
ITU

Smart Precision Farming

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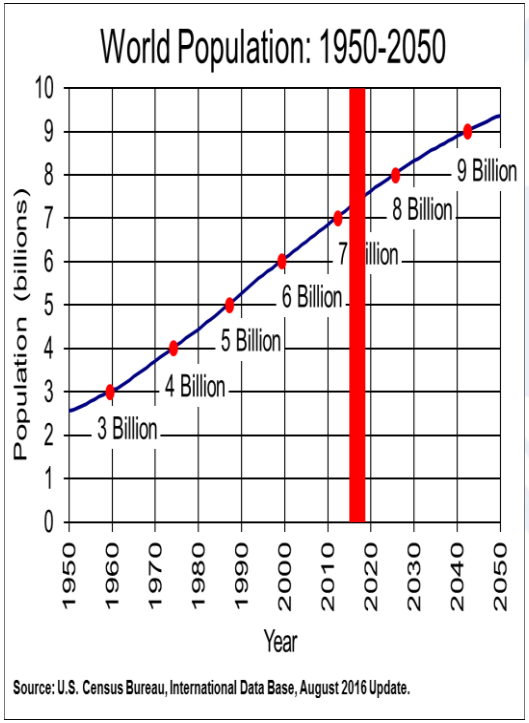
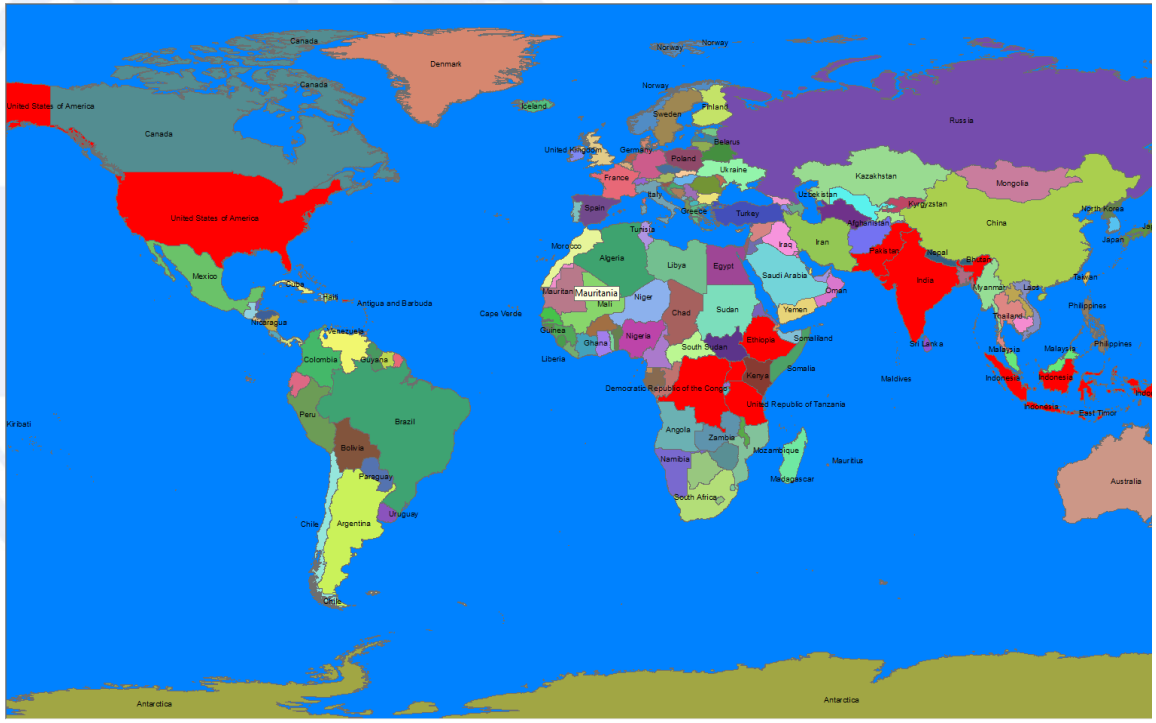
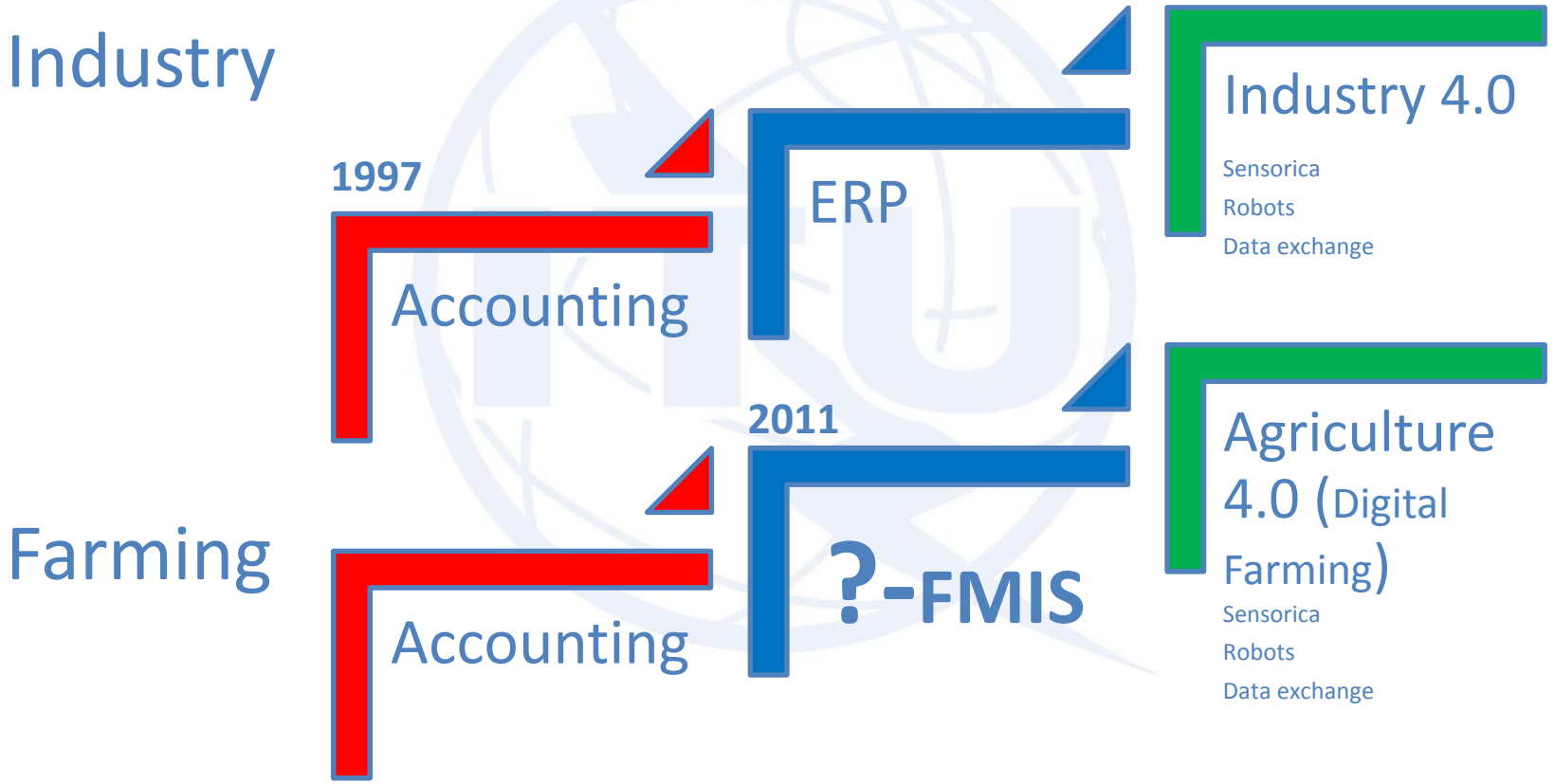
Where we are now in 2018?

