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Final Marketing plan

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Executive Summary

The Marketing Plan of the gaisense smart farming system for the countries identified and defined earlier in the project's lifetime is an essential component of the sustainability of the LIFE GAIA Sense outcomes. It refers to the integrated strategy for the marketing of gaisense in the target markets identified, namely **Greece, Spain, Portugal, Romania and Cyprus**.

The final version of the marketing plan presented in this deliverable is based on the one developed for the Greek market, where gaisense is designed, developed and commercially available. As gaisense has been marketed in Greece for the last years, this experience has been used as the basis for the marketing plan to be designed and implemented in other countries, with all necessary adjustments: Taking into consideration the specific characteristics of each country, the marketing plan will be used as a framework, the components of which will be properly adapted to meet the needs of the different markets in each target country, getting as closer as possible to potential customers, collaborators and other stakeholders of gaisense.

This deliverable provides information on different aspects of the marketing strategy and the way it will be implemented with specific activities, as part of the marketing plan. In this context, the document provides information on the digital and traditional marketing techniques, activities and means to be used, marketing goals and monitoring of the implementation of the plan. It also provides information on the communication strategy as part of the marketing plan, as well as information on the pricing, budget and the positioning of gaisense in the smart farming market, among others.

While specific marketing activities are described throughout the document, the point of the deliverable is to provide the basis for the design and implementation of a marketing plan in each one of the marketing countries.

The work described in this deliverable makes use of the work already undertaken and described in other deliverables of the LIFE GAIA Sense project, such as the **D2 "First Policy Uptake Activities and Material"**, **D9.4 "Initial Marketing Plan"**, **D9.3 "Market analysis & initial recommendations"** and **D8 "Initial replicability and transferability plan"**. This allows a seamless interconnection between the activities taking place in the context of different Work Packages, therefore contributing to the holistic implementation of the project's activities.

This final marketing plan will be more precise and concrete as gaisense reaches the point of being commercially available abroad; at that point, the strategy, tools, means and activities will be described in more details, aiming to address the clearly specified needs of each different target market.

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Definitions, Acronyms and Abbreviations

| Acronym/Term | Explanation |
|---------------------|--|
| CAP | <i>Common Agricultural Policy</i> |
| CDG | <i>Civil Dialogue Group</i> |
| CE | <i>Circular Economy</i> |
| COMAGRI | <i>Committee on Agriculture & Rural Development of the European Parliament</i> |
| DG AGRI | <i>Directorate-General for Agriculture and Rural Development</i> |
| DG CLIMA | <i>Directorate-General for Climate Action</i> |
| DG ENVI | |
| EC | <i>European Commission</i> |
| EIP-AGRI | <i>European Innovation Partnership for Agriculture Productivity and Sustainability</i> |
| EP | <i>European Parliament</i> |
| EU | <i>European Union</i> |
| GAIA | <i>GAIA EPICHEIREIN ANONYMI ETAIREIA PSIFIAKON YPIRESION</i> |
| KM | <i>Key Message</i> |
| NP | <i>Neuropublic Ae Pliroforikis & Epikoinonion</i> |
| SF | <i>Smart Farming</i> |
| TF | <i>Task Force</i> |
| WP | <i>Working Party</i> |

1. Introduction

1.1 Project Summary

The main objective of the LIFE GAIA Sense project is to demonstrate gaiasense, an innovative “Smart Farming” (SF) solution that aims at reducing the consumption of natural resources, as a way to protect the environment and support Circular Economy (CE) models.

More specifically, this project will launch 18 demonstrators across Greece, Spain and Portugal covering 9 crops (olives, peaches, cotton, pistachio, potatoes, table tomatoes, industrial tomatoes, almonds, kiwi) in various terrain and microclimatic conditions. They will demonstrate an innovative method, based on high-end technology, which is suitable for being replicated and will be accessible and affordable to farmers either as individuals or collectively through Agricultural Cooperatives.

Moreover, LIFE GAIA Sense aims to promote resource efficiency practices in SMEs of the agricultural sector and eventually, contribute to the implementation of the Roadmap to a Resource Efficient Europe. This project will demonstrate a method on how the farmer will be able to decide whether to use or avoid inputs (irrigation, fertilizers, pesticides etc.) and more specifically how to apply them in a most efficient way, without risking the annual production. The focus is on the resource consumption reduction side of CE, and the results will be both qualitatively and quantitatively, considering the resources’ efficiency in the agricultural sector.

