



# Digital Agriculture for Every Farm

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• Vitaly •

# Company Introduction



AgrioCom is the first company using LoRa and NB-IoT technology for smart agriculture and producing the next-generation IoT monitoring and controlling devices.

At present, the company's products mainly related to agricultural data monitoring, irrigation automation control, greenhouse automation and web cloud. AgrioCom motto is, "Digital Agriculture For Every Farm!"

Created by Vitaly Ignatovich, known Austrian IoT expert, and his team, with nearly 20 years of experience in the Agricultural Internet of Things (IoT) have overcome the toughest technical issues and developed new generation of agricultural IoT devices.

AgrioCom was founded in Jiangsu and Shenzhen, China and has a development team in Austria, with products sold in more than 20 countries and regions around the world, including China, Europe, the United States, Russia and Israel. Today, AgrioCom IoT monitoring devices use LoRa to send data to the Web cloud enabling seamless communication across all devices. LoRa devices are more economical and stable than GPRS or 4G modules, significantly reduce installation and maintenance costs.



# Founders



## Vitaly Ignatovich

Founder and General Manager of the Company

2 master degrees in computer software and hardware, more than 20 years of international experience in IoT for agriculture.

3 invention patents.

Member of Jiangsu 100 Foreign Expert program

Expert of Beijing IoT Association

In 2004, led the team in Austria to develop the world's first wireless agricultural weather station.

In 2011, founded Caipos Ltd. in Austria and developed the first low-cost wireless agricultural sensor network.

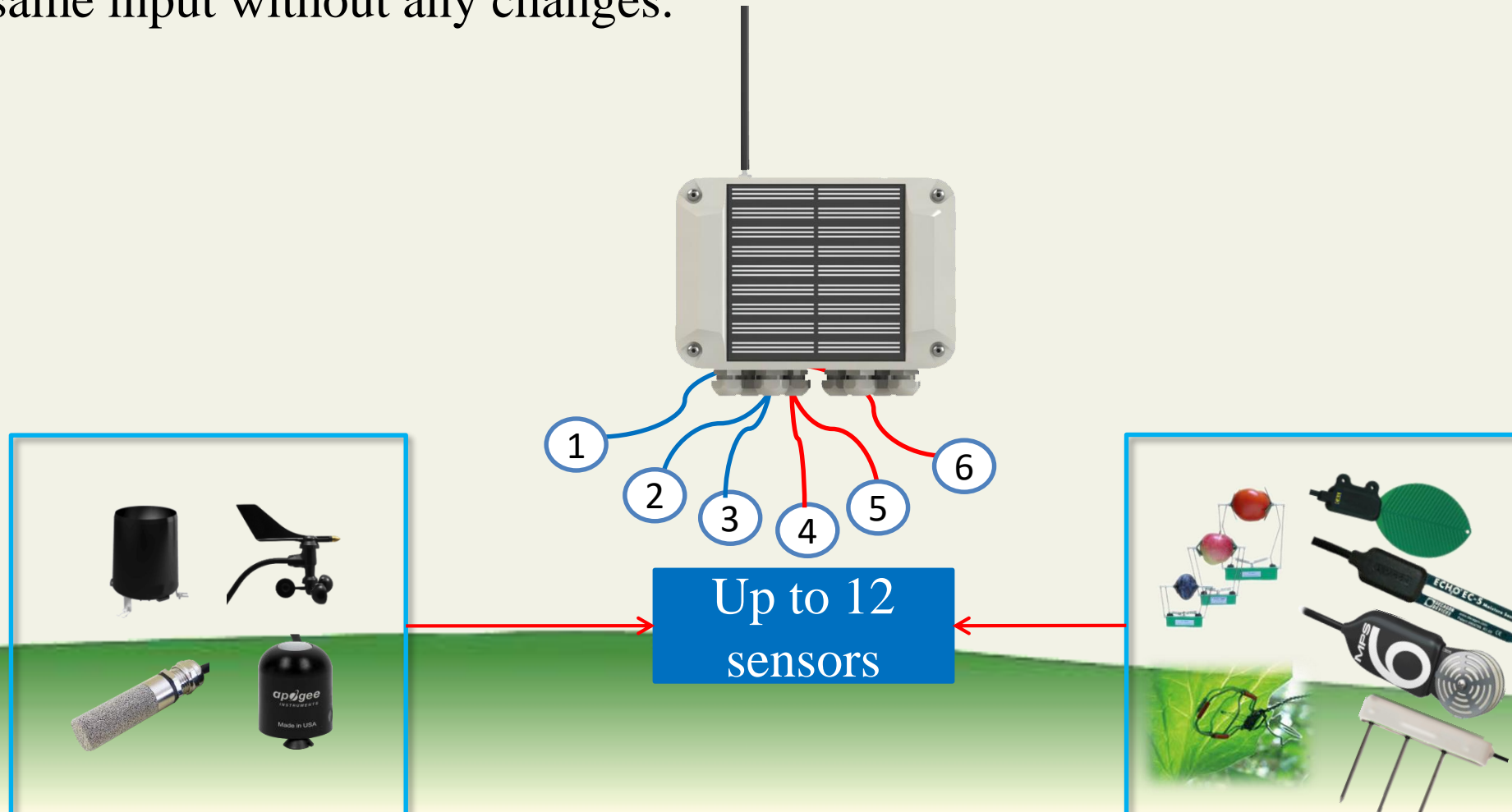
In 2017, set up AgrioCom IoT ltd. in China to develop the first LoRa agricultural network system for ordinary farmers.



