Gaiasense Smart Farming System

Name of the Organisations Involved

- NEUROPUBLIC, Greece
- GAIA EPICHEIREIN, Greece

Challenges Identified

Until today farmers decided based on experience and perhaps the scientific knowledge of their local agronomist. But many times, to understand what is happening in the field they have to ask specialized scientists who are often not available. They struggle that they are not making the best decisions for their crop, and they see that they are losing in yield and quality of production.

As for agricultural consultants they rely almost exclusively on field observations. The only "tool" is their eyes, while in practice there is data that they do not have access to or cannot easily utilize. And researchers are not able to put their research results into practice.

For the first time in Europe, not only large-scale farmers but also small-holder farmers can have access to the privileges and capabilities of smart farming by using Gaiasense. It can be utilized by farmers, agriculturists, researchers, industries and analysis laboratories.

The Gaiasense system is a Greek innovation that marries IT technologies with agronomic science in a holistic way. In the field of intelligent agriculture, Gaiasense is pioneering at the European level. It enhances and optimizes the decision-making process and precision applications in agricultural crops, however small or large in size.

Goals and Solution

The Gaiasense smart farming system is an innovative tool for developing digital advisory for agriculture.

It is a Greek smart farming system that continuously records and analyses data and measurements from fields and offers all those technological tools that will lead to significant economic and environmental benefit.

It provides with scientific knowledge and reliable information to deal with the dangers and problems of production in the best and most reliable way. It provides advice for thousands of farmers in Greece and abroad and expands at an impressive rate. A farmer using the Gaiasense system enjoys one of the most advanced smart farming services at a European level, paying only an annual subscription corresponding to the length of its use.

Gaiasense collects data from the field, the satellite, the scientist, and the farmer, and gives the tools to the agricultural consultant, the researcher and the farmer to take advantage of every possibility to get a better, more and more economical agricultural product from the Greek land.

But the European vanguard of Gaiasense is that it concerns everyone.

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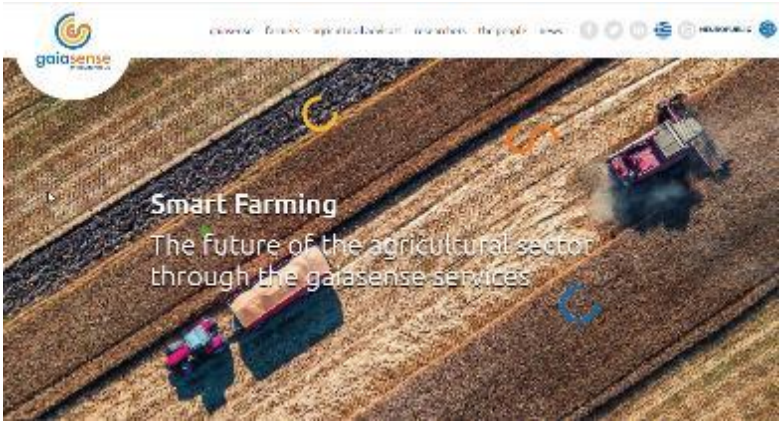
Short description of the technology and the beneficiaries

Gaiasense is an integrated system consisting of a technological infrastructure of thousands of IoT sensors installed on productive agricultural land across Greece and Europe. A digital platform collecting and processing satellite land data, a cloud ecosystem of applications for mobile devices and computers.

The **Gaiasense** system combines a multitude of informatics technologies (Big Data, Cloud Computing, Internet of Things, Machine Learning, Service-oriented Architectures, modern techniques and programming languages, and Semantic Web) with interdisciplinary fields like soil science, agricultural engineering, meteorology, agronomic and biological sciences and environmental sciences.

Actions Taken

It is for the first time in Europe that such an integrated smart farming system is created and operates on the one hand containing a high-scale technological infrastructure, and on the other hand an operational infrastructure with agriculturists, researchers and laboratories supporting it.
Gaiasense was developed entirely in Greece by NEUROPUBLIC A.E. and has been successfully implemented in recent years in the Greek territory.
Today Gaiasense covers more than twenty-five different types of crops and its infrastructure is installed in 70 different areas throughout Greece and abroad covering more than 1.5 million acres.



Source: https://www.gaiasense.gr/en/

Benefits and Impact

- Gaiasense is an advanced, but also simple to use, service for every farmer, irrespective of how familiar the farmer is to new technologies.
- It is an integrated production management system, it is economical, accurate and can be customised in each different region, for each type of soil, for each microclimate, for each variety.
- Farmers can improve their production in many ways, benefit financially and take advantage of new features for their products.
- It offers new advisory services to Agricultural Advisor that they have not been able to do until now, seal their work with scientific documentation and gain access to the professional prospects of the new digital era in agriculture.

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- Allows researchers to gain access to important data, test their research under real conditions, develop it, and make profit out of it.
- Gaiasense has proven to offer a series of benefits:
  - Reduction in the use of pesticides, fertilizers, and irrigation water,
  - Effectively addressing the threats that affect production,
  - Qualitative and quantitative improvement of production,
  - Added value to agricultural products,
  - Reduction of environmental impacts,
  - Compliance with the regulatory framework of EU.

Contact Information

Website: https://www.gaiasense.gr/home

Email: info@gaiasense.gr

More Infomation: https://www.gaiasense.gr/wp-content/uploads/2022/06/gaiasense_leaflet_21X27_GS_EN.pdf

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Application Area

☒ Soil ☒ Plant ☒ Terrain

Digital Technology in the Value Chain

☒ Agromonic Services

Digital Technologies

☒ IoT ☒ Big Data ☒ Sensor Technology

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