1.2. Document Scope

The aim of this deliverable is to provide an overview and the guidelines of the marketing plan to be followed by the LIFE GAIA Sense project after the end of the project, when the smart farming services of the gaiasense smart farming system will be commercially available in the countries mentioned in the document: Greece, Spain, Portugal, Cyprus and Romania.

This deliverable takes into consideration the work that project partners have conducted and presented in the deliverables **D9.4 “Initial Marketing Plan”**, **D9.3 “Market analysis & initial recommendations”** and **D8 “Initial replicability and transferability plan”**. These deliverables provided useful insights that helped identify the specific characteristics of the target markets, as well as other aspects that help in the definition of the final marketing plan. Especially the deliverable D9.3 is the basis which provided an initial version of the marketing approach and activities to be undertaken by the project regarding the extension of gaiasense in new countries. The same document also provided some information on other aspects of interest to this deliverable, such as an analysis of the most important competitors, a proposed concept of the marketing activities and others. All updates since the publication of Deliverable D8 have been

implemented in this deliverable, in order to better reflect updates on the smart farming market and the marketing activities to be undertaken in the next period.

The deliverable also makes use of existing work undertaken and documented in other deliverables, such as **D2 “First policy uptake activities report and material”** which sets up the scene regarding the key messages to be used for communicating with various stakeholders.

In order to make this deliverable easier to read and understand, instead of repeating information already available in other deliverables, there are references throughout the document to the corresponding deliverables. At the same time, information that was considered necessary for the final version of the Marketing Plan was copied from other deliverables and included in this document, contributing to the development of an integrated document.

1.3. Document Structure

This document is comprised of the following chapters:

Chapter 1 presents an introduction to the project and the document

Chapter 2 presents the mission statement of gaiasense

Chapter 3 presents the product statement of gaiasense

Chapter 4 presents an overview of the smart farming market characteristics

Chapter 5 presents the positioning of gaiasense in the smart farming market

Chapter 6 presents an overview of the competition in the smart farming market

Chapter 7 presents the marketing strategy of gaiasense

Chapter 8 presents the communication strategy for gaiasense

Chapter 9 presents the marketing plan for gaiasense

Chapter 10 presents components for the marketing of gaiasense in the target countries

Chapter 11 summarizes the key points of this deliverable

2. Mission Statement of gaiasense

gaiasense, the smart farming system on which the LIFE GAIA Sense project is based, is an innovative smart farming system that helps farmers make the most out of their farms, while at the same time improving the financial and environmental sustainability of their production.

In an era where “producing more with less” is not just a marketing motto but an identified dire need, gaisense allows farmers to optimize the use of inputs like fertilizers, pesticides and irrigation water, thus contributing to reduced production costs, higher and better yields and reduced carbon footprint of their production.

The gaisense smart farming system helps farms produce food in compliance with the recently announced **EU Green Deal**¹ and the **Farm to Fork strategy**², which define a more sustainable food production system, with lower inputs and emissions. At the same time, the new **Common Agricultural Policy**³, in alignment with the European Green Deal, sets higher green ambitions and puts the framework for more sustainable food production with minimized environmental impact.

In this context, gaisense helps farmers optimize the use of inputs, such as agrochemicals, energy and natural resources like irrigation water, avoiding excessive use and waste. This allows farmers not only to reduce their production costs but also the environmental footprint of their production.

One of the main aspects of gaisense is that it is accessible to and affordable even by smallholder farmers. Its innovative “Smart Farming as a Service” approach allows farmers to benefit from smart farming without having to invest in expensive infrastructure or tools. In this sense, gaisense aims to democratize smart farming and bring it to all farmers despite of their farm size, crops or financial status.

¹ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

² https://ec.europa.eu/food/horizontal-topics/farm-fork-strategy_en

³ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/new-cap-2023-27_en



3. Product Statement of gaiasense

gaiasense is an integrated smart farming system that brings smart farming in the hands of all farmers. It aims to provide a low-cost smart farming solution with multiple benefits for the farmers, their production and the environment, among others.

What makes gaiasense stand out from the existing competition is a set of unique characteristics, as described in the following sections.

