GRAS®

Smart farming solutions

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WHO ARE WE?

- Predistic is a software company based in Sofia, Bulgaria. Our main operations include software development and maintenance services
- Predistic was founded mid 2011 by a team of software engineers with over 10 years of experience in the field of software development for corporate customers
- Our small and friendly team with passion for electronics and software has worked together for almost 20 years now. Some of us have been here right from the beginning, and others have worked together even before Predistic was established.
- Our people are used to working in multi-national teams, according to quality standards and aligning to specific customer processes.
- Currently Predistic team delivers software services in logistic and automotive industry to two major customers:
  - ✓ Continental Automotive GmbH
  - ✓ Siemens Logistics GmbH
- We are flexible, open-minded and looking for new technological challenges!

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HOW DID WE START GRAS?

- After many years of working for big international clients, we decided to start creating our own products
- Searching for fresh ideas for future development, we found inspiration in our own team
- This idea was born in 2020, during the first covid lockdown, when people were not allowed to go out and water their gardens or crops
- We used our experience in embedded software and IoT to develop a Smart Farming solution with focus on extreme flexibility, named GRAS
- Our aim is to use advanced IoT technologies to really make people's lives easier by giving them remote control over their farms, 24/7

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WHAT IS GRAS?

- GRAS by Predistic is a Smart Farming system that applies modern Information Technologies like IoT, into farming sector
- GRAS is a clever solution for crop monitoring and management in all areas under cultivation, agricultural buildings, open fields, and warehouses
- Its aim is to help optimize processes in greenhouses and sown fields by saving water, energy and manual labor
- GRAS helps to cut losses and reduce risks associated with rural production
- GRAS allows farmers to monitor field and greenhouse conditions remotely using their laptop, PC or mobile phone, make decisions and take actions remotely if needed
- GRAS can control farming infrastructure manually or automatically, for example start or stop irrigation systems

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WHAT CAN GRAS DO FOR FARMERS?

- Collect **environmental measurements** utilizing multiple types of sensors, including:

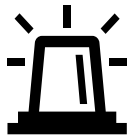
Air/Soil Temperature

Light Level

Air/Soil Humidity

Soil PH

Air Pressure/CO2/CH4

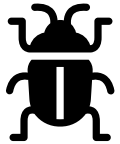


Smoke/Presence Detector

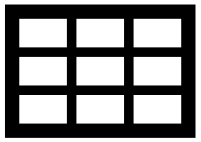
- Forward sensor readings over **wireless or Internet**
- **Process** gathered data
- Provide remote **24/7 monitoring** of collected data
- Send **warnings** to users in case of specific or critical events
- Allow users to **take control over on-site executing devices** (actuators)
- Take **automatic** intelligent data-based actions via on-site actuators