# AgrioSens: Wireless Sensor Hub



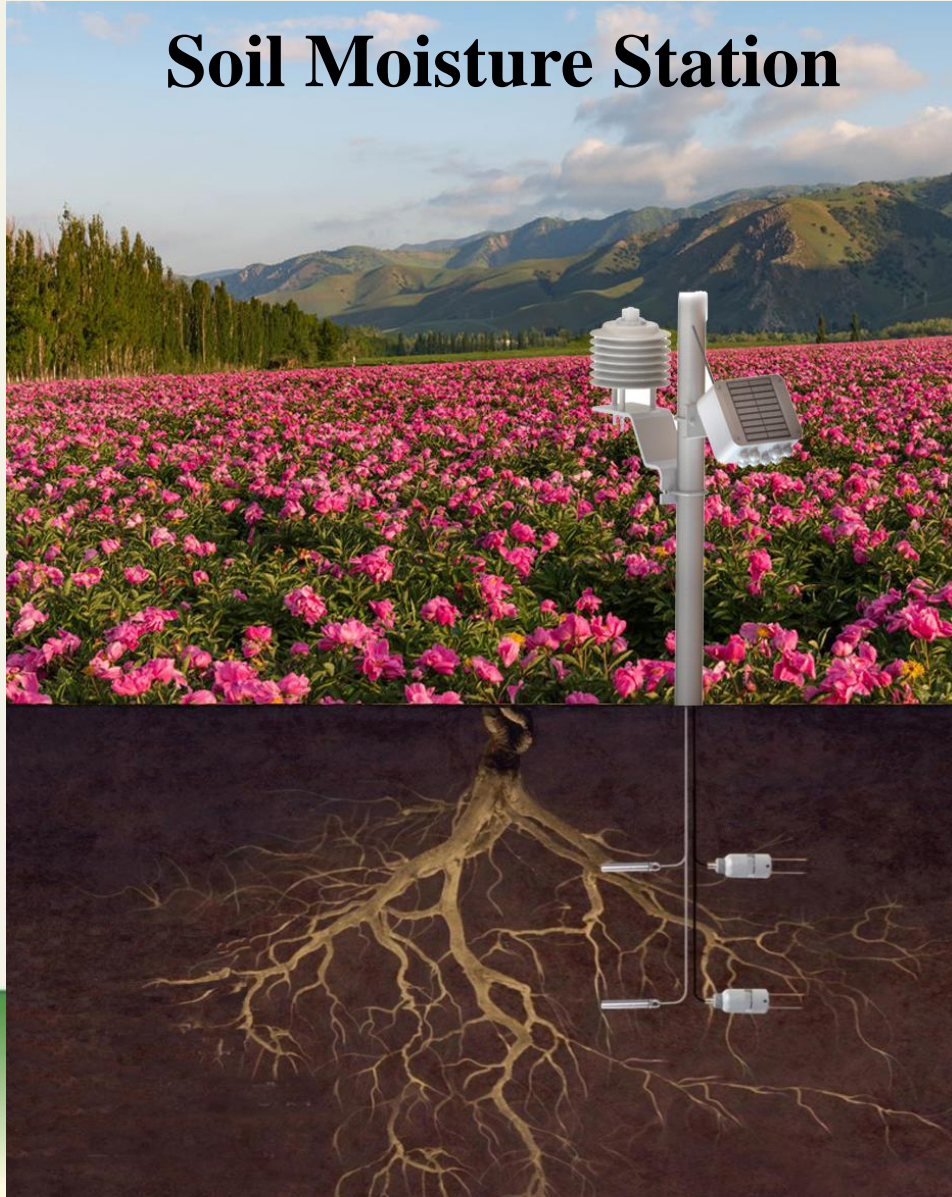
Climate, soil and plant monitoring device for agriculture, sending data directly to the web platform. Any kind of sensors can be connected to the same input without any changes.



