



# Smart agri-food Solutions



## 7 Turnkey, packaged loT solutions

Digital farming platform from farm to fork



agroNET is a smart agri-food framework comprising a set of interoperable modules designed to enable smart agriculture service providers, system integrators, mobile operators, agriculture machinery vendors and livestock service companies to rapidly enter the smart agriculture market and start offering new services.



agroNET comes pre-packaged into several configurations tailored for use in different farm types. Other packages, including implementation of platform extensions, are available on request.

**agroNET packages** have it all: sensors, data loggers, data analytics modules, reporting, web and mobile apps, chatbots, support and training.

#### agroNET is used as:

- a farm decision support tool enabling holistic farm management and just in time support to farmers
- a farm interoperability hub, enabling data acquisition from farm assets' (tractors, machinery, irrigation systems, diesel generators, weather stations, insect traps, sensors etc.) and their monitoring

#### The power of ecosystem

Turnkey IoT solutions cannot be built by individual companies; a strong ecosystem is required to rapidly design and implement efficient solutions providing value to the users. Over the years, we have built such an ecosystem, gathering partners with complementary expertise necessary to create powerful digital agriculture solutions, from hardware components to cloud platform, domain-specific data analytics and field support and maintenance.



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#### Built by ecosystem of partners

Cloud platform

Solutions are hosted on Microsoft Azure to ensure scalability, reliability and easy compliance with relevant security and data privacy rules.

Agricultural expertise

Renowned experts, university professors, agricultural consultants and farmers are our associates.

Sensors and gateways

We combine hardware components from multiple vendors to get the best cost/performance ratio.

Documentation

Instructions and manuals, marketing collateral - all at your disposal.



#### Our clients

License agroNET and provide smart agriculture services to farmers.



Service providers, system integrators and mobile operators

With agroNET, you can start providing smart agriculture services immediately, all technological components, materials and support are provided by us.



Software developers

Build your own smart agricultural services without having in-house agricultural expertise.



Agri-machinery manufacturers

Use agroNET to create connected machinery and value-added connected services. Up-sell by providing other services from the agroNET portfolio.



Livestock service companies

Use agroNET to track how your services and products are used by farmers, ensure best results for farmers and for your company.

#### The end users

- Medium to large farmers and agricultural companies
- O Distributors of agricultural machinery and chemical products
- Food supply chain stakeholders

#### Join our partner ecosystem!

Hardware vendors, data analytics providers, domain experts, service operators,...get in touch to build even more versatile smart agriculture platform.

Visit:
www.digitalfarming.eu
Contact us:
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#### agroNET functionalities

Decision support guidelines and instruction for optimal crop' growing and raising livestock provided through set of functionalities.

#### Crop production

- O Pest and disease prediction
- Insects monitoring
- O Irrigation optimization
- Frost prediction
- O Satellite based fields monitoring
- O Satellite based soil sampling and variable fertilizers maps
- O Asset and machinery tracking
- Activity book
- O Greenhouse management



#### Livestock production

- Weight estimation and behavior analysis based on video recordings
- O Early detection of health issues
- O Environmental conditions and parameters optimization
- Activity book
- O Production success analysis
- O Best practice guide
- O Economy assistant
- O Expert advice in problem solving
- O Feed mixture optimization
- O Asset and machinery tracking

#### **Storage management**

- O Grain storage management
- O Feed storage management

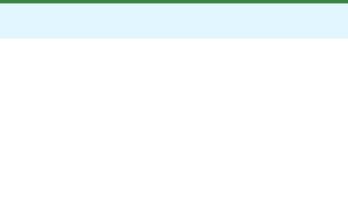




#### Preconfigured packages

#### Vineyards/orchards

For healthy apples and digital wine



#### Arable crops/vegetables

Keeping crops healthy and yields increasing



#### Greenhouse management

Hot, cold, humid,...monitor and control



#### Silo management

Grain in, elevate, grain out, top quality



#### Asset monitoring

Day and night, know where and how it's used



#### Feed storage management

Improved service, reduced CO<sub>2</sub> emissions



#### Feed mixture optimization

Ingredients and costs, mixed and optimized



#### Poultry farms

Happy chicken, happy farmers



#### Pig farms

Happy pigs, happy farmers





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#### agroNET devices

agroNET collects data through devices equipped with a set of sensors capturing information about environmental and soil conditions, insects, plants, machines, etc. We provide a wide range of sensors and data loggers from different vendors.