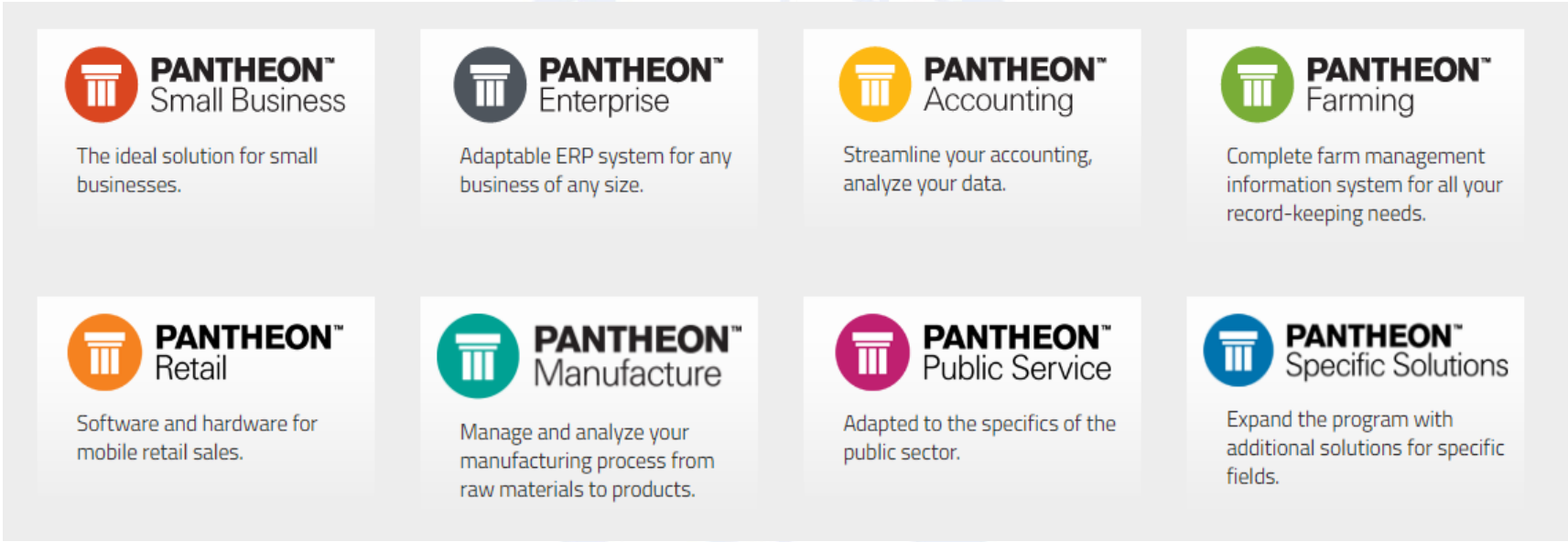




ICT Evolution



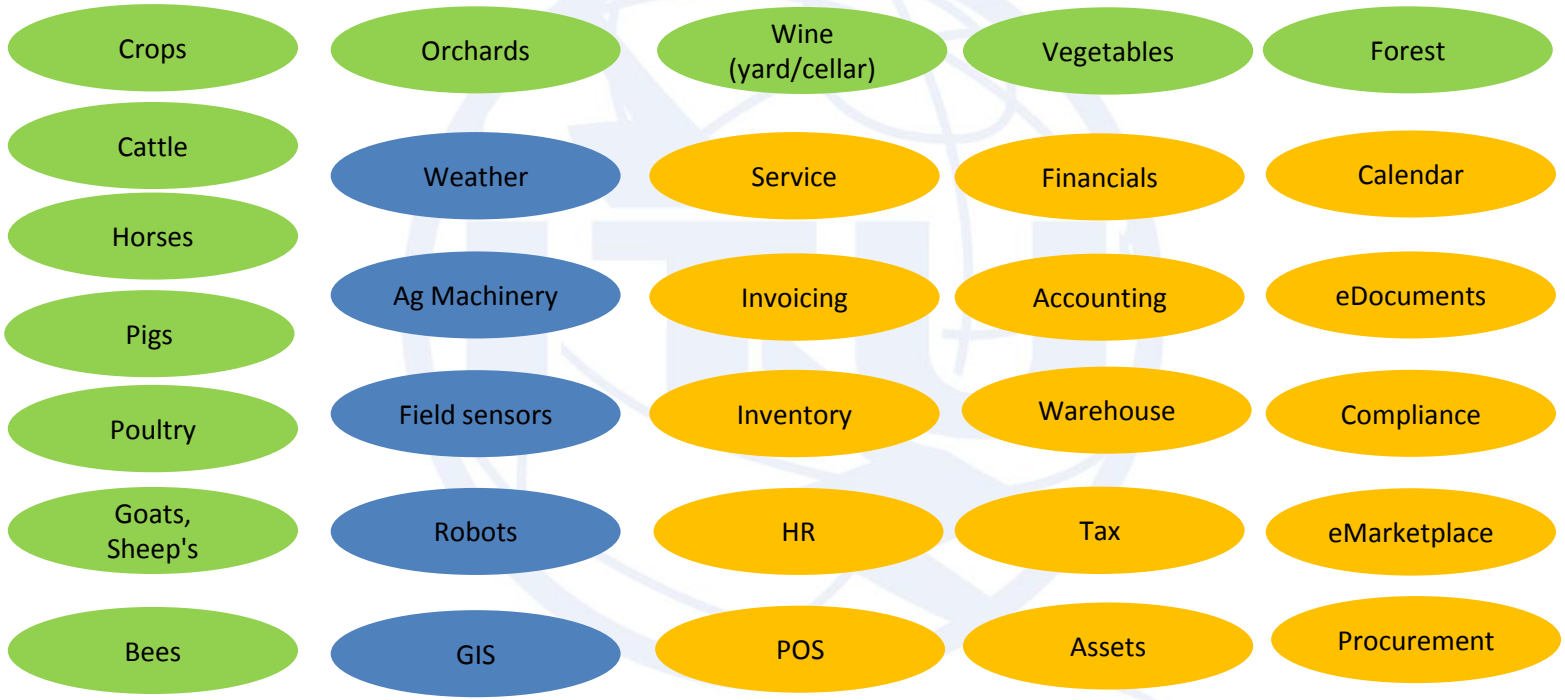
About Datalab



Over 50.000 users and 18.000 companies in South-Eastern Europe

https://www.datalab.eu

About PANTHEON™ Farming



- **Complete & Integrated**
- **True transparency of the farm**
- **One (or none) data entry, multiple usage**
- **Profit/Loss on the level of production unit**

https://www.datalab.ch

External data..

Weather

Meteoblue is our weather forecast service provider.

More Info

GIS Feeds

Map Viewer is part of PANTHEON Farming where GIS (Geo Information System) data are presented in a way the farmer can easily understand.

More Info

Field Sensors

Automated pest monitoring system that monitors insects, which are lured into insect traps.

More Info

Robots

DeLaval milking robots store information about animal milking.