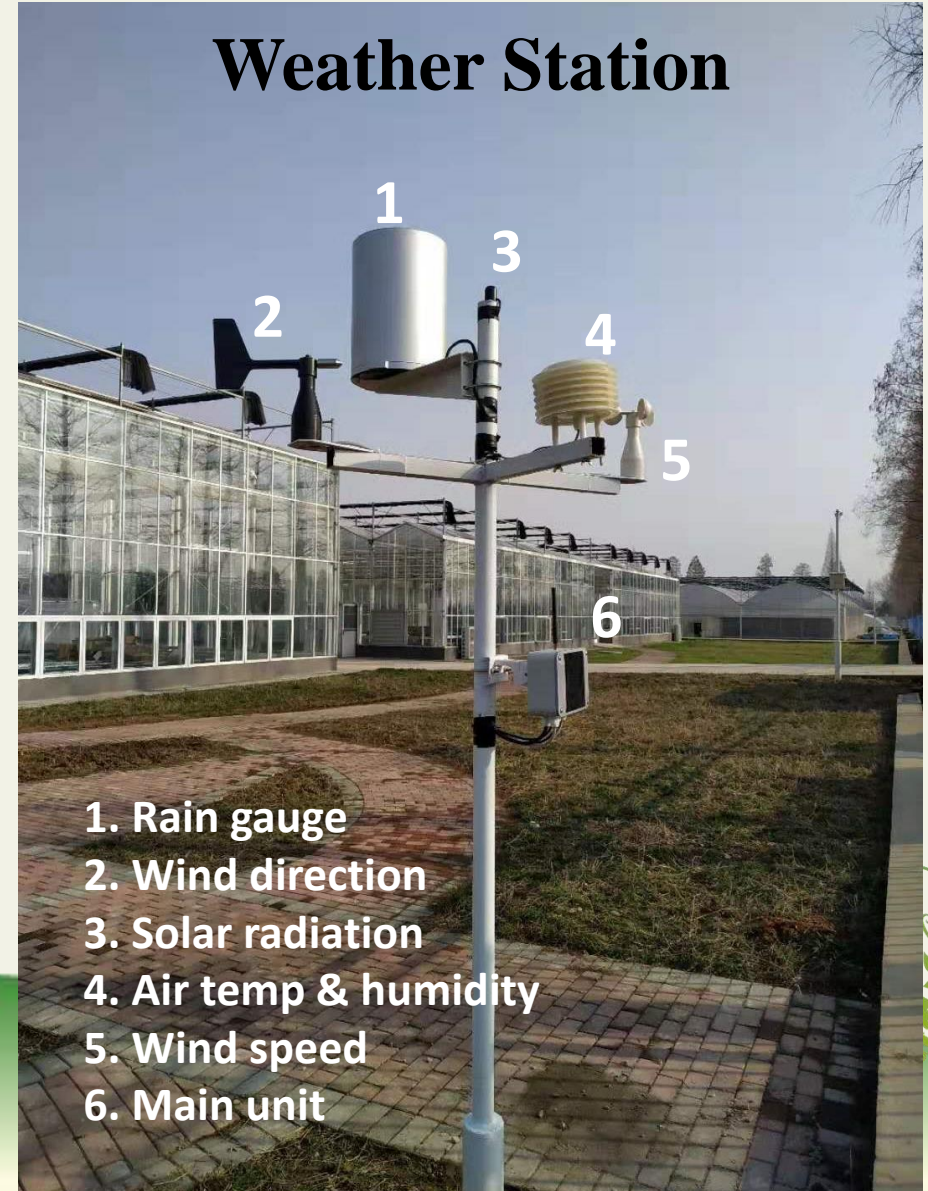




## Soil Moisture Station



## Weather Station



1. Rain gauge
2. Wind direction
3. Solar radiation
4. Air temp & humidity
5. Wind speed
6. Main unit

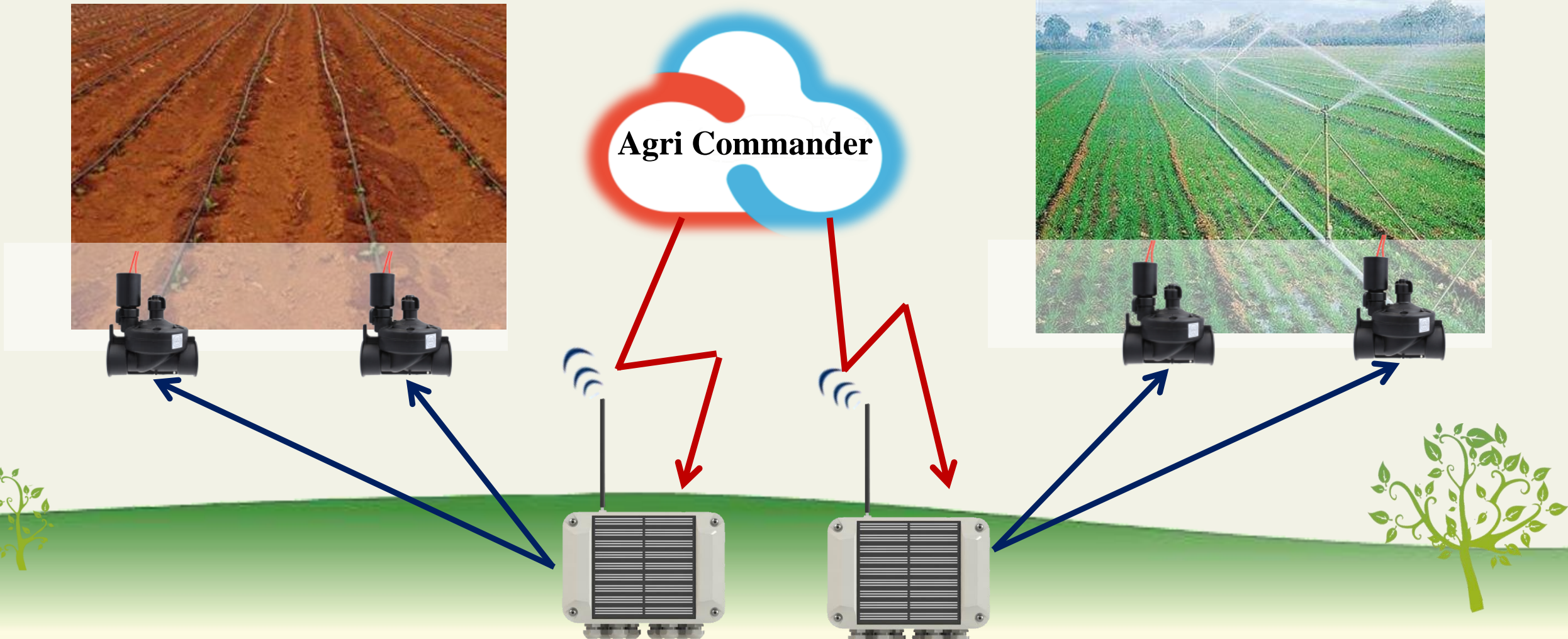




# AgrioValve: Irrigation Valve



One device can control 2 Valves, low-cost, simple irrigation controller for small and middle size farm and greenhouse.