3.1 Low cost Smart Farming services - Zero infrastructure costs

The gaiasense smart farming solution has been developed so that it is affordable even by smallholder farmers. There are two possible ways that farmers and agricultural cooperatives can have access to the smart farming services of LIFE GAIA Sense:

1. **Smart Farming as a Service:** Farmers can access the smart farming services of gaiasense through a small annual subscription fee. In this case, NEUROPUBLIC undertakes the investment costs, e.g. all costs related to the data acquisition infrastructure and operation, as well as other costs according to the agreement with the specific user.
2. **Leasing of data acquisition infrastructure:** Farmers can opt to have access to the data acquired by the gaiasense infrastructure, such as the gaiasense telemetric agrometeorological stations, without having access to the smart farming advice. In this case, they have to pay for using the infrastructure in the form of leasing for a predefined period.

These different options allow gaiasense to meet different needs of different customers. For example, individual farmers can opt for the Smart Farming as a Service model, which allows for more peace of mind and lower annual costs as they do not have to consider anything apart from receiving the smart farming advice and implementing it in their farm. On the other hand, more technologically advanced farmers or agricultural cooperatives may prefer paying for the robust data acquisition infrastructure of gaiasense and make use of the gaiasense data using the valuable knowledge and experience of their agronomic personnel who will be responsible to interpret the data, transform it into smart farming advice and consult their farmers.

3.2 A custom-made solution for each crop in each area

One of the strong points of gaiasense is its adaptability to different crops and different (micro)climatic conditions, a fact that reduces operational costs and improves efficiency.



More specifically, specialized researchers work on the development and adjustment of scientific algorithmic models for the irrigation, crop protection and fertilization of each crop. These models are adjusted to the special conditions of each area before they become commercially available, so that their accuracy is ensured.

The gaiasense smart farming system does not offer pre-made “one-size-fits-all” services. Despite the fact that thanks to its architectural design it can easily adapt to different crops and microclimatic conditions, each new application requires a period for the adaptation of the scientific models to the new condition in order to maximize the effectiveness of the services and the benefits for the farmer.

In the case of areas and crops where scientific models are not yet developed and calibrated, a transition period of at least one year is required for setting up the data acquisition infrastructure of gaiasense, pilot testing and validating the scientific models.

This transitional period is required for setting up the data acquisition infrastructure of gaiasense, the validation of the scientific models using data from the area, and the pilot testing of the gaiasense smart farming services in the field.

3.3 Services based on robust technological infrastructure

NEUROPUBLIC, the company that designed, develops and evolves gaiasense, has its own state-of-the-art technological infrastructure on which gaiasense is based. This eliminates the use and dependency on infrastructure owned and operated by third parties.

More specifically, thanks to the technological infrastructure of NEUROPUBLIC, gaiasense is based on:

- In-house cloud computing infrastructure
- In-house IoT development (sensors and telemetric agrometeorological stations)
- In-house scientific model development (for irrigation, fertilization, crop protection, weather forecast etc.)
- In-house software development
- In-house earth observation department and EO-data management platform
- The largest ground-truthing network for remote sensing in the EU

More information about each of the aforementioned features is provided in the following sections.

3.4 In-house cloud infrastructure

NEUROPUBLIC owns a modern and reliable cloud computing infrastructure, located at its corporate office building in Piraeus, Greece. This allows gaiasense to have the storage and computing power needed for

storing and processing the huge volumes of data it requires for its operation. Examples of this data are satellite images and agrometeorological data acquired by its telemetric stations.

NEUROPUBLIC has designed and applies an **integrated Information Security Management System (ISMS)**, which is certified by TÜV AUSTRIA HELLAS for meeting the requirements of relevant international standards: **EN ISO 9001:2015**⁴ (Quality Management Systems) and **ISO/IEC 27001:2013**⁵ (Information Security Management Systems).



Figure 1: NEUROPUBLIC's certificates for compliance with ISO 9001:2015 and ISO 27001:2013

3.5 In-house development of IoT components

The Research & Development department of NEUROPUBLIC designs and develops all hardware components of the gaiatron telemetric agrometeorological stations, from the circuit board to the protective shell. A team of engineers specialized in microelectronics and sensors, networks, Internet of Things etc. are working on different aspects of the gaisense stations, evolving the original designs and

⁴ <https://www.iso.org/standard/62085.html>

⁵ <https://www.iso.org/standard/54534.html>

making them more diverse and efficient. This provides a competitive advantage to gaiasense, as it does not depend on external collaborators for the specific activity and allows for more flexibility and adaptability to different needs.