#### agroNET uses:

- Weather stations for monitoring environmental conditions (air temperature and humidity, wind speed and direction, rain amount, global and active solar radiation, barometric pressure)
- Leaf wetness sensors
- Soil moisture, temperature and salinity sensors for monitoring soil conditions
- Smart traps for monitoring insects' activities
- Devices for monitoring environmental conditions in livestock production objects
- Video and thermal cameras, microphones to monitor animal behavior and vocalization
- Temperature sondes for monitoring storage conditions
- RFID tags for assets tracking (box pallets, machinery, irrigation systems, diesel generators...)





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### agroNET benefits contributes to UN SDG2, SDG13 and SDG15

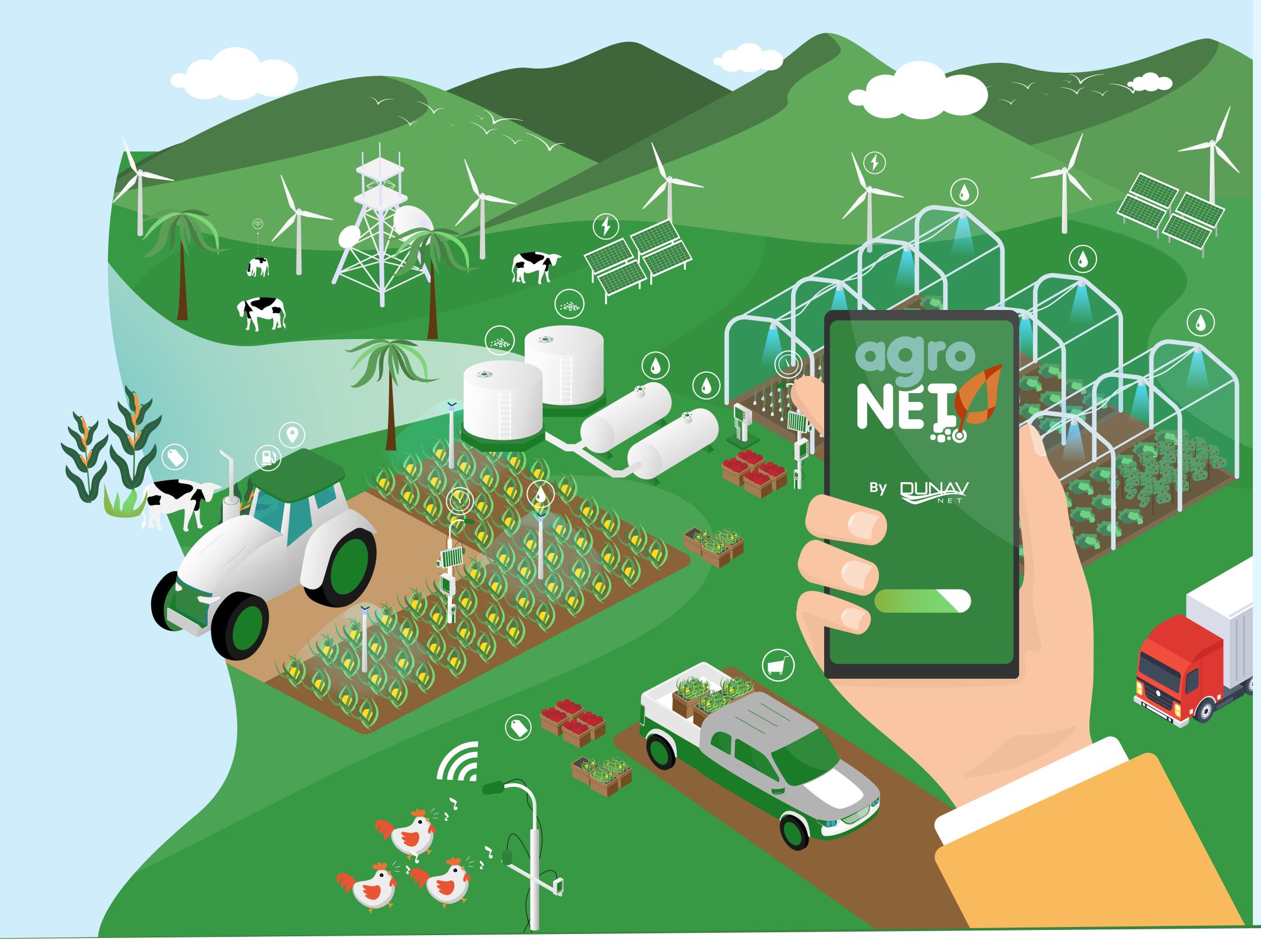


- Optimized resource and inputs utilization
- Increased yields and crops quality