# AgrioValve: Irrigation Valve

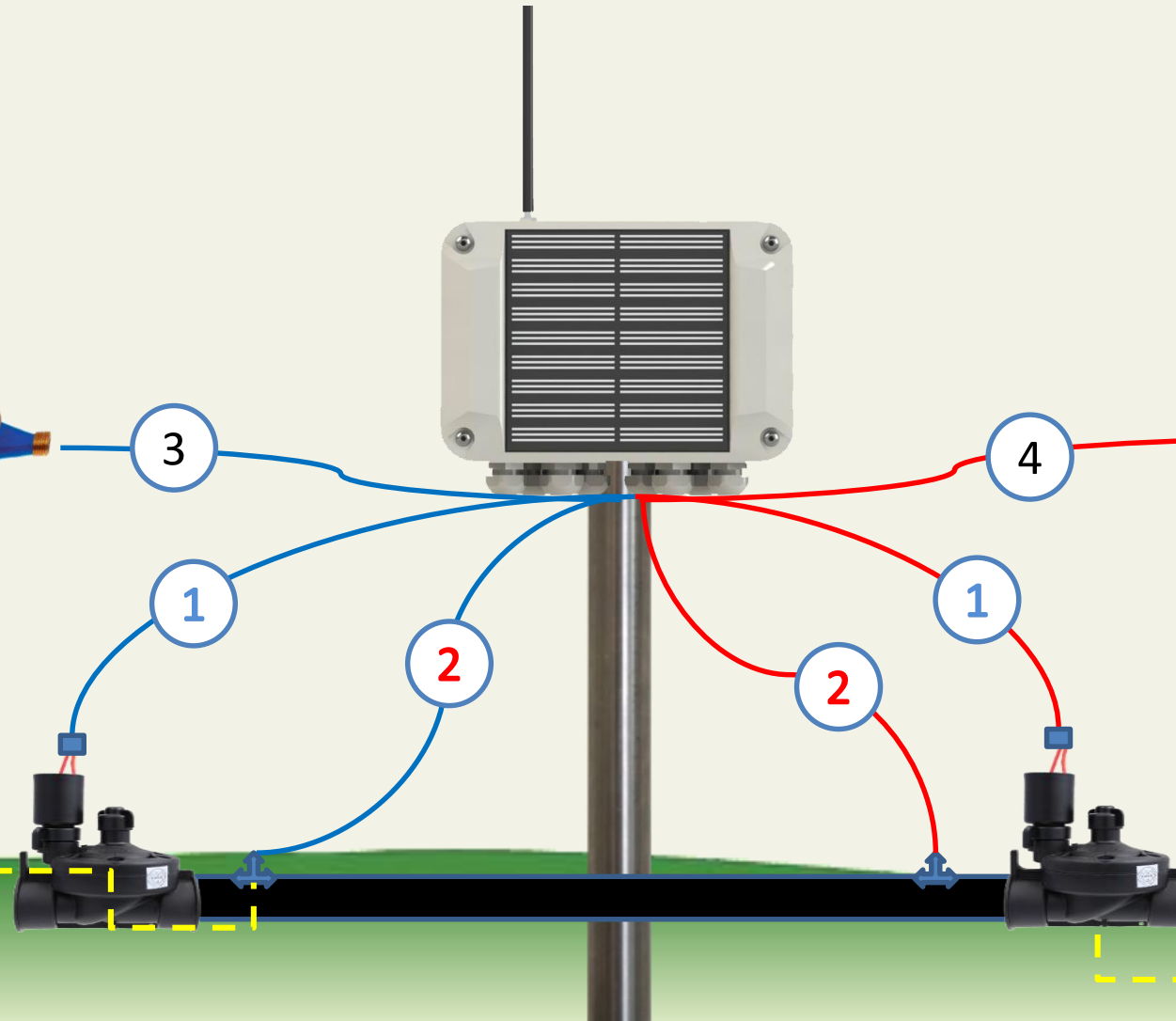


Water meter

2 any kind of sensors

Water pressure sensor

Irrigation valve





# AgrioMac: Pump station



Internet Controlled Pump and Fertigation Station, Intelligent irrigation station allows connecting all devices remotely from Web and app.

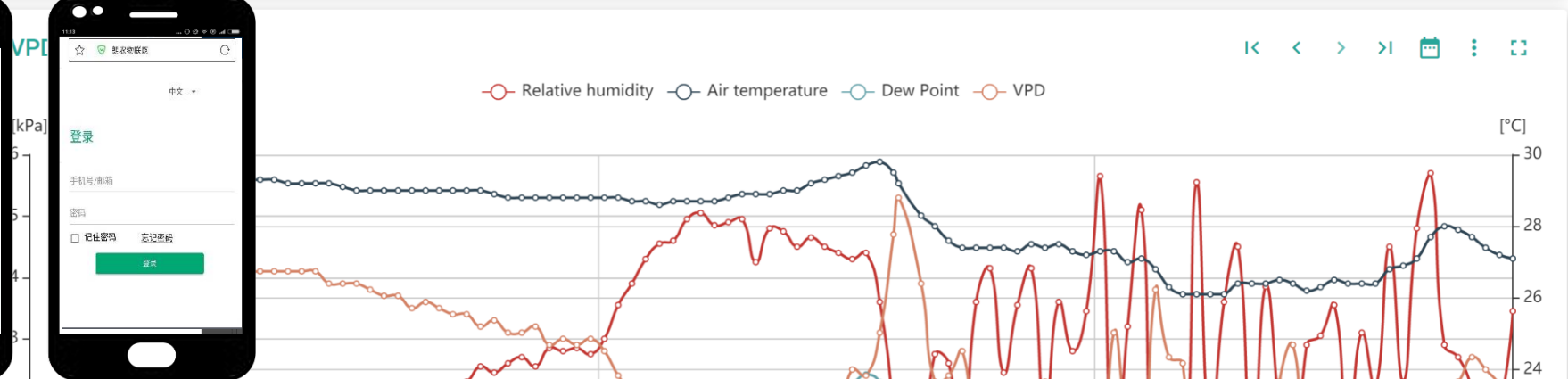
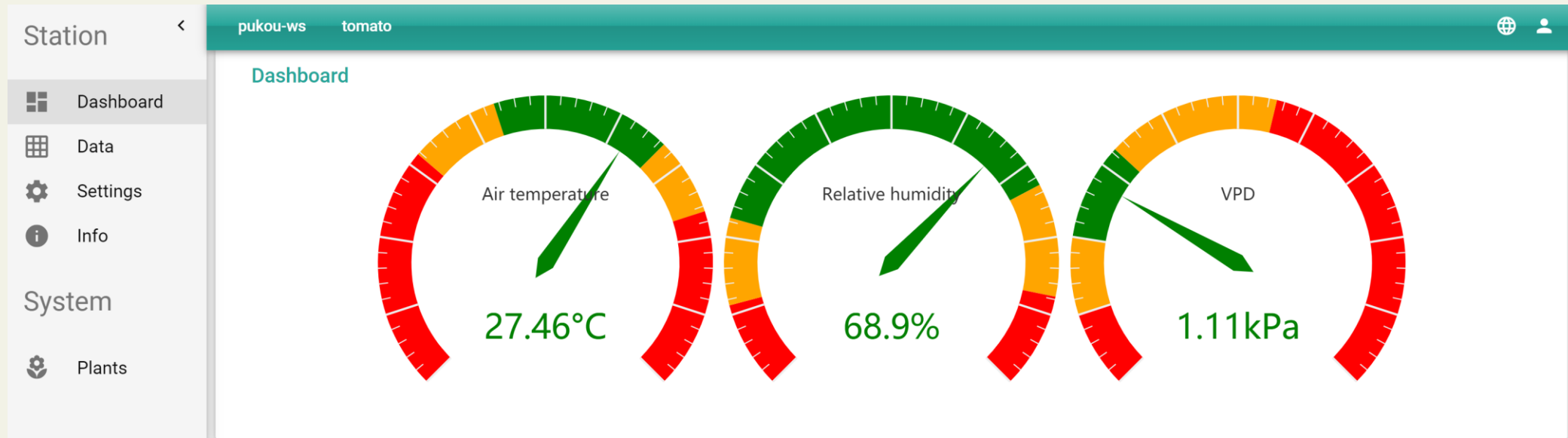