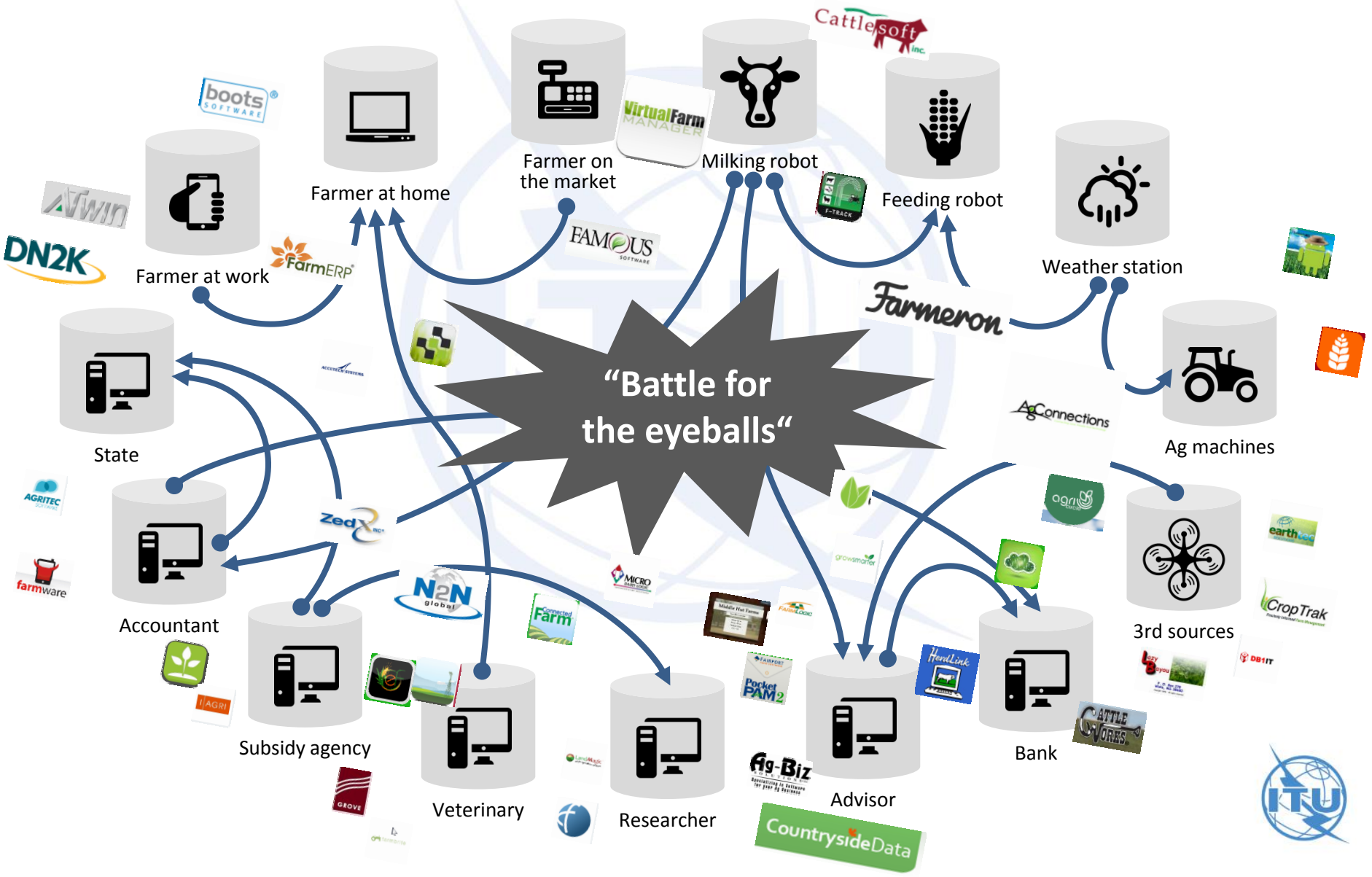
More Info

Ag Machinery

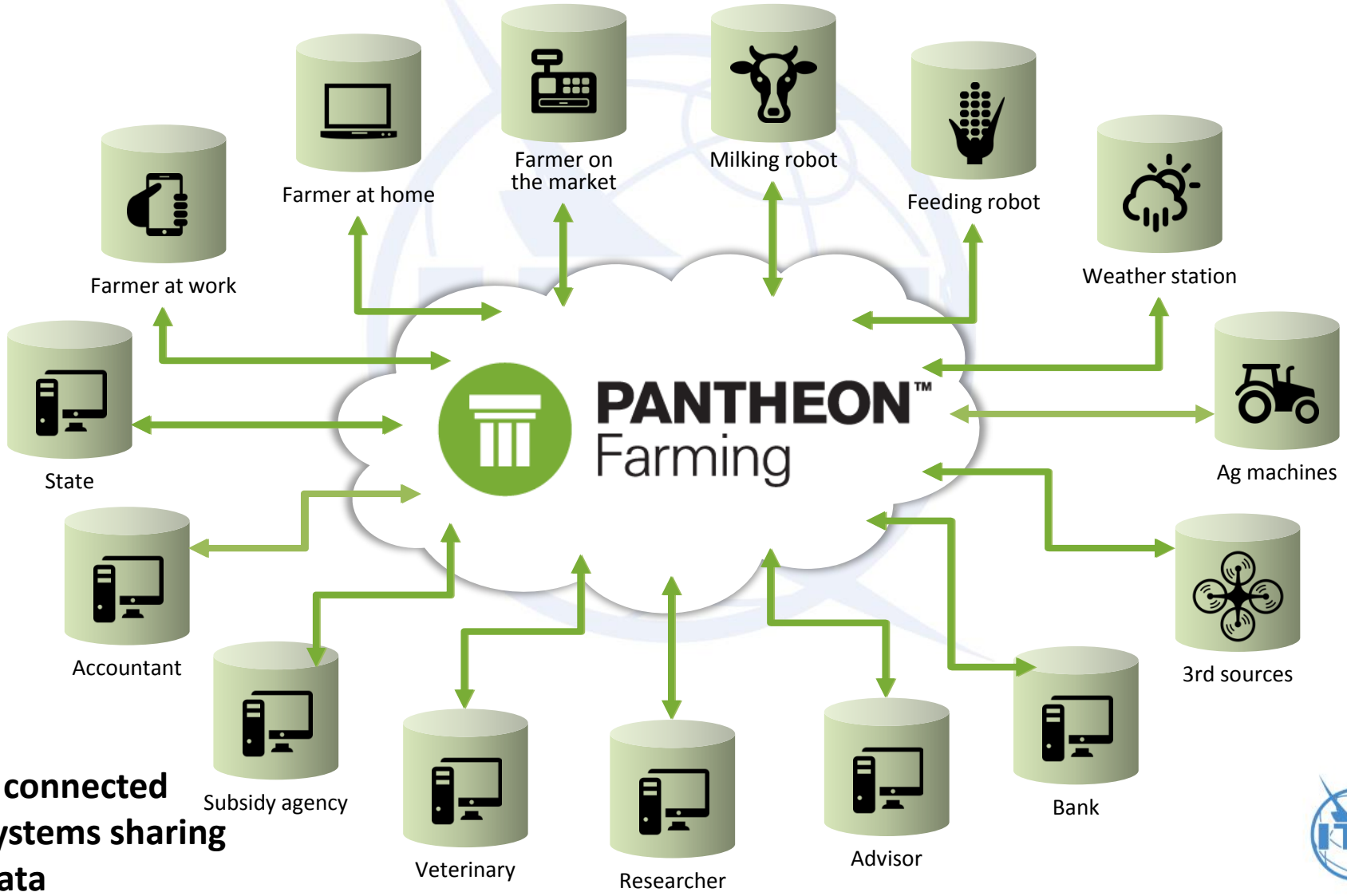
As the members of AEF we are involved in the enforcement of ISOBUS standard.