- Reduced pesticide usage
- Optimized animal production
- Optimized water usage
- Reduced carbon emissions, water savings and degradation of soil as natural resource



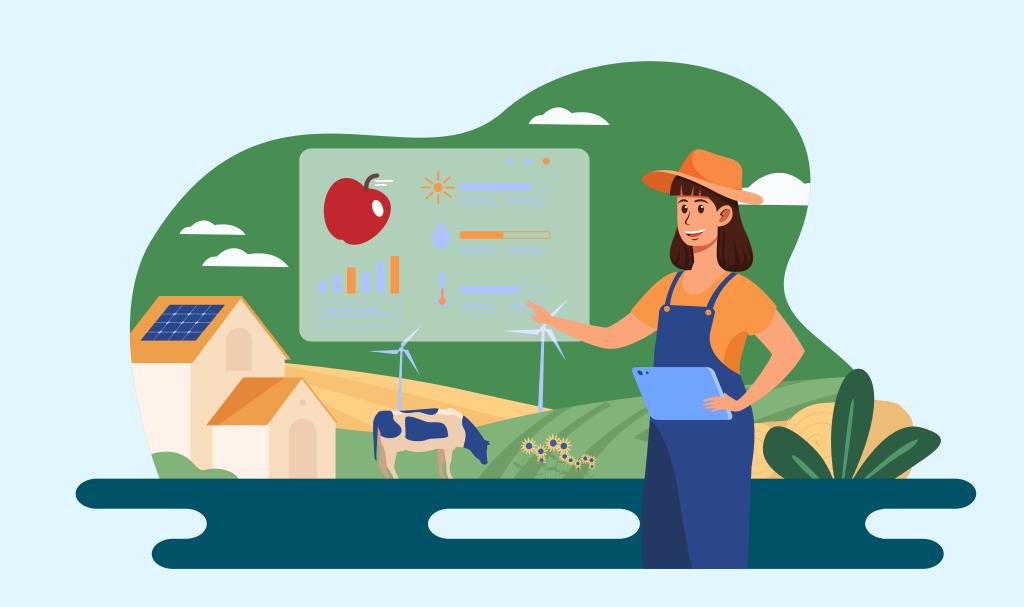






#### Transparent food supply chain

**agroNET** is being extended to provide functionalities required by food processing, food safety and supply chain stakeholders, thus covering the complete farm to fork path.



#### o agroNE

Cloud based acting as an interoperability hub for all farm operations providing decision support tools.



#### fleetNET

Manages all fleet and asset information, optimising food distribution, transportation and logistics.



#### • Product passport

Enables tracking complete product life cycle, improving food safety and quality and provides traceability and supply chain management.



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