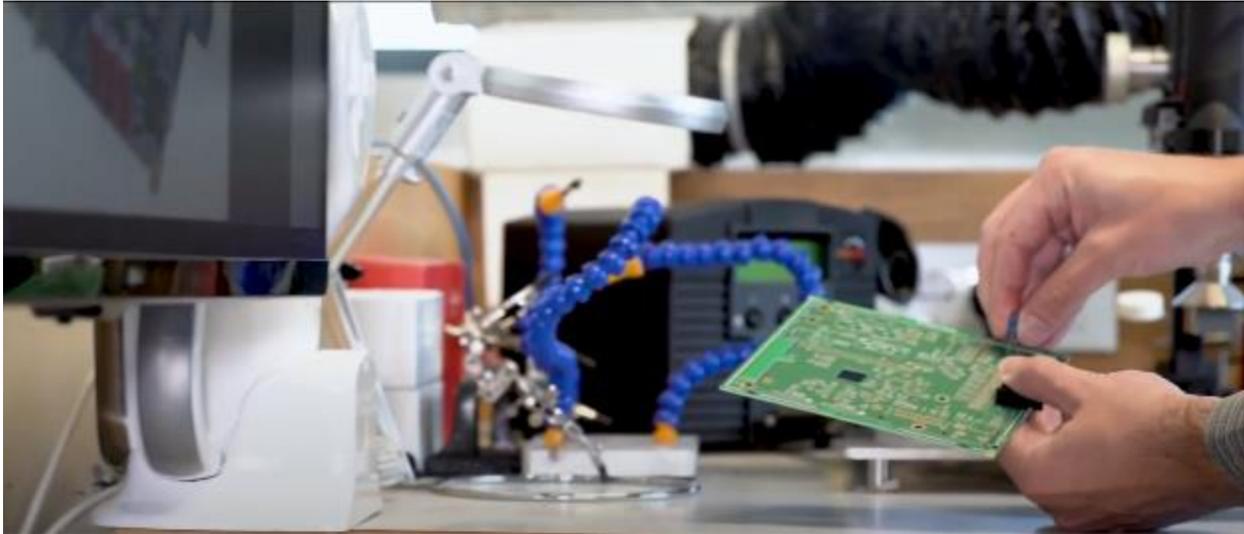


Figure 2: PCB testing for the gaiasense stations at NEUROPUBLIC's Research & Development Lab

It must be noted that NEUROPUBLIC has constructed a new corporate building at the heart of Piraeus, Greece, that aims to function, among others, as a smart farming hub. A large part of the 3-storey building, with more than 3.000 m² of covered area, is used for hosting the production line of the gaiasense telemetric stations, from the Research &Development lab to the finished constructed station. This will contribute towards the reduced production costs of the stations, will facilitate further development and evolution of the components, and will allow even more control over the production process.



Figure 3: NEUROPUBLIC's new building in progress

3.6 In-house scientific model development

Scientific models for the irrigation, fertilization and crop protection, developed for different crops are a core component of the gaiasense smart farming system. Additional models for weather forecasting and early warnings for extreme weather phenomena at parcel level are also developed in-house.

For the development of these scientific models, specialized researchers of NEUROPUBLIC work closely with experienced scientific collaborators from academic and research organizations on irrigation, fertilization and crop protection models.

3.7 In-house software development

NEUROPUBLIC has a large team of experienced software engineers, front- and back-end developers, mobile app developers etc., which collaborate for the development of web and mobile applications and services.

