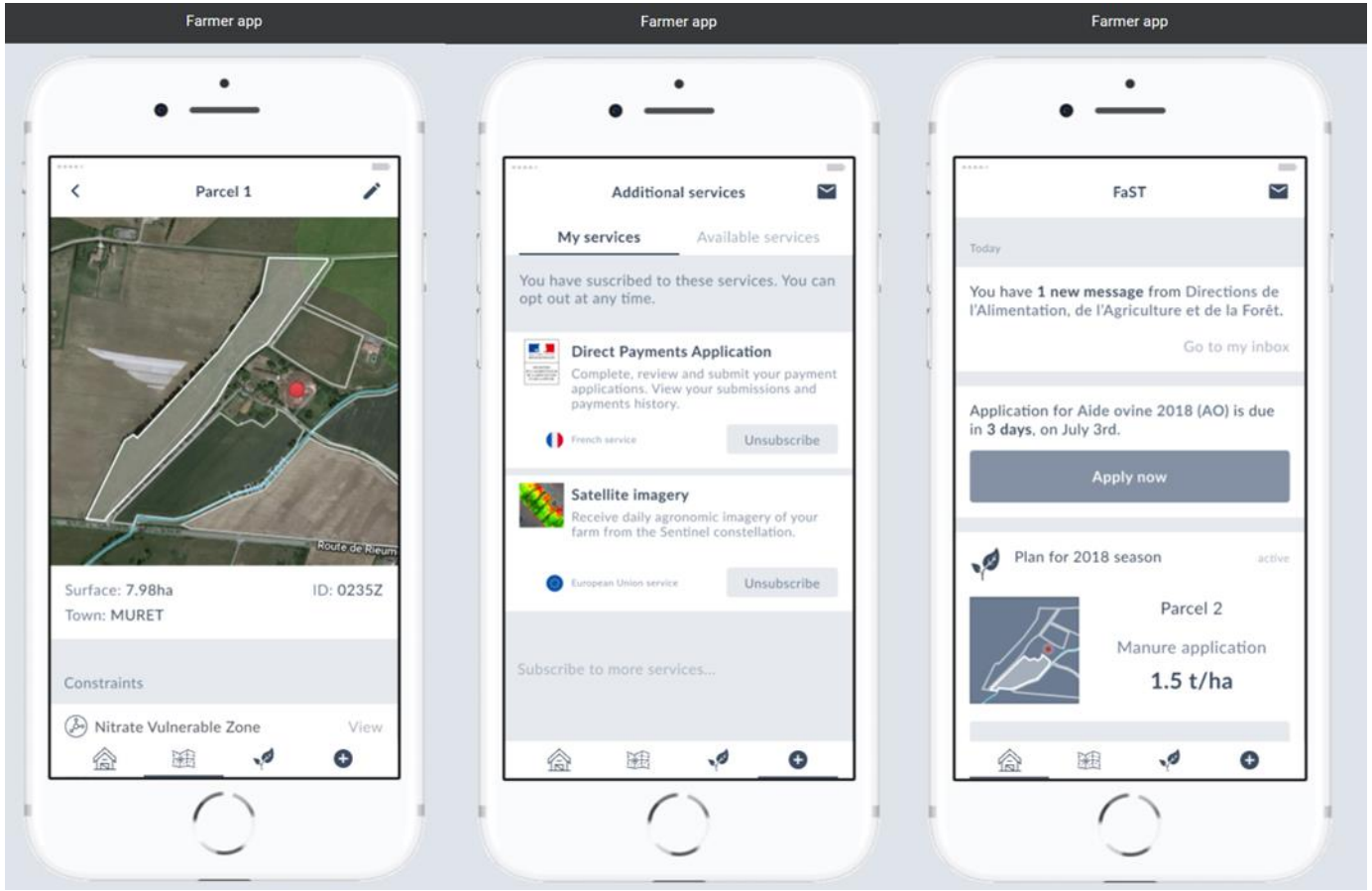
- **Simplification and clarification** of farmer's task

Incorporation in the advice of all relevant legal limits, obligations and committments (NVZ etc.)

- A **messaging component**

Two-way communication with PA/MAs, farm advisors, etc.

- **Sinergies with monitoring** tools (remote sensing, etc.)