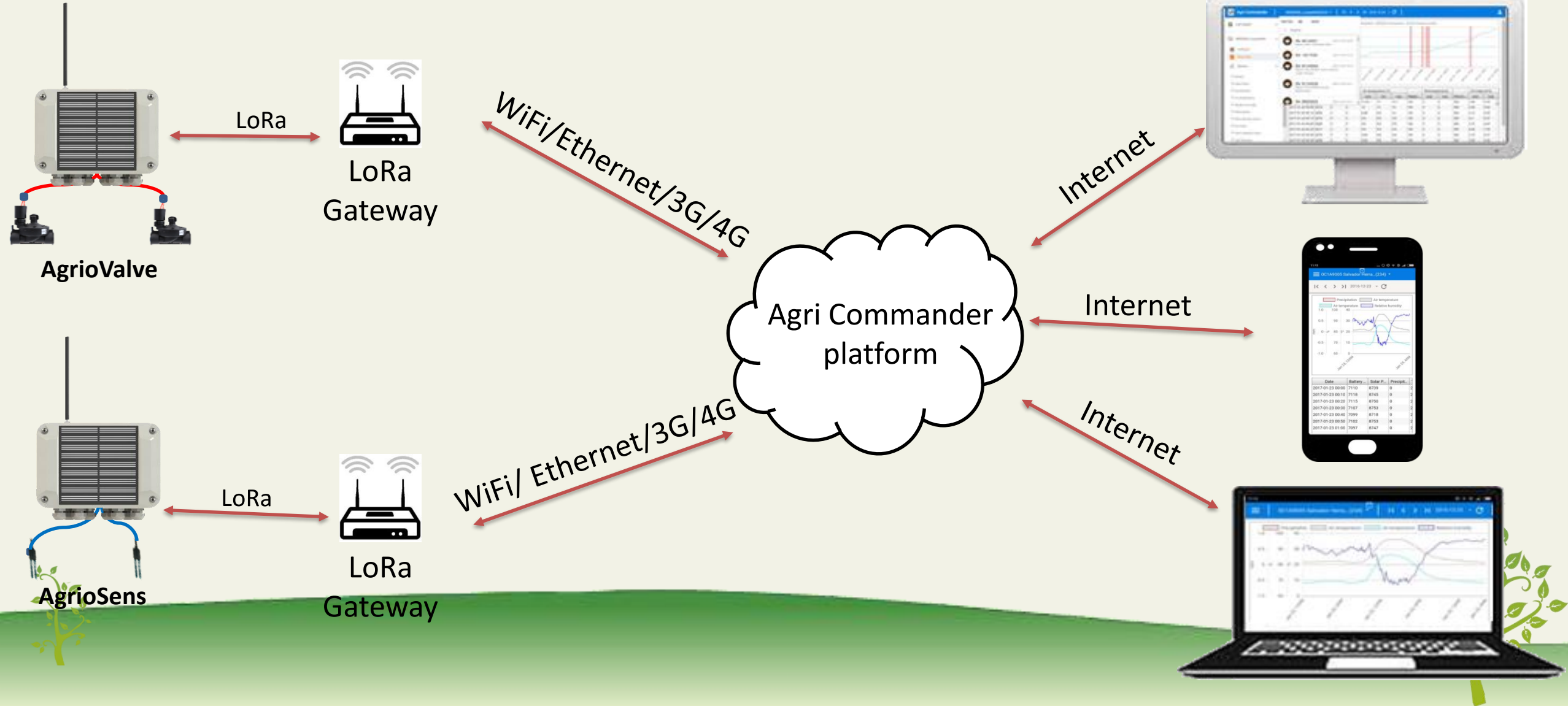
# Web Application



Control center for all devices and functions. Customer can quickly access sensors data, analysis results, irrigation control and other modules