| | Date | Leaf Relative Humidity 1 | Leaf Relative Humidity 2 | Relative Humidity | Soil Moisture (%) 10cm [DND] | Soil Moisture (%) 20cm [DND] | Soil Moisture (%) 30cm [DND] | Soil Moisture (%) 40cm [DND] | Soil Moisture (%) 50cm [DND] | Soil Moisture (%) 60cm [DND] | Soil Moisture (%) 70cm [DND] | Soil Moisture (%) 80cm [DND] | Soil Moisture (%) 90cm [DND] | UV | Pyranometer (V) | Pressure | Salinity 10cm [DND] | Salinity 20cm [DND] | Salinity 30cm [DND] | Salinity 40cm [DND] | Salinity 50cm [DND] | Salinity 60cm [DND] |
|----------------------------|---------------------|--------------------------|--------------------------|-------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--------|-----------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| AGRINIO 1 [PLATU] | 2022-07-20 15:00:00 | 31.5 | 31.17 | 100.0 | 41.72 | 45.63 | 46.76 | 46.91 | 43.74 | 42.86 | 39.22 | 42.36 | 37.51 | 912.67 | 923.33 | 1017.66 | 1500.89 | 1577.57 | 1623.27 | 1573.91 | 1496.98 | 1520.00 |
| AGRINIO 2 [SIDEREIKA] | 2022-07-20 14:00:00 | 33.5 | 32.67 | 100.0 | 33.96 | 45.31 | 46.74 | 46.91 | 43.73 | 42.86 | 39.24 | 42.37 | 37.52 | 990.67 | 923.0 | 1017.96 | 1399.83 | 1587.53 | 1633.96 | 1572.3 | 1495.97 | 1510.00 |
| AGRINIO 3 [BIGLA] | 2022-07-20 13:00:00 | 36.0 | 35.5 | 100.0 | 33.98 | 45.3 | 46.75 | 46.92 | 43.73 | 42.86 | 39.26 | 42.38 | 37.55 | 891.0 | 901.67 | 1018.25 | 1400.13 | 1587.3 | 1634.68 | 1572.3 | 1496.39 | 1520.00 |
| AGRINIO 4 [RIZES] | 2022-07-20 12:00:00 | 38.0 | 38.67 | 100.0 | 33.97 | 45.31 | 46.76 | 46.93 | 43.73 | 42.88 | 39.27 | 42.39 | 37.57 | 725.33 | 856.33 | 1018.53 | 1398.88 | 1587.53 | 1634.13 | 1572.3 | 1496.47 | 1520.00 |
| AGRINIO 5 [AGIOS GEORGIOS] | 2022-07-20 11:00:00 | 41.33 | 41.33 | 100.0 | 33.98 | 45.32 | 46.78 | 46.94 | 43.74 | 42.89 | 39.3 | 42.42 | 37.59 | 505.83 | 795.0 | 1018.52 | 1399.17 | 1587.53 | 1634.82 | 1572.3 | 1496.47 | 1520.00 |
| AGRINIO 6 [KOULIA 1] | 2022-07-20 10:00:00 | 47.67 | 47.5 | 91.0 | 33.99 | 45.31 | 46.79 | 46.94 | 43.74 | 42.9 | 39.31 | 42.42 | 37.6 | 208.5 | 383.0 | 1017.98 | 1399.83 | 1587.19 | 1635.11 | 1572.53 | 1496.64 | 1520.00 |
| AGRINIO 7 [KOULIA 2] | 2022-07-20 09:00:00 | 59.0 | 59.17 | 100.0 | 33.99 | 45.32 | 46.81 | 46.93 | 43.75 | 42.9 | 39.32 | 42.43 | 37.61 | 69.33 | 128.0 | 1017.66 | 1400.5 | 1587.77 | 1635.11 | 1572.53 | 1496.56 | 1520.00 |
| AIGINA 3 [AGGELAKI] | 2022-07-20 08:00:00 | 71.0 | 71.17 | 100.0 | 34.01 | 45.35 | 46.8 | 46.94 | 43.76 | 42.91 | 39.33 | 42.44 | 37.62 | 40.0 | 122.67 | 1017.28 | 1400.31 | 1588.23 | 1635.69 | 1572.3 | 1496.72 | 1520.00 |
| AIGINA 4 [BOBOU] | 2022-07-20 07:00:00 | 72.17 | 72.5 | 100.0 | 34.03 | 45.36 | 46.82 | 46.95 | 43.77 | 42.92 | 39.34 | 42.45 | 37.63 | 18.67 | 112.0 | 1017.04 | 1400.67 | 1588.23 | 1635.68 | 1572.3 | 1497.06 | 1520.00 |
| AMUNTAIO [AMUNTAIO] | 2022-07-20 06:00:00 | 71.83 | 72.33 | 100.0 | 34.05 | 45.37 | 46.84 | 46.95 | 43.78 | 42.92 | 39.35 | 42.53 | 37.63 | 16.0 | 112.0 | 1016.89 | 1400.61 | 1588.23 | 1635.83 | 1572.64 | 1496.89 | 1520.00 |

Figure 4: The gaisense dashboard, visualizing raw data from the agrometeorological stations

An example is the gaisense dashboard, which – among others - allows the visualization of the data acquired by the agrometeorological stations of gaisense, such as temperature, relative humidity and soil moisture, precipitation, etc.