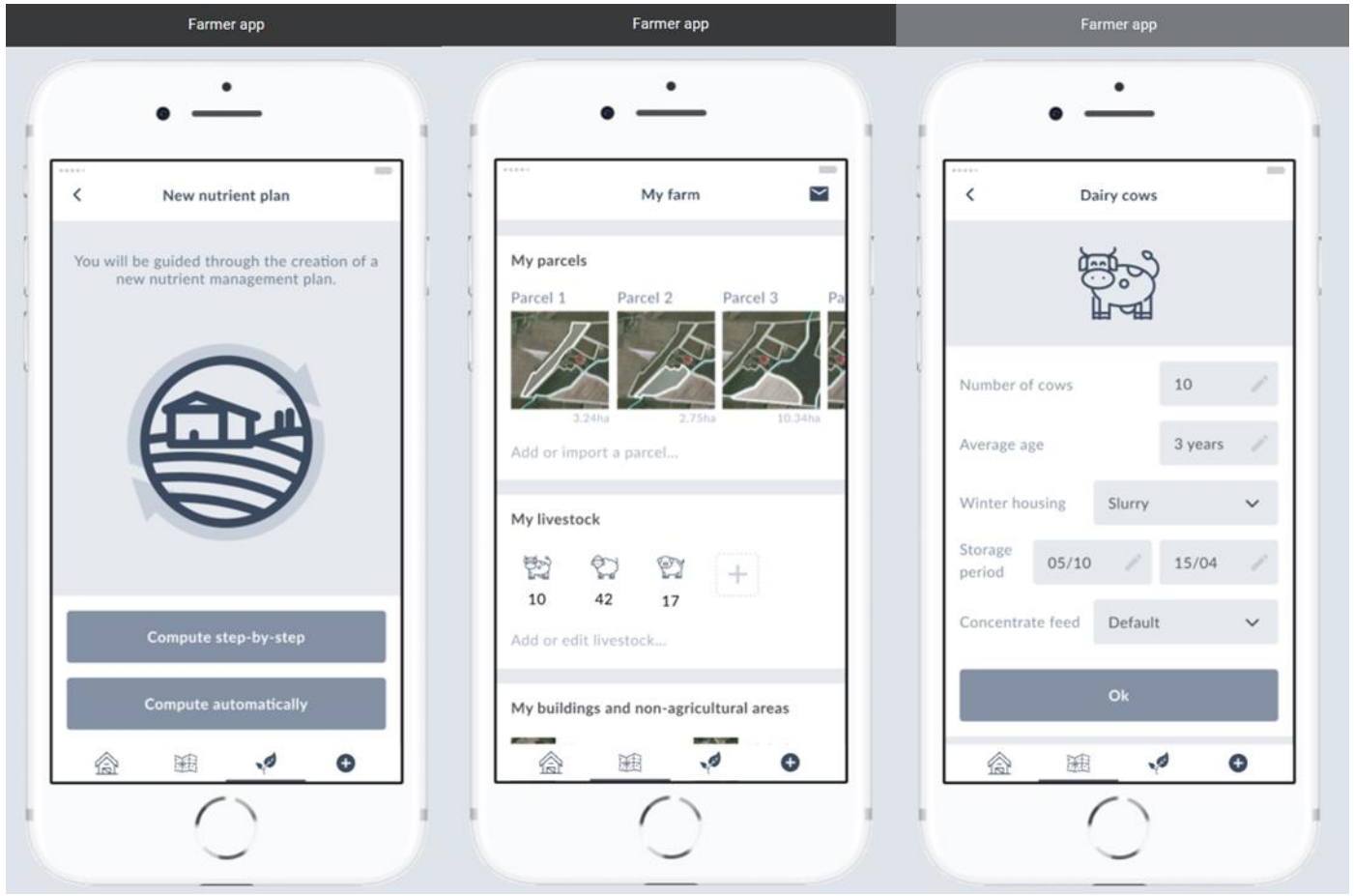


DATA ENTRY

- The farmer's GAEC obligation in the proposal is limited to "**use**" = **activation and data entry**.
- Farmers would use the FaST convinced about its real value added provided (agronomic, simplifications of administrative tasks).
- Minumin data required for reliable Nutrient Plan

- Number of animals, manure inport/export, available soli sampling, yield targets

"Farmers should not be subject to control/inspections on the data inputted and actual follow-up of instructions provided by the FaST"