More Info

Information silos of today's farm



Tomorrow‘s farm
= ONE TRUTH



= connected systems sharing data

Today`s challenges

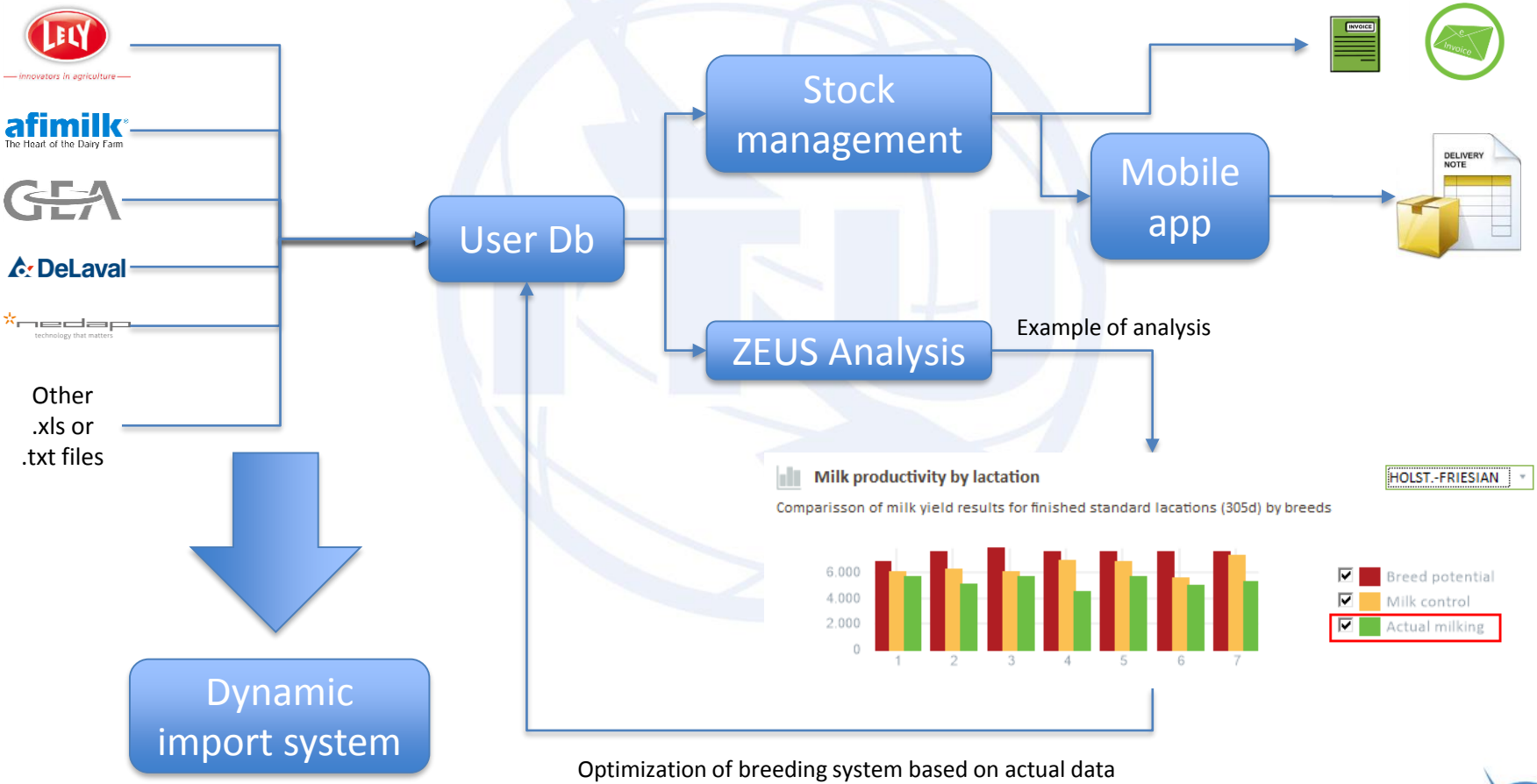
- Changing environment and climate
- Limited natural resources
- Competitive market

are forcing farmers to produce more with less (more productive, more sustainable, more competitive)