Figure 5: The gaisense dashboard, creating graphs from primary data of agrometeorological stations

Agrimonitor is a web application developed by NEUROPUBLIC, that makes use of processed satellite data and other data in order to visualize historical data like the NDVI index of parcels, temperature, precipitation etc., and also provide various insights like the variety of a crop in different parcels of an area. The analysis takes place at a parcel level and can include relatively large areas.



Figure 6: NEUROPUBLIC's Agrimonitor web app

Another interesting example of such application is the one allowing the remote monitoring of pesticide applications, combining the use of GPS trackers and satellite images.



Figure 7: Web interface for the remote monitoring of pesticide applications

This experience provides NEUROPUBLIC with the flexibility to develop custom software solutions, be responsive to any revisions/adjustments needed, based on the feedback received by the users of its services, like the smart farming services and apps of gaisense, and allows the seamless integration between the different software components of gaisense.

3.8 In-house earth observation platform and department

NEUROPUBLIC has a dedicated Earth Observation team that works on the development of solutions based on geospatial technologies and data. The gaisense smart farming system makes use of satellite data for various purposes, including but not limited to the extraction and visualization of the NDVI index from satellite images.

The gaisense smart farming system is backed by the **EarthInsight engine** developed by NEUROPUBLIC's engineers, which allows fast processing, analysis and classification of satellite images. Using satellite images from various sources, the EarthInsight engine delivers the necessary Earth Observation-based input when needed. This means that the gaisense system does not depend on external collaborators or software solutions for addressing its needs in terms of satellite data.



3.9 The largest ground-truthing network for remote sensing in the EU

NEUROPUBLIC has developed the first and only large-scale Internet of Things infrastructure in Greece, installing thousands of wireless sensors and hundreds of agrometeorological telemetric stations, which are designed and manufactured by its Research & Development Lab, on agricultural land. This is coupled with the constantly growing Earth-Observation team of NEUROPUBLIC, which focuses on the development of innovative EO-based services for the agricultural sector.

The gaiasense smart farming system benefits from both, and the combination of EO data with atmospheric and soil data, along with other types of data, distinguishes gaiasense as a holistic approach in the smart farming ecosystem.

4. Market research

Market research is the backbone of the marketing plan. It refers to the thorough collection of information regarding the industry, the competition, the potential customers and other aspects of the market of a given product, in order to ensure the successful entry of the product in the market. In the case of gaiasense, we refer to a constantly growing market of agritech solutions, focusing on the smart farming and precision agriculture segment.

A detailed market research for the identified target markets has been conducted and presented in the context of the project's deliverables **B9.3 "Market analysis & initial recommendations"** and **B9.4 "Initial Marketing Plan"**. This initial work was mostly based on desktop research, taking into consideration all the information that was available online by that time, along with relevant market research reports that the authors had access to. This information was enriched with country-specific information on the corresponding markets that was provided by project partners and collaborators in these countries.

On top of that, updated information on the smart farming market including the competition in the target countries, is provided in the deliverable **B8 "Final replicability and transferability plan"** of the project, which was developed at the same time as this document.

The identification of the existing competition, especially the strengths and weaknesses of the competitive offerings, is crucial for the successful entry of gaiasense in the target markets. The same applies to the identification of the demographics of potential customers, as this will help towards the marketing of gaiasense in a more attractive way for a diverse group of potential customers.

4.1 Main characteristics of the target market

This section aims to provide a summary of the information already available in the aforementioned deliverables regarding various aspects of the market that gaiasense targets, including the country, user type, demographics etc.

The target market of smart farming services, like the ones provided by gaiasense, is a diverse one and consists of a wide variety of user types, with different demographic characteristics, background and location, among others. The main target segment of this market consists of farmers, either individual ones or organized in agricultural cooperatives and other forms of organization. At the same time, other types of potential market stakeholders is also considered, as they are either potential customers or collaborators of interest to gaiasense.



The following sections include information about the potential target market of gaiasense, as a smart farming offering.