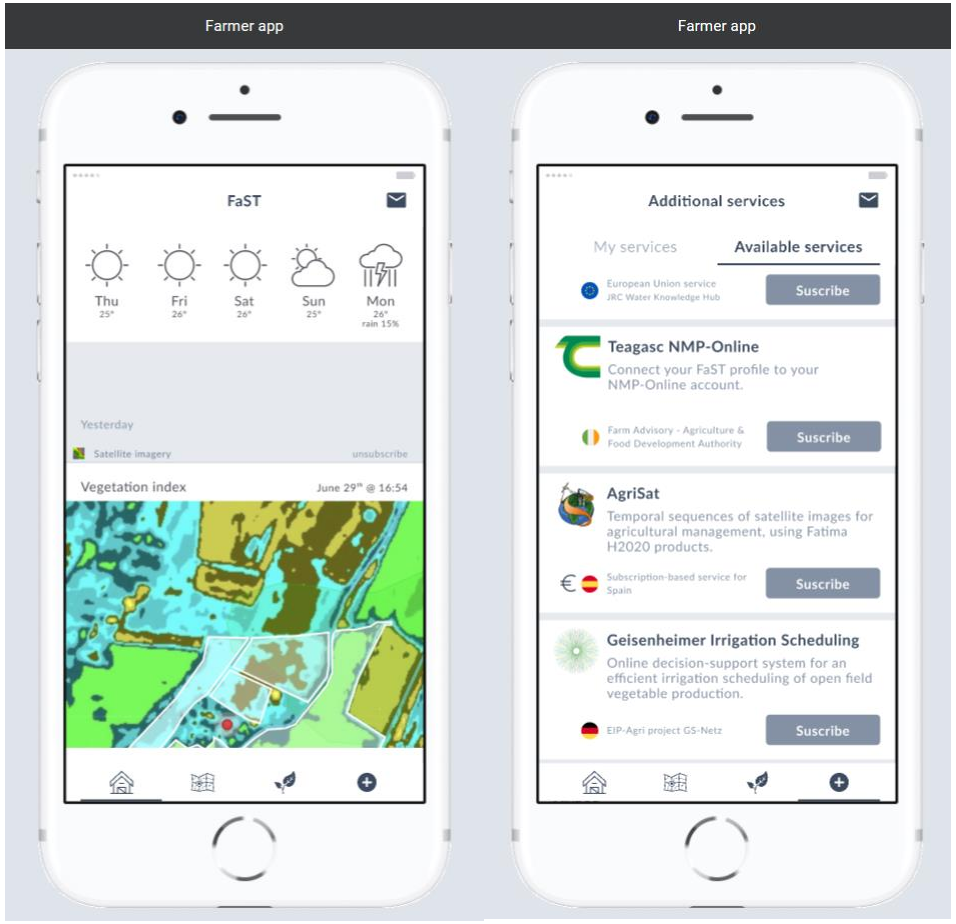
MODULARITY and INTEROPERABILITY

Able to integrate further modules/apps/widgets, driving localisation and diversification of services to farmers (advisory services, commercial services etc). Carbon footprint, water management, integrated pest management, etc.

Already-developed services such as the **Irish NMP online** could continue to be used, while taking advantage of the **new App for Farmers and DIAS satellite** services.

Integration with the Copernicus programme and data, the EU DIAS platform (Copernicus cloud-based platforms for Data and Information Access Services), or any cloud provider will open a myriad of possibilities.