Start/Stop Irrigation

Start/Stop Fertilization Systems



Start/Stop Pest Control Systems



Climate Management

Light Management

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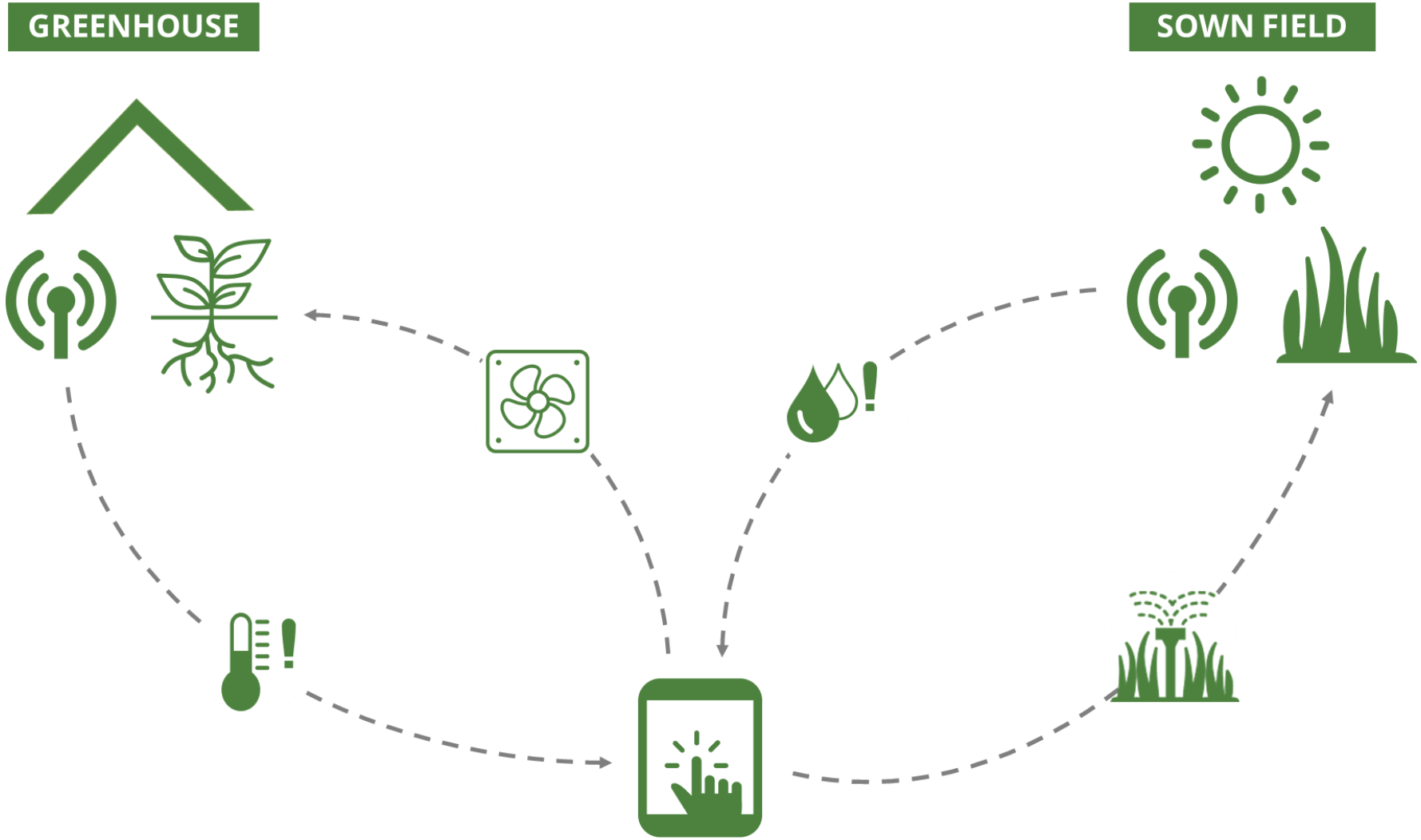
HOW DOES IT WORK



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HOW TO USE GRAS

1. Our automated sensors measure and detect changes in environment parameters 24/7
2. Our system transmits automatically data over WiFi or GPRS in real time
3. Farmers can monitor measurements in real-time, receive notifications & warnings on smartphone, tablet or PC
4. Farmers can control their systems manually or automatically, for example start or stop irrigation systems
5. Farmers save time, efforts and resources, and enjoy better harvest!