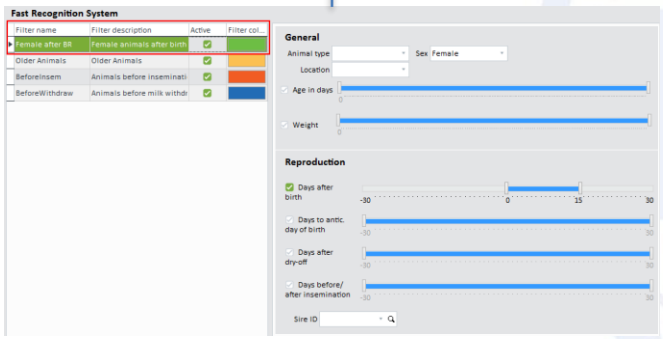
- Market demand, smart consumers

are demanding **traceability**, origin, **quality** (organic) products

Milking robot integration



Animal search and filtering



User Db

Mobile app

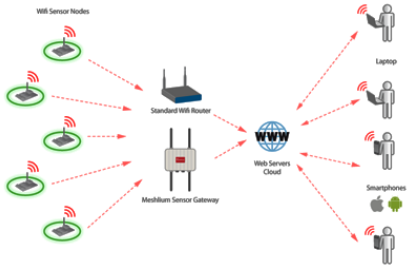
Animal 1

Animal 3

Animal 7

Elimination, movement, weighing, other tasks…

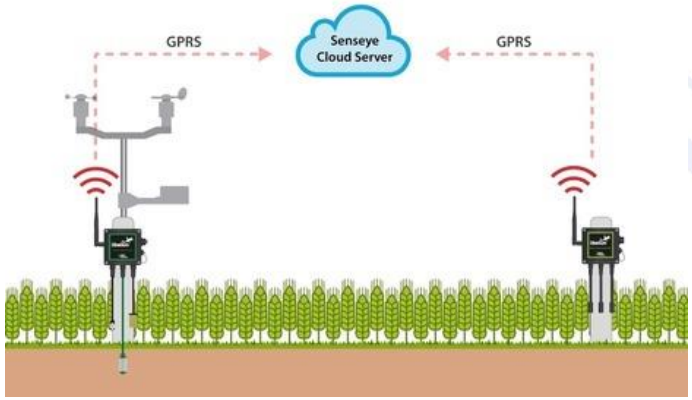
IoT sensor system



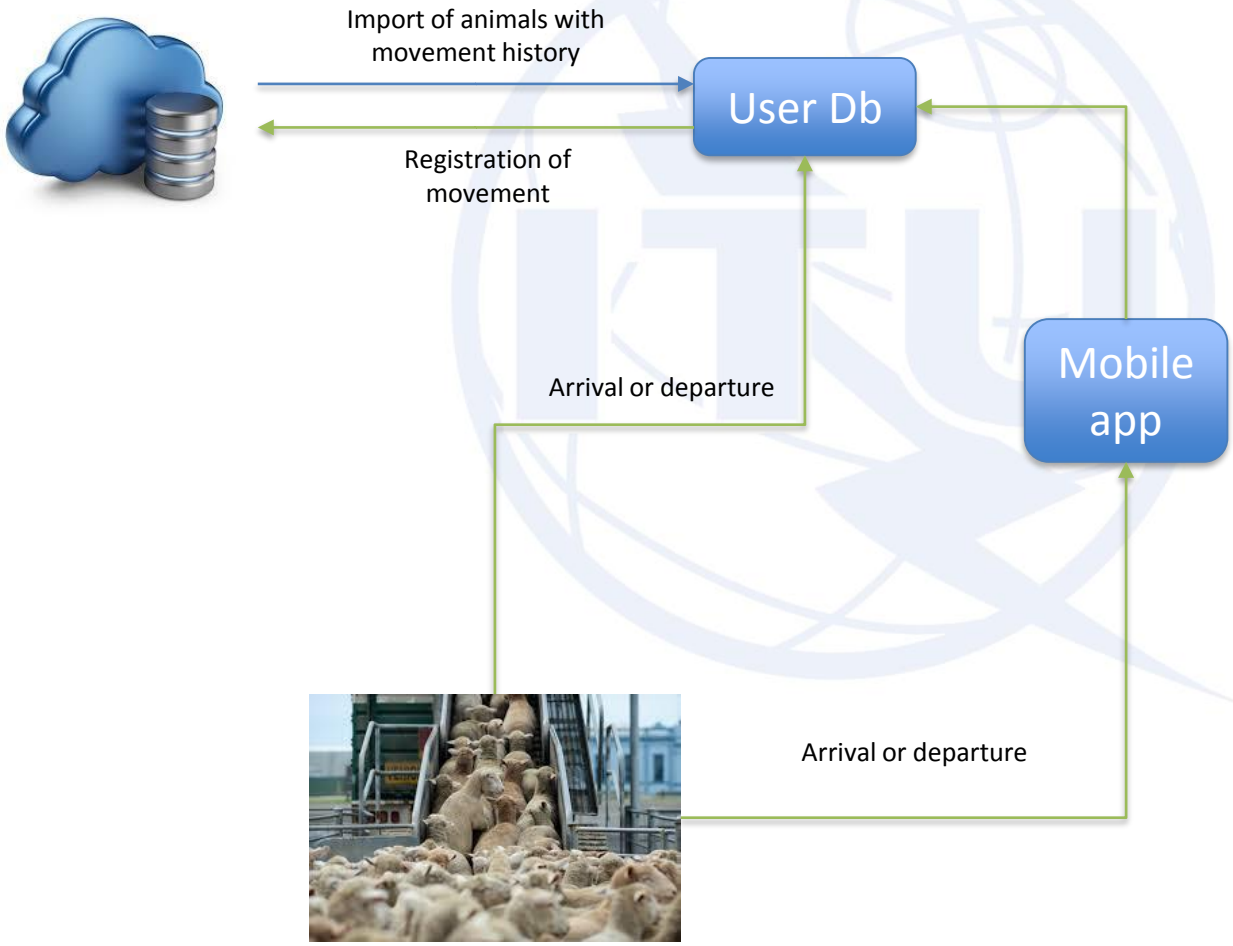
User Db

Adjust the situation (ventilation…)

Speed up tasks

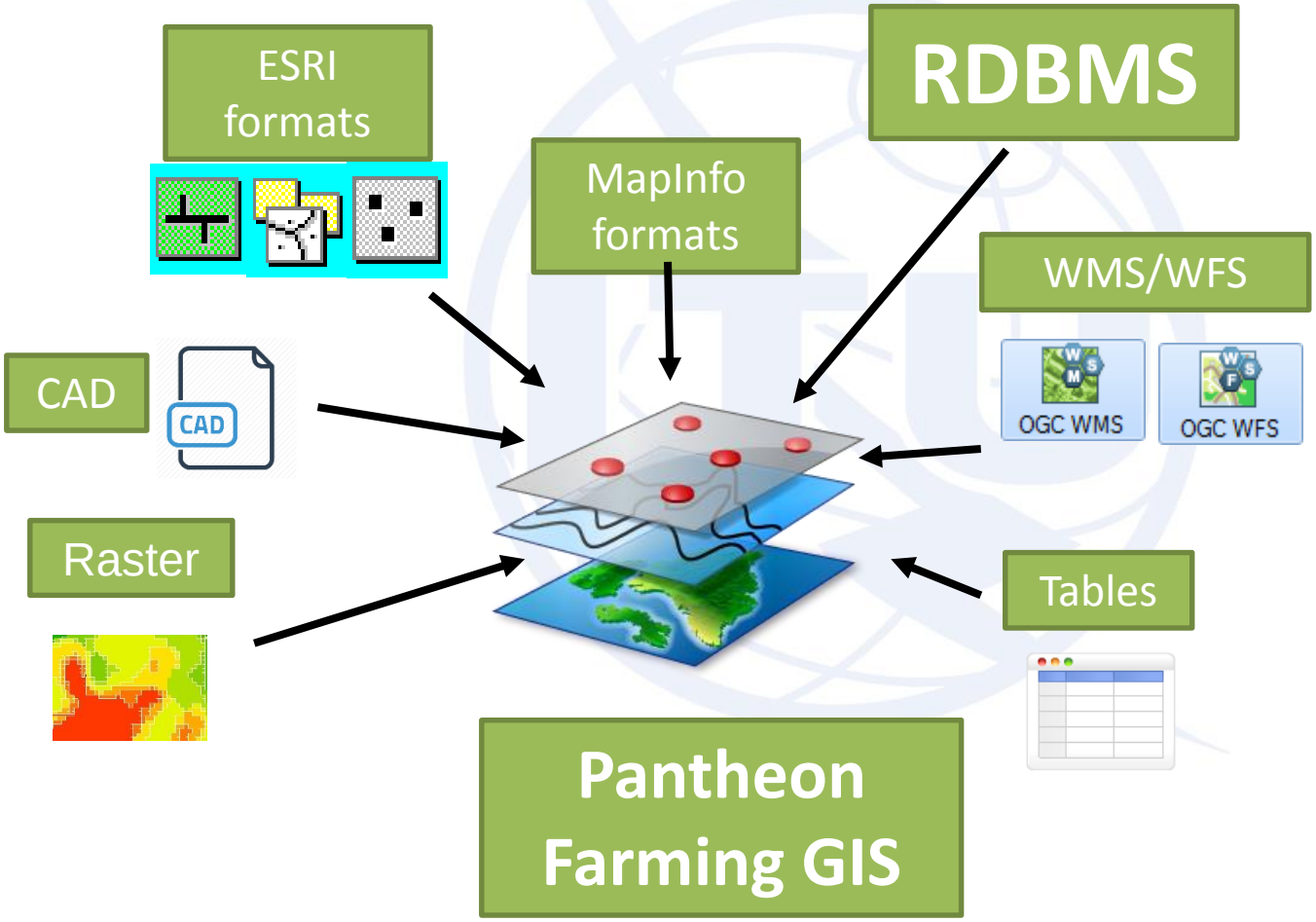


Registration of animals (SI case)



Data formats

- PAFA GIS Viewer works with the data in multiple formats (more than 50 formats)