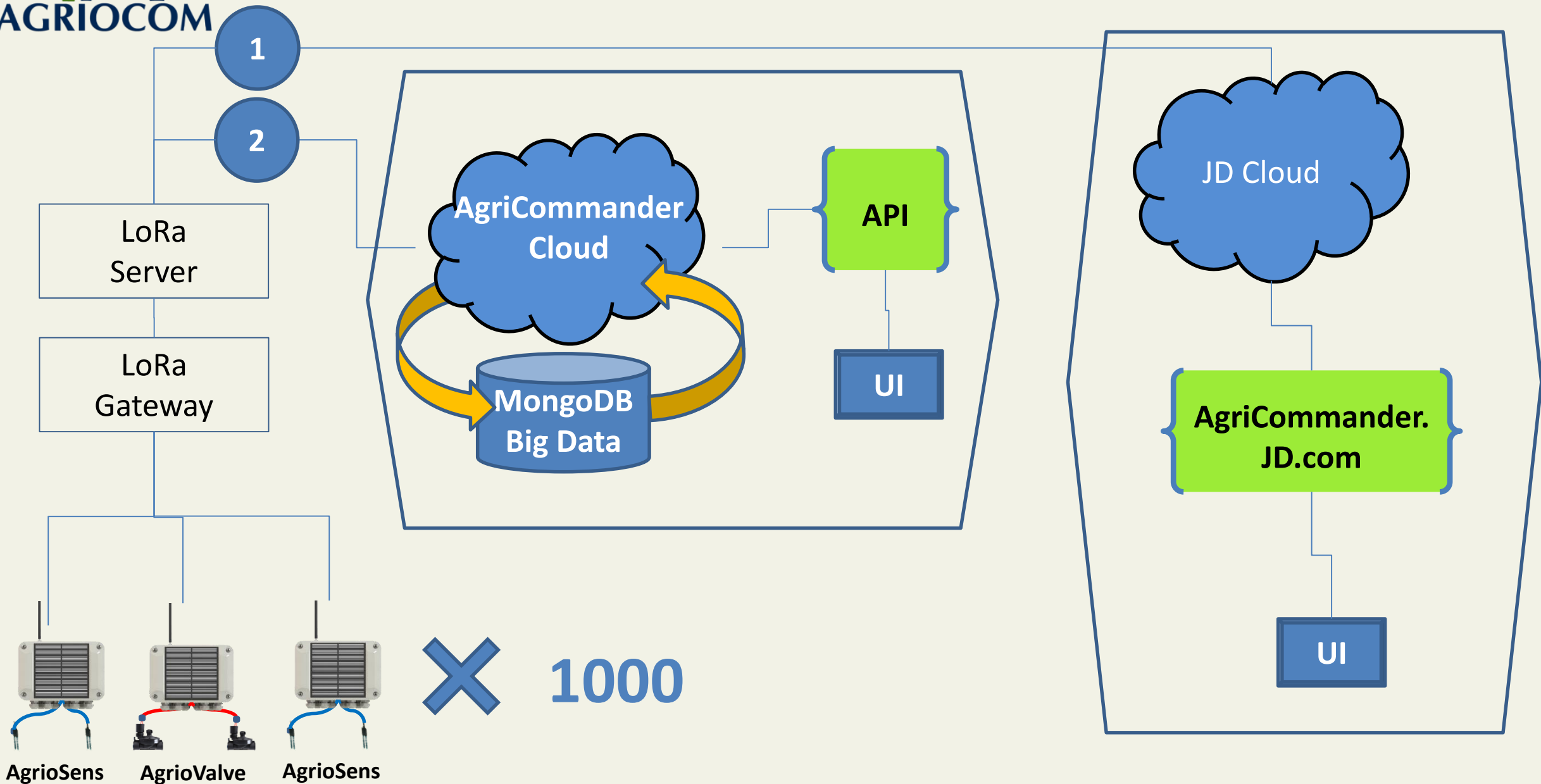
# LoRa Network Principle



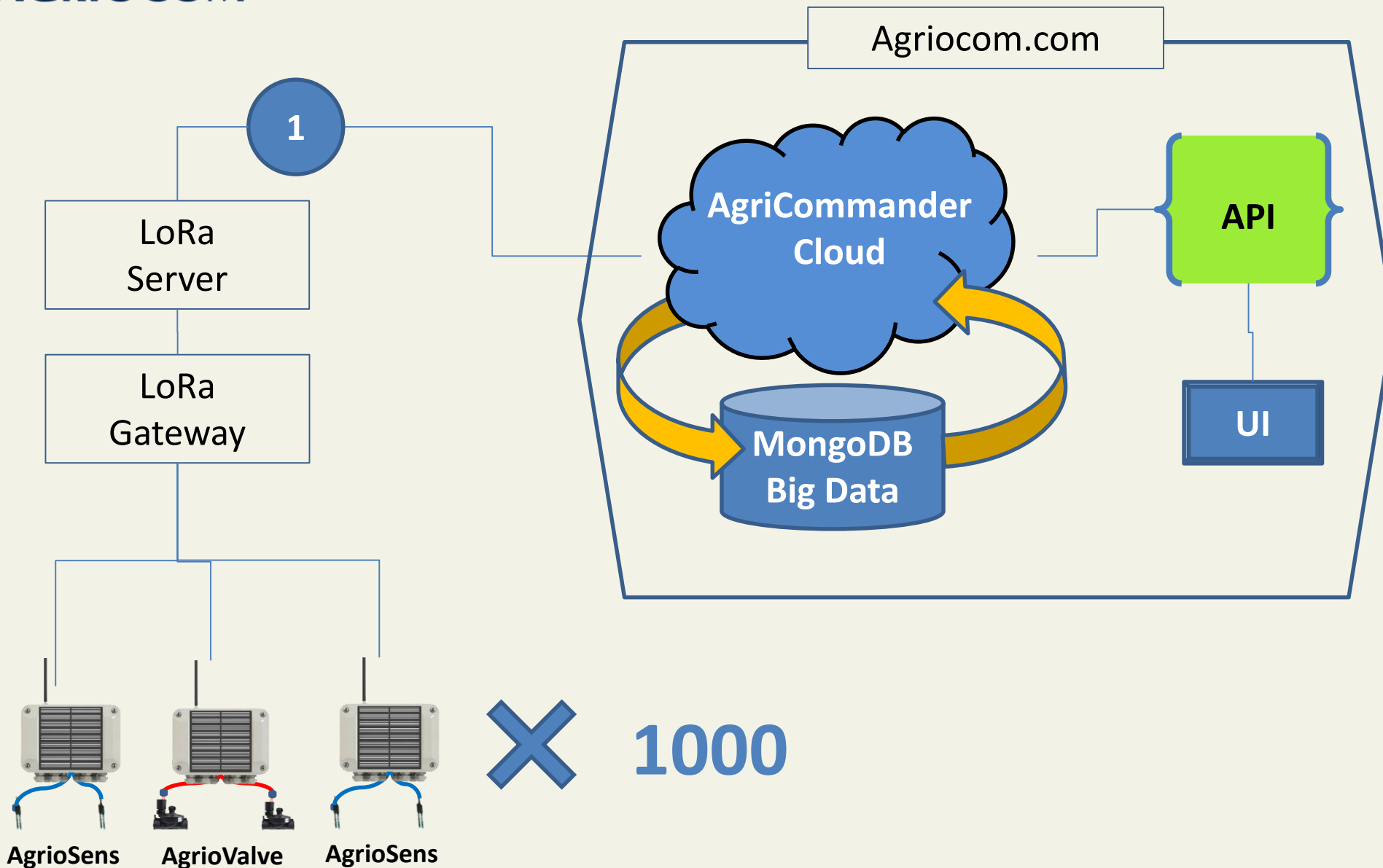




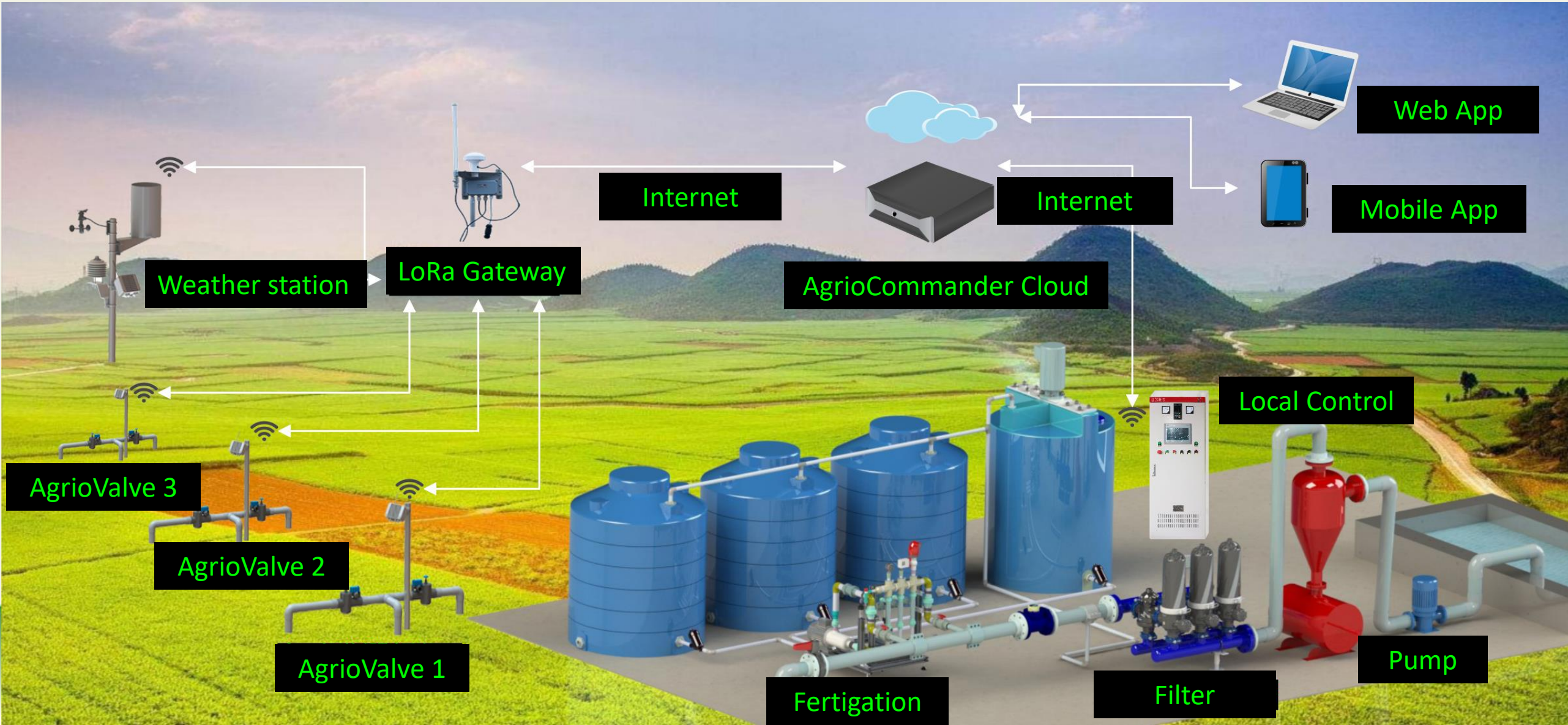
# AgriCommander Overview



# AgriCommander Overview











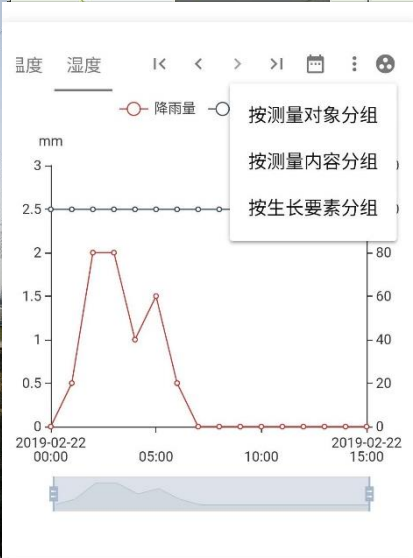


## 1. Monitor all environmental factors of crops

Three factors: climate, soil and plant growing

## 2. Create growth model and build plant profile

Through continuous monitoring of all factors, create most optimal conditions and guide farmers



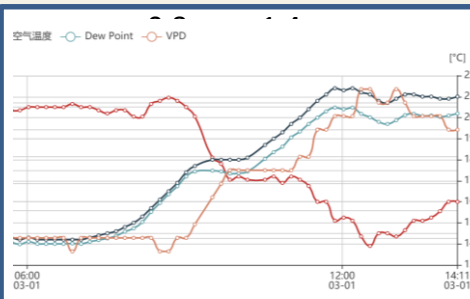
# One Device – 6 Functions



Keep best temperature to make your plants happy



Control humidity to prevent plant diseases and pests



Optimal VPD value improves all aspects of plants growth



Photosynthetically Active Radiation optimal light



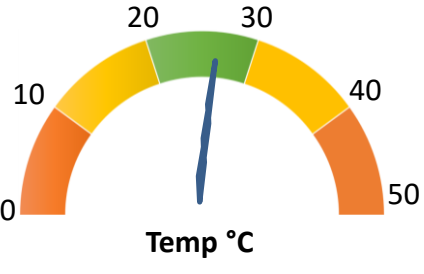
Measure Soil Moisture & EC to save water