4.2 Countries

The introduction of the gaiasense smart farming system to new country markets will be considered after the end of the project. The targeted countries, apart from Greece (the home country of gaiasense), Spain and Portugal where the pilot application of the smart farming services of gaiasense is taking place, are Cyprus and Romania. All four countries were selected based on different criteria, so that the gaiasense smart farming services are a good match to the needs identified by farmers of each country:

- **Greece** is the main market of the gaiasense smart farming system; it is developed by NEUROPUBLIC and designed in a way to meet the specific needs of Greek farmers, mostly smallholder ones, while at the same time addressing the issues of the Greek farming sector in general.

The gaiasense system has been marketed in the specific country for the last years, and a mapping of the market is always updated. The experience from the marketing of gaiasense in Greece will be used as the basis for the marketing activities in the other target countries, with all necessary adjustments.

- **Spain and Portugal:** Thanks to the participation of partners from Spain and Portugal in the LIFE GAIA Sense project, an initial introduction of gaiasense has taken place in pilot status. With the help of these partners, along with information from various sources, the corresponding markets will be mapped, so that the most appropriate marketing plan will be defined for each country.

Despite their geographical proximity, these two countries exhibit some significant differences in terms of characteristics of their corresponding agricultural sectors, such as average farm size, number of farms, economic value of farms etc. these differences will be taken into consideration for the successful marketing of gaiasense in these countries.

- **Cyprus:** The agricultural sector of Cyprus exhibits similar characteristics with the Greek one, sharing similar climate, crop types and other parameters. The agricultural sector of Cyprus is relatively small, but exhibits a high potential thanks to the traditional crops like potatoes and other agricultural products.

In addition, thanks to the preliminary work undertaken by NEUROPUBLIC in the context of other EU projects like **IoF2020** (the IoT4 Potato Use Case⁶) and **PLOUTOS** (the Sustainable Innovation Pilot 7: Supporting wine producers in taking advantage of the changes in labelling regulations & enhancing their sustainability performance in Cyprus⁷) in which the gaiasense system is applied in

⁶ <https://www.iof2020.eu/use-case-catalogue/arable/data-driven-potato-farming>

⁷ <https://ploutos-h2020.eu/supporting-wine-producers-in-taking-advantage-of-the-changes-in-labelling-regulations-2>



different crops in Cyprus, the specific market can be mapped with the help of the corresponding partners and collaborators.

- **Romania:** Romania is a country with a large (about 33% of the total agricultural land in the EU⁸) and important agricultural sector. At the same time, the country is mostly following a traditional approach regarding farm management, with the majority of the farmers not having adopted smart farming or digital farming yet. In addition, the farming sector is dominated by smallholder farmers, as it has the third smallest average farm size (topping only Malta and Cyprus). In this sense, Romania is a prominent new market for giasense, with increased potential for a market share.

At the same time, Romania is the only target market where giasense has not been tested and validated yet. Despite the fact that this may be challenging, the prospect of having giasense marketed in an agricultural sector with high potential like the Romanian one is a key factor for selecting the specific market.

More information about the characteristics of each target country is provided in the deliverable **B9.4 “Initial marketing Plan”**.

4.3 User types

The potential and most prominent end users and customers of the giasense smart farming solutions are farmers, agricultural cooperatives and agricultural advisors. However, different user types, such as researchers and developers of smart farming solutions are also considered.

For farmers, giasense is a valuable tool that allows them to make the best possible decisions regarding the management of their crops at any given time. For example, giasense provides advice for the optimal irrigation, fertilization and crop protection of more than 30 crops, and provides a detailed weather forecast at parcel level, with improved accuracy thanks to the acquisition of agrometeorological data from the giasense telemetric stations and the use of advance weather forecasting models.

These allow farmers to reduce their production costs, improve their competitiveness and reduce the impact of their agricultural activities on the environment - simply put, improve the financial and environmental sustainability of their farms.

Agricultural cooperatives reap the same benefits from giasense as farmers, but at a higher level thanks to the economy of scale achieved through their high number of farmers-members. In addition, agricultural cooperatives have better organization and more resources compared to individual farmers; therefore, they have the capacity to adopt a smart farming system like giasense at its full extent, maximizing its benefits.

⁸ https://www.accesstoland.eu/IMG/pdf/ro-small_farms_and_commons.pdf



In addition, agricultural cooperatives could play a pioneering role and strengthen their role in the area, as they will be capable of providing useful information for their partners/producers, allowing them to improve the quality of their products, safeguard the rural areas, and work towards a more viable financial environment at a regional level.