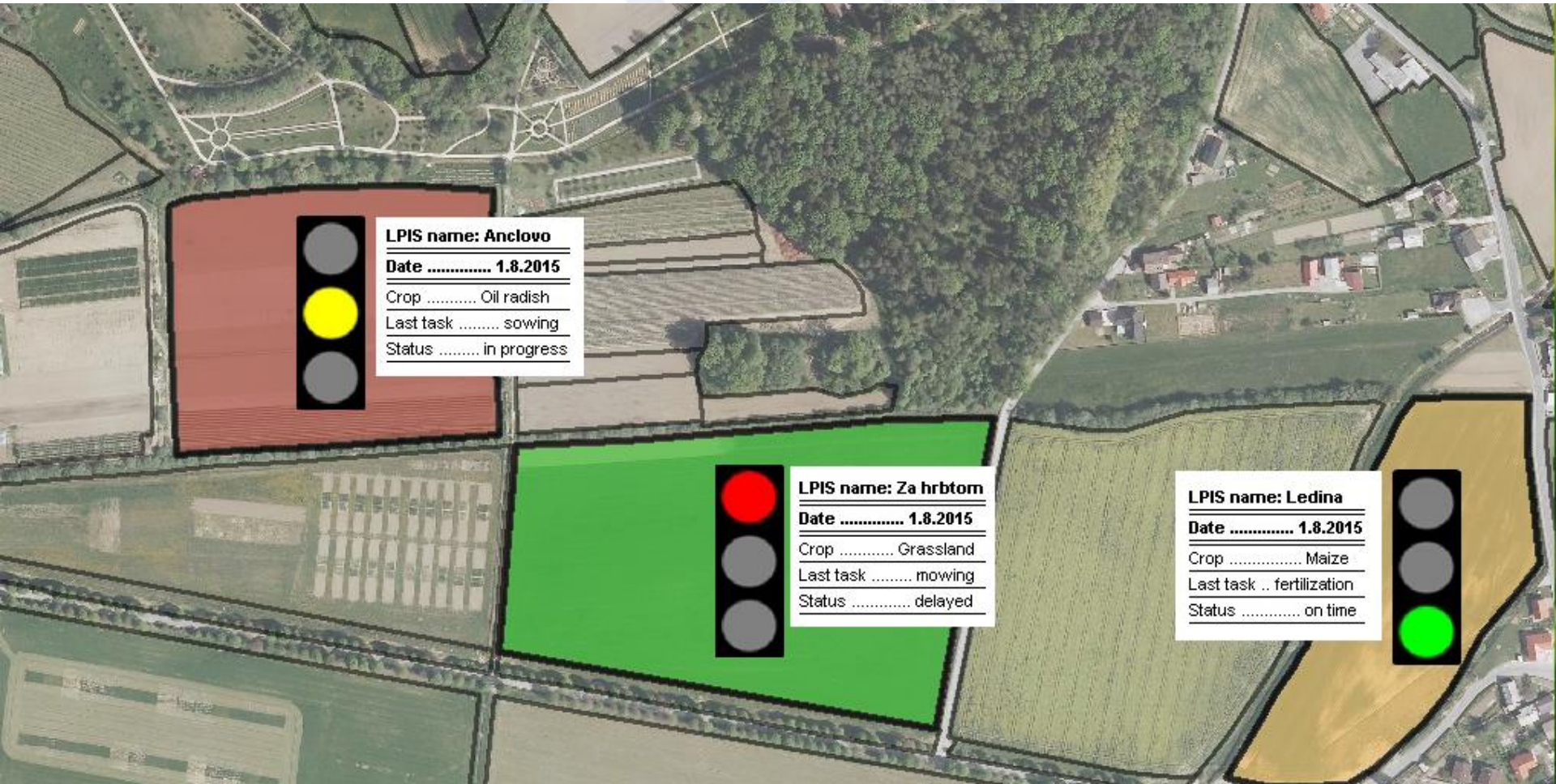


Support of all world known GIS data formats and services :

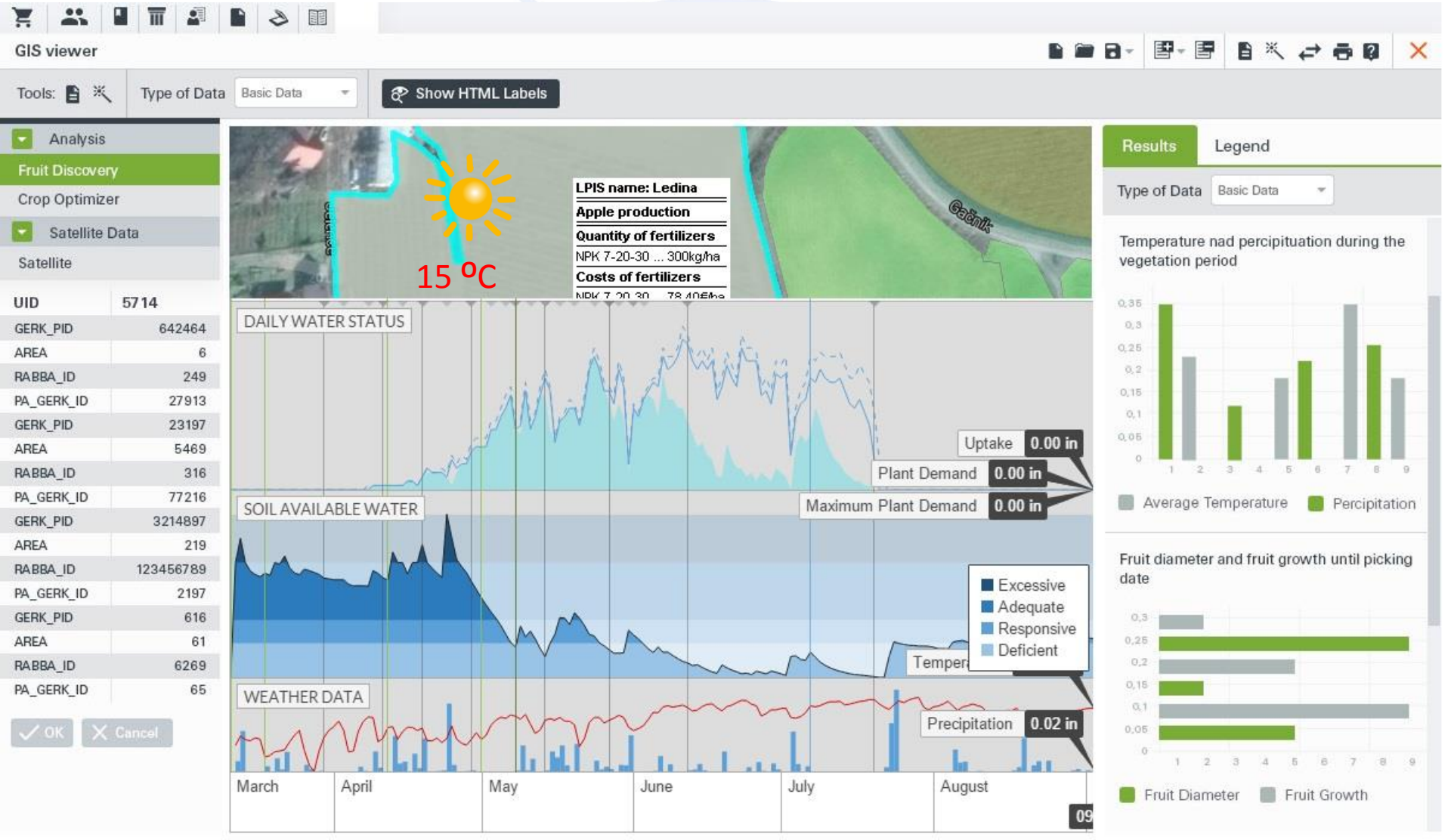
ESRI
OPEN GIS
GEOMEDIA
MAPINFO
AUTODESK
IBM
POSTGIS
ORACLE SPATIAL
MS MSSQL

WFS & WMS

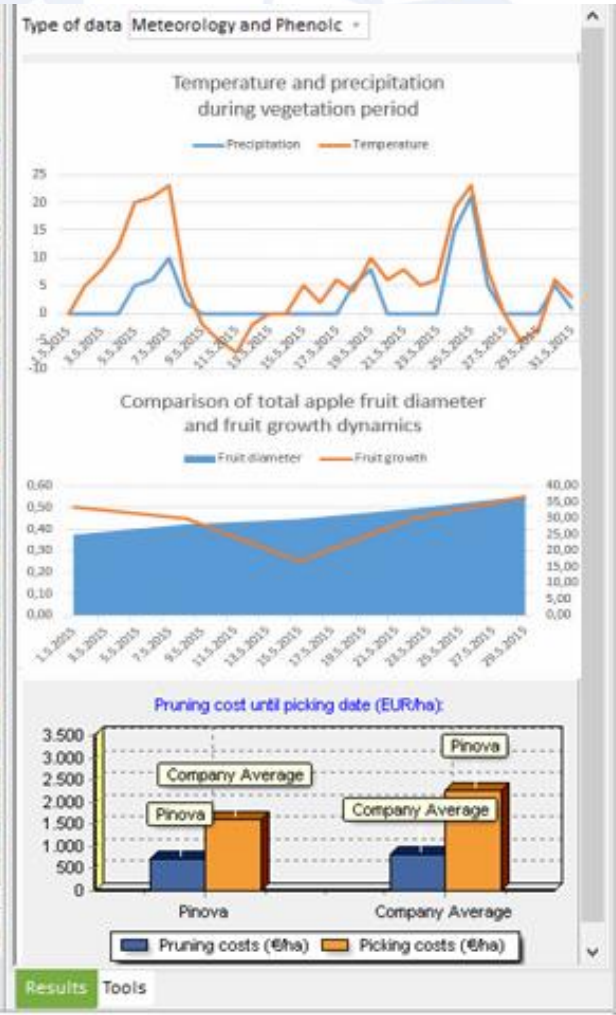
Overview of task statuses directly on the map