Measure & control CO2 to stimulate growth



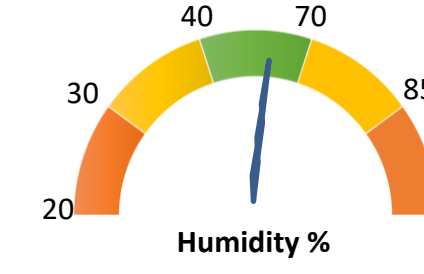
# One Device – 6 Functions



Temp °C

Keep best temperature to make your plants happy

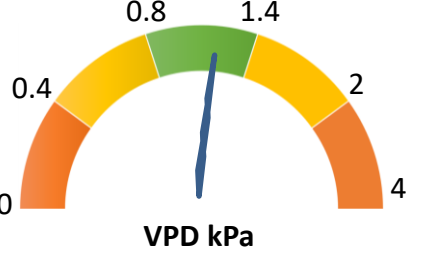
Temperature Range (°C)	Color
0 - 10	Red
10 - 20	Yellow
20 - 30	Green
30 - 40	Yellow
40 - 50	Red



Humidity %

Control humidity to prevent plant diseases and pests

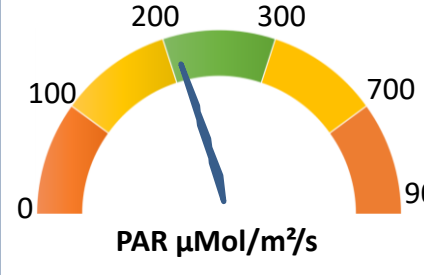
Humidity Range (%)	Color
20 - 30	Red
30 - 40	Yellow
40 - 70	Green
70 - 85	Yellow
85 - 99	Red



VPD kPa

Optimal VPD value improves all aspects of plants growth

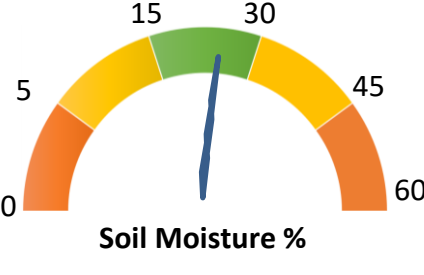
VPD Range (kPa)	Color
0 - 0.4	Red
0.4 - 0.8	Yellow
0.8 - 1.4	Green
1.4 - 2	Yellow
2 - 4	Red



PAR  $\mu\text{Mol}/\text{m}^2/\text{s}$

Photosynthetically Active Radiation optimal light

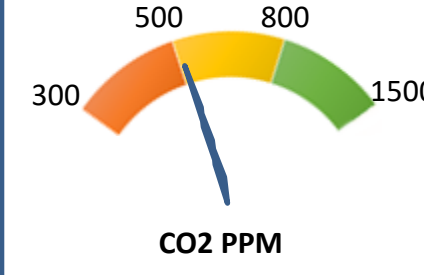
PAR Range ( $\mu\text{Mol}/\text{m}^2/\text{s}$ )	Color
0 - 100	Red
100 - 200	Yellow
200 - 300	Green
300 - 700	Yellow
700 - 900	Red



Soil Moisture %

Measure Soil Moisture & EC to save water

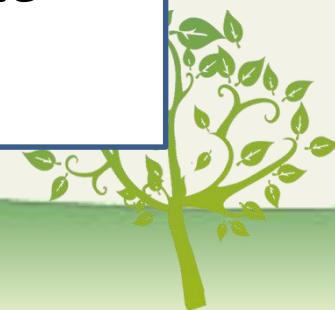
Soil Moisture Range (%)	Color
0 - 5	Red
5 - 15	Yellow
15 - 30	Green
30 - 45	Yellow
45 - 60	Red



CO2 PPM

Measure & control CO2 to stimulate growth

CO2 Range (PPM)	Color
300 - 500	Red
500 - 800	Yellow
800 - 1500	Green







Fruit grows



Trunk size



Leaf temperature



Stem diameter

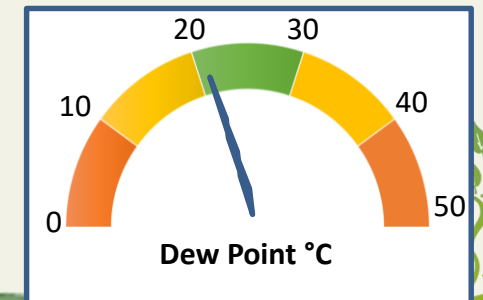
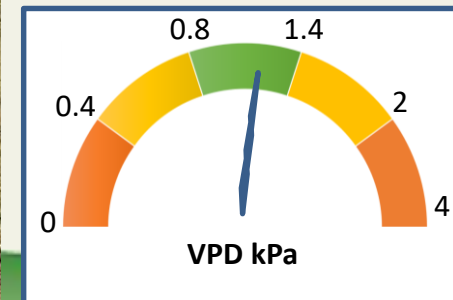
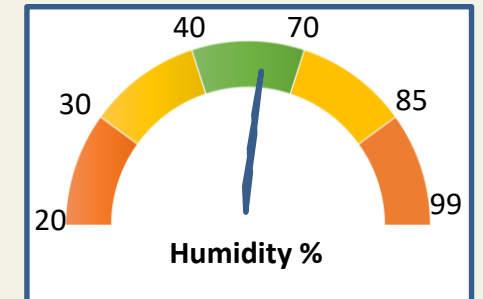
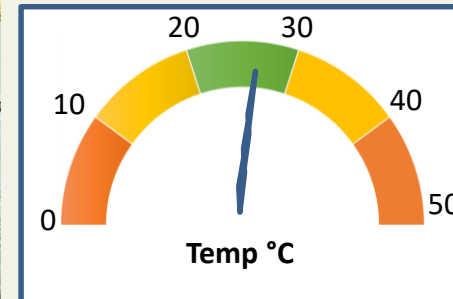




Increase yield

Save labor

Save time





# Success Cases



Vitaly International projects  
in Europe, Turkey, Russia,  
Ukraine





# Success Cases



Chinese projects in Jiangsu province, Anhui province, Shandong province, Shaanxi province







# Thank You!

— — Vitaly

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