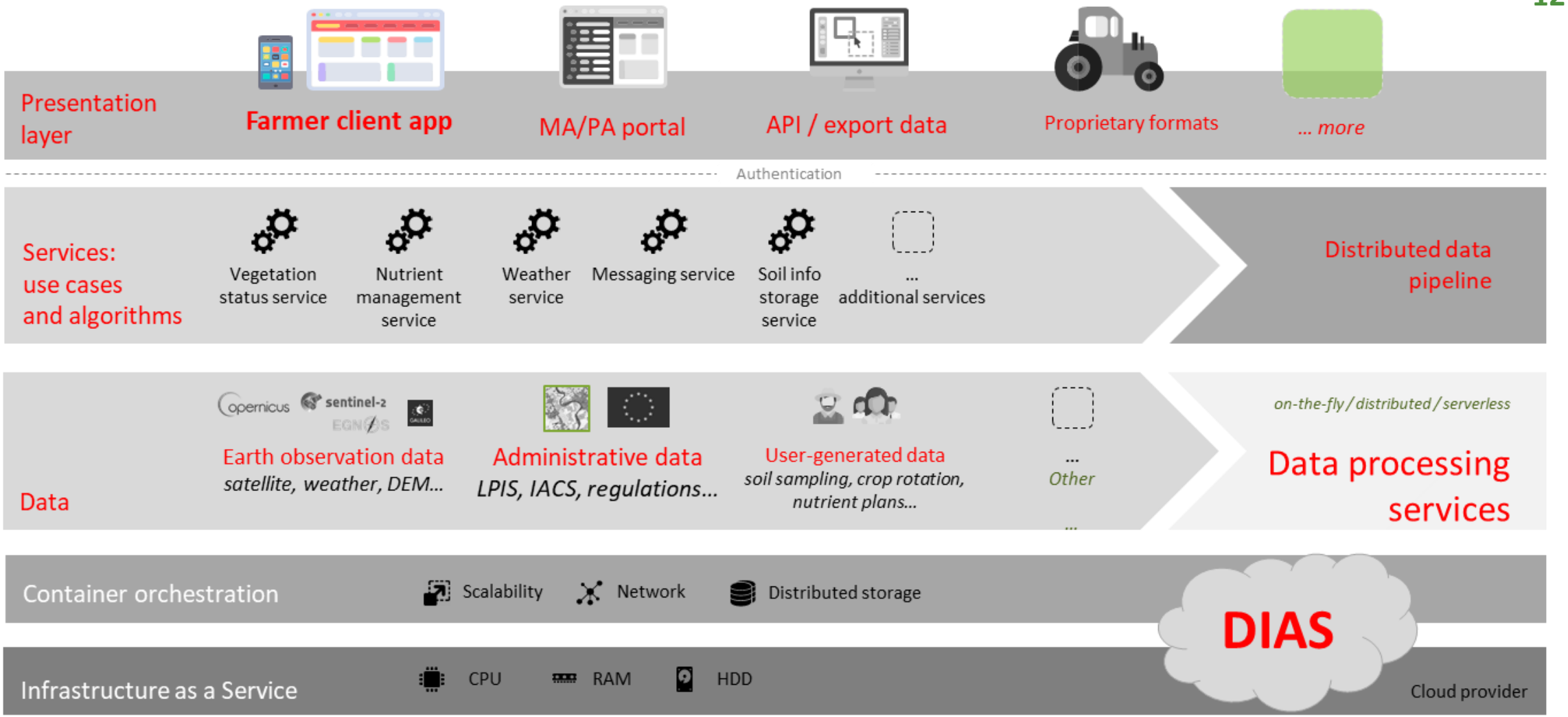
"Farmers would use the FaST convinced about its real value added provided (agronomic, simplifications of administrative tasks)"



Feasibility Study

(AGRI, GROW, JRC, CLIMA, ENV)

- Analysis of the feasibility and usefulness of the concept
- Analysis of user and stakeholder requirements
- Prototype farmer application (FaST) – January 2019
- Outline of a supporting technical architecture
- Platform’s deployment options



European Commission - DG AGRI - NMP Feasibility Study

The prototype (demonstrator) FaST

- Will be in the form of a web application (able to run in a recent browser or laptop/tablet/ mobile).
- Will present the forms for the various uses: user input, messages, maps, graphs.
- Will also incorporate the basic usage of sensors available on the farmer's mobile terminal (positioning, camera, compass etc).
- Will offer basic offline capabilities.
- Will offer rudimentary (backend) administration application: user management, main settings, manual data export etc.

Catalyst for on-farm innovation and digitalisation for the local, EU and global agricultural knowledge and innovation systems