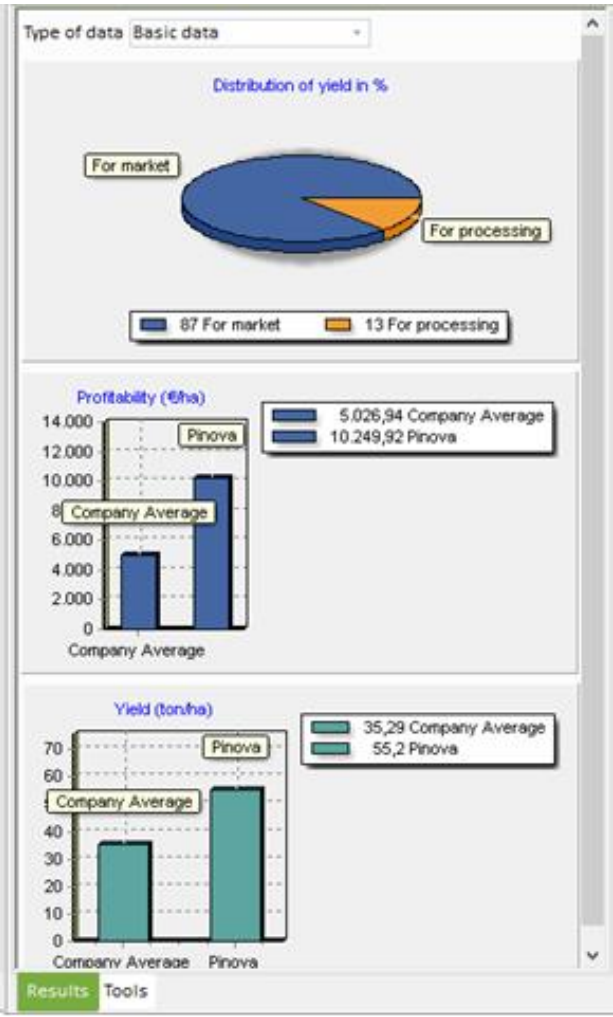


We add agroclimatology, soil analyses…



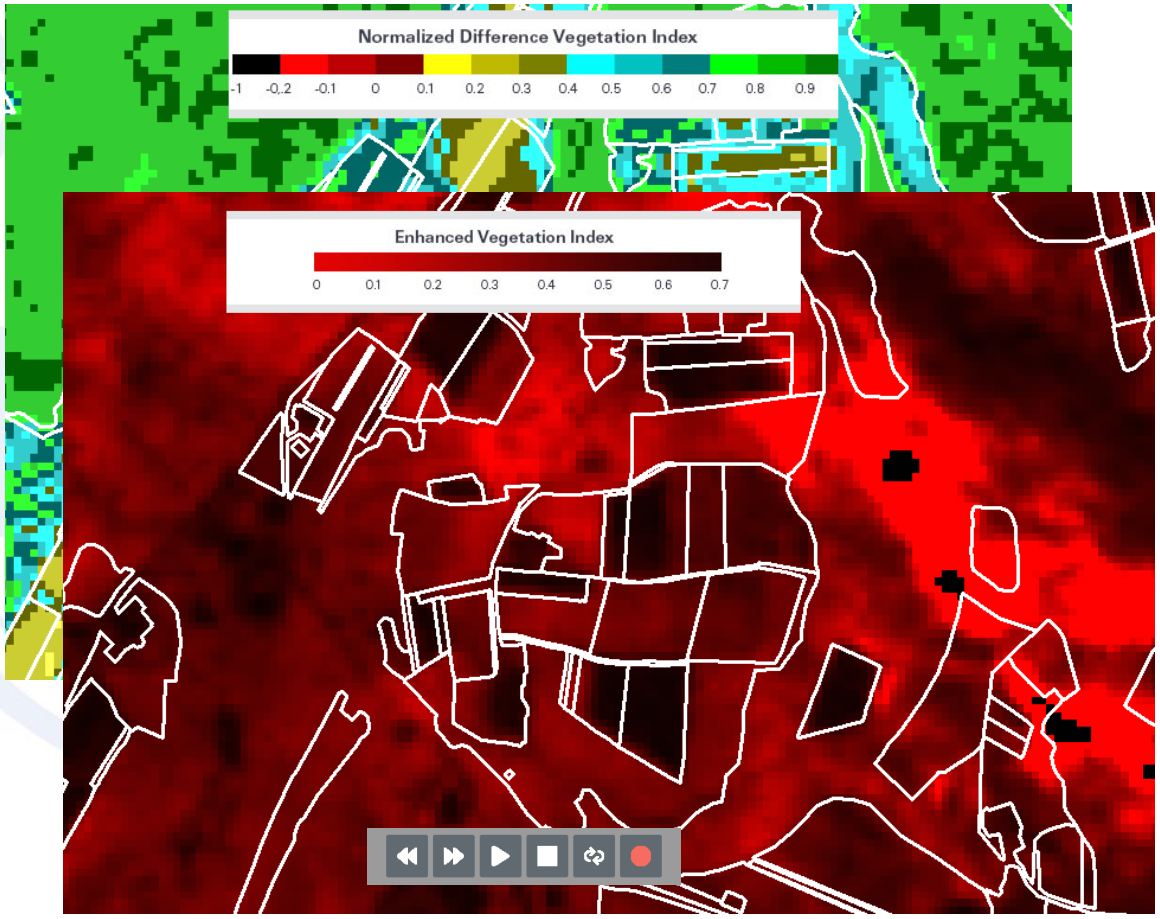
Our GIS can display all kinds of data in relation to the spatial representation





SatFeedz for your farm

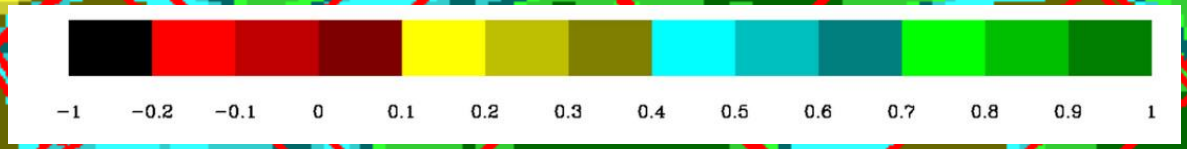
- Examine satellite data on the map
- Plant health monitoring with remote sensing data
- Agriculture monitoring based on continuous satellite imagery
- Examine vegetation indexes data
- Disaster mapping
- Examine land and water body change
- Comparing plant health before and after plant nutrition or irrigation

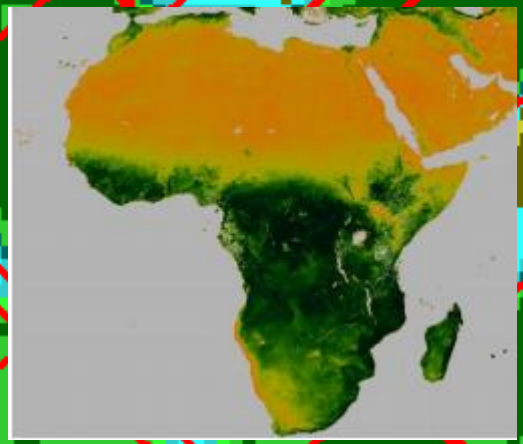


NDVI - Normalized Difference Vegetation Index

Normalized Difference Vegetation Index is a simple graphical indicator of plant photosynthetic activity, it is used to monitor vegetation conditions and therefore provide early warning on droughts or nutrient deficiency.

$$NDVI = \frac{(\mathrm{NIR} - \mathrm{RED})}{(\mathrm{NIR} + \mathrm{RED})}$$





Main users:
European institution for global crop monitoring.
Research institutions and it's time: also farmers