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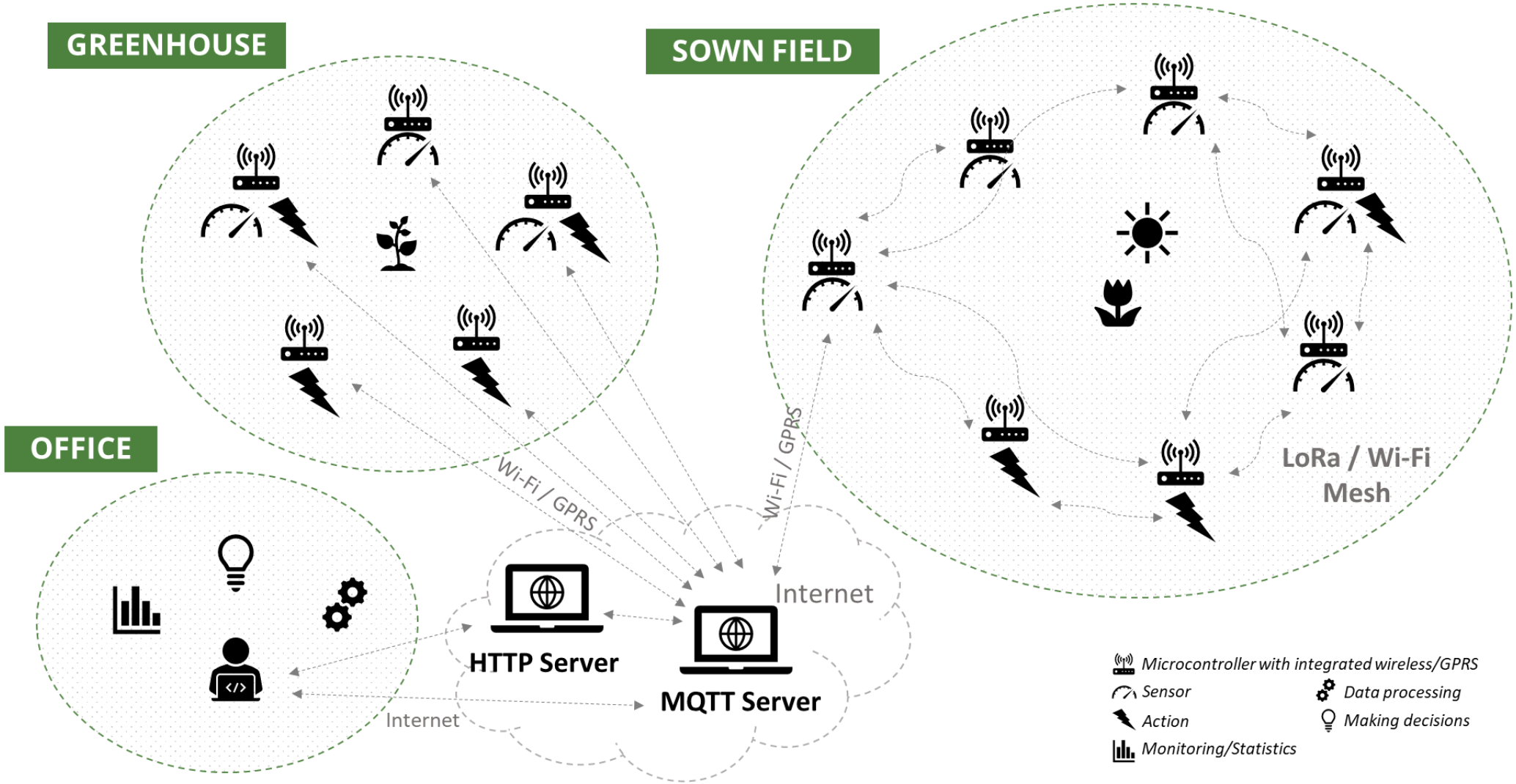
USE CASE



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OUR ADVANTAGES

MORE THAN JUST A METEO STATION

- In addition to standard meteo stations' functionality, GRAS also offers control over farming systems using actuators
- GRAS can work in self-sustained mode: i.e., without human interaction or control

CUSTOM SOLUTION

- Customization for each farm: We can configure networks of Microcontrollers and Sensors based on customer requirements
- GRAS can be easily customized to support almost all available sensors on the market and can be configured to read sensor data as requested by clients
- Our modules are not fixed: Farmers can order only those sensors and components that they need

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OUR ADVANTAGES

EXTREMELY FLEXIBLE

- The system can be configured with any number of sensors and actuators, and they can be changed anytime
- We can modify or update the functionality of the attached IoT devices on the fly, with no system downtime and with minimal efforts
- Multiple communication channels: WiFi, GPRS, WiFi Mesh, LoRa Mesh or NBIoT
- GRAS can work in standalone mode, in mesh-mode, in the cloud, or using arbitrary combination

NO EXPENSIVE HARDWARE

- Farmers can use their own computer, tablet or smartphone to monitor and control sensors and systems
- Our software does not need to be installed on powerful computers
- Clients can select a cloud service, or host the solution on a personal budget device

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WE ARE LOOKING FOR PARTNERS!

- Hardware vendors who can allow us extend the functionality of our system
- Local partners in Bulgaria and Czech Republic who can help promote our system on the local and European markets
- System integrators looking for new partnerships

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QUESTIONS

We will be happy to answer your questions!

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