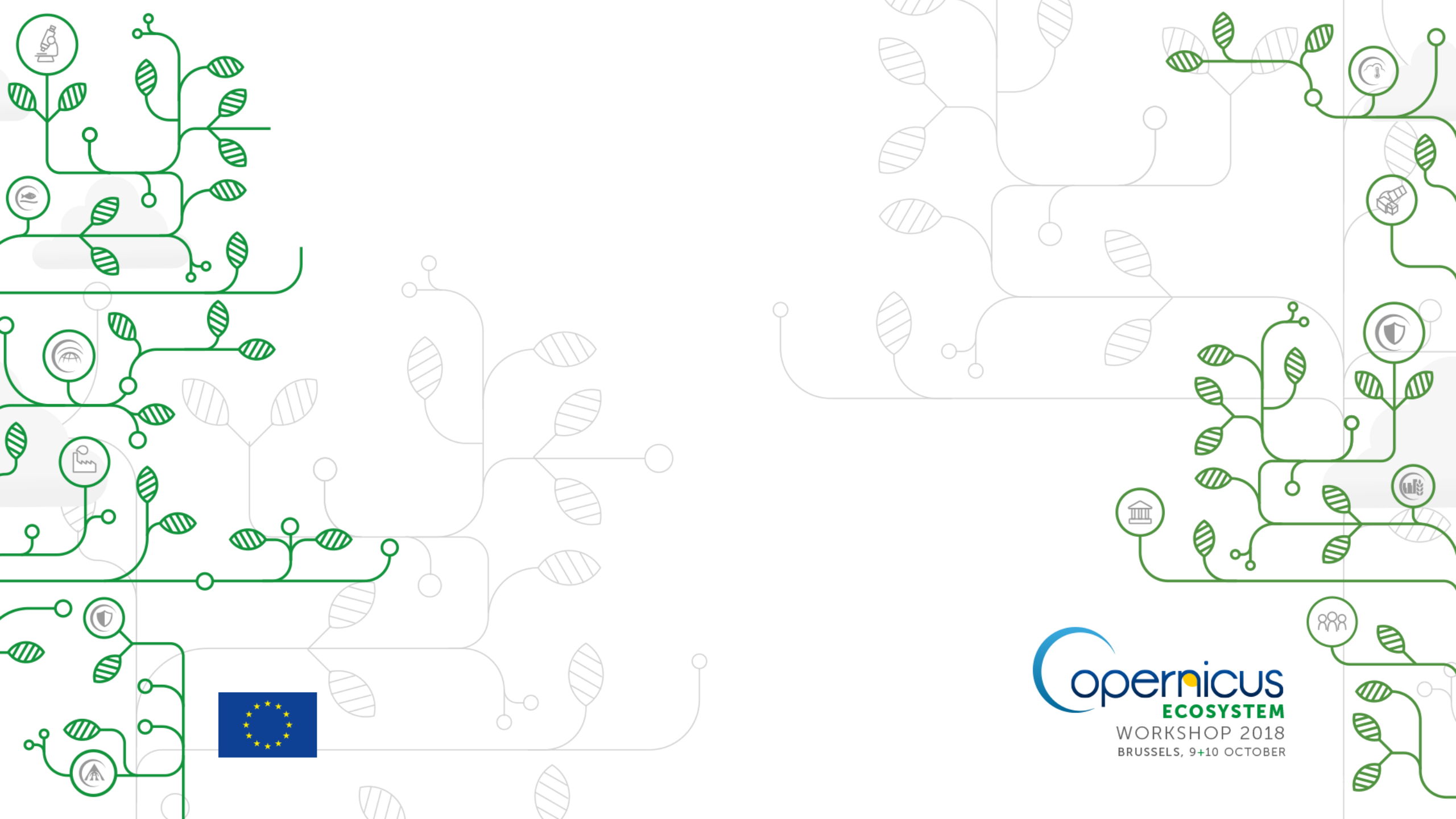
The FaST could be the **on-farm landing spot for many services** provided by commercial third parties, from machinery and input producers to decision support services based on digital technologies (remote sensing, geo-positioning, machine learning, internet of things).

The use of Copernicus DATA is fundamental for the development of services to farmers.

The rollout of the FaST should be consistent with the implementation timeline of the post-2020 CAP.

Way Forward

- Workshops with farmers and other users will fine-tune the prototype;
- Support for MS in the implementation of a FaST solution in line with CAP post-2020 timeline;
- Need for outreach and communication to MS and stakeholders



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Deployment options for the FaST platform

1. **Deployment on a core DIAS-based FaST platform servicing the needs of all MS:**

- A level playing field for farmers across member states through shared services;
- Mutualisation of resources to maintain the platform infrastructure (IT, Data Protection, Access);
- Takes advantage of DIAS features (especially relevant for future monitoring applications), use of EO data, built in security and access control.

Cost P with significant economies of scales.

2. Individual deployment of platform by MS

- Technical solution same as option 1;
- Tool developed and installed in the Member States own technical infrastructure or selected cloud provider (including DIASs);
- Solution not optimal for sharing algorithms and common development of services (controls etc.);

Cost (approx.) P x number of Platforms (P = cost of option 1)

3. Hybrid Option (common platform for more MS +connected individual MS platforms + connected individual MS solutions)

- Various actors are still free to extend and exchange services according to different needs, stemming from existing relationships or commonalities in terms of services, institutional initiatives already in place or other existing or desired future collaborations or synergies.
- Support for a core platform for interested MS allows them to jump-start e-governance and simplification

Cost depending on number of Platforms (P = cost of option 1)