Data exchange with machinery

Техника

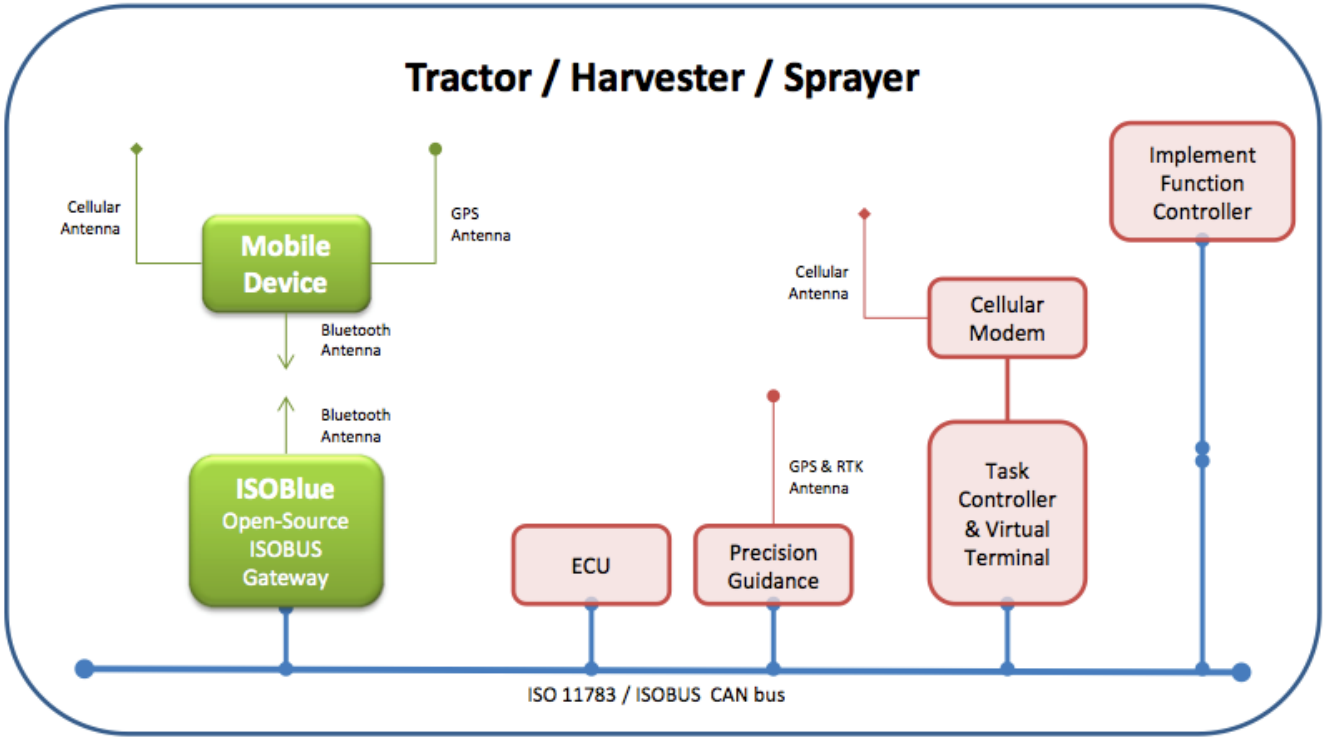
UPLOAD EXPERT GEO DATA TO ISOBUS COMPATIBLE EQ

Expert models for pesticide application

Expert models for fertilizers application

This is it …

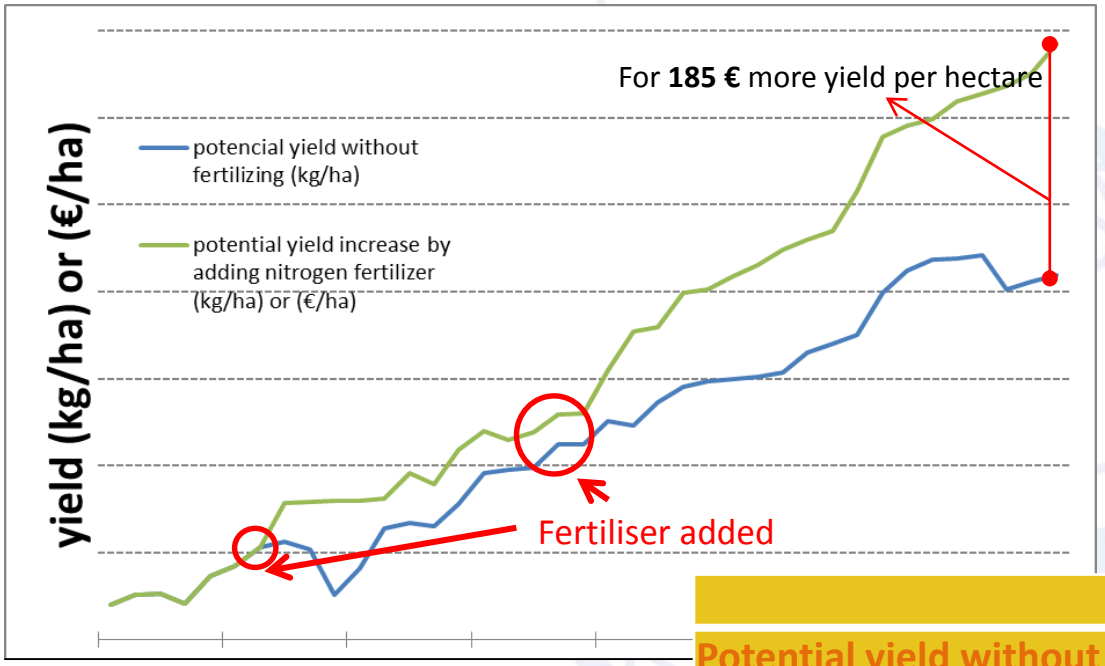
AEF Certified ISOBUS
UT TECU AUX-N TC-BAS TC-GEO TC-SC ... ...
www.aef-isobus-database.org



= Farmer Controlled Data

= Ag Vendor Controlled Data

Crop Optimizer = do your crops feel good or your vallet?



Hollistic information allows us to simulate plant growth and the uptake of water/N/P/K

But crossed with economic data it sheds new light on farmer‘s decisions

Model data

ERP data

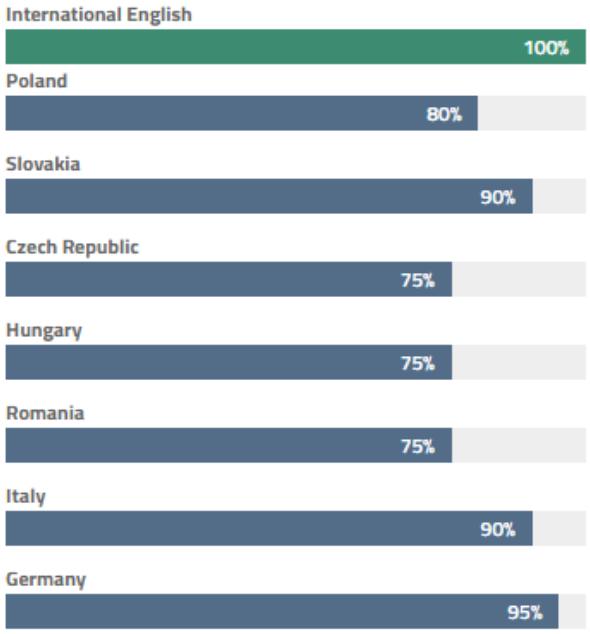
		Difference
Potential yield without fertilisation	9098 kg/ha	**+ 1325 kg/ha**
Potential yield with fertilisation	10423 kg/ha	
Revenue without fertilisation	1.273,69 €/ha	**+ 185,53 €/ha**
Revenue with fertilisation	1.459,22 €/ha	
Cost of fertilisation	207 € / ha	**- 21,47 €** (IF everything goes well)

Language and Legislative Localizations

PANTHEON™ Farming

Language and Legislative Localization

Language Localization



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Thank you

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