In addition, the availability of at least one dedicated, full-time agricultural advisor as part of the agricoop staff is a major benefit for gaiasense, as they will probably be the ones to be trained in using the gaiasense suite of digital tools and provide the necessary data from the field (e.g. observations, measurements and sampling, among others).

We should keep in mind that gaiasense is a 4-dimensional smart farming system that also relies a lot on the help and expertise of local cooperators such as agronomists and agricultural advisors. In this context, a cooperative that occupies well-trained personnel in Digital Agricultural Technologies such as gaiasense, could only be proud and benefit from it and use him as a real asset.

Agricultural advisors play a dual role in gaiasense; they contribute to gaiasense as one of its data sources, with their in situ observations, measurements and sampling, and they are the ones to receive the smart farming advice of gaiasense, guiding farmers into their implementation in the field. In this context, gaiasense provides them with easy to use digital tools for data recording and at the same time offers them the opportunity to enrich their portfolio of services to farmers.

Developers of smart farming solutions can benefit from the software, hardware and services of gaiasense, which are already designed, developed and in place. Using them as their basis, developers can build their own services and hardware components enhancing the offerings of gaiasense by providing more functionalities. In addition, the data acquired by gaiasense can be used for the development of data-powered applications and services for the agricultural sector.

A detailed description of the different user types is provided in the deliverables **B9.4 “Initial marketing Plan”** and **B8 “Final replicability and transferability plan”**.

4.4 Demographics

The gaiasense smart farming system aims all types of farmers, innovative and traditional, smallholder and large-scale ones, no matter what their age is. This is thanks to (a) its simplified approach that does not require specific digital skills, and (b) its innovative business model, that does not require financial investment in any kind of infrastructure, tools nor anything similar.

Younger farmers are more familiar with new digital tools, the use of smartphones and computers and in addition, they usually have a better understanding of the value of data and technologies for improving



their production. In this context, younger farmers tend to be more open to innovative approaches like the one of gaiasense.

On the other hand, despite the fact that the smart farming services of gaiasense are very easy to use and only require basic digital skills, elderly farmers seem to be more hesitant to adopt new farm management systems, as they are used to more traditional approaches. This seems to be mostly due their preference in traditional farming and not due to the complexity of a smart farming system.

Another factor that affects the potential adoption of gaiasense by farmers is the educational level, their financial status and even their geographical location within a country or a region - remotely located farmers tend to be more disconnected and less informed about advances in farm management, despite the availability of online sources of relevant information.

More information about the demographics of the potential gaiasense customers can be found in the deliverable **B9.4 “Initial marketing Plan”**.

5. Positioning

We are currently in the era of **Agriculture 5.0**, which refers to agriculture supported & enhanced by Internet of Things, Artificial Intelligence and Machine Learning, among others. Agriculture 5.0 is an interdisciplinary approach in the domain of smart farming, which shows how the traditional farming practices are enhanced by automation and introduction of modern scalable technological solutions that minimize risks, improve sustainability, and provide farmers with improved decision making tools, in order to make agriculture more productive and reduce its impact on the environment.

The gaisense smart farming system makes use of all the aforementioned techniques and approaches, ranging from its gaiatrons - the IoT telemetric agrometeorological stations - to the analysis of huge volumes of data with the help of Artificial Intelligence and Machine Learning models. In this sense, gaisense lies at the core of the smart farming market in the era of Agriculture 5.0, putting cutting-edge technologies like IoT, Big Data Analytics, Artificial Intelligence, Machine Learning and Earth Observation at the hands of the farmers, even smallholder ones.

Its innovative “smart Farming as a Service” approach is one of the competitive advantages of gaisense, along with its holistic approach, as described in the following section. These are just a couple of distinct characteristics that place gaisense at the top of the smart farming market in Greece and abroad.

In Greece, gaisense is recognized as an effective and efficient tool for farmers, allowing them to be more efficient, reduce their costs and be compliant with the mandates of the new CAP, the Farm to Fork strategy and at a higher level with the EU Green Deal. At the same time, gaisense has been acknowledged as an innovation at European level among major agricoops, agricultural organizations and policy makers.

6. Competitive analysis

The smart farming market consists of various different smart farming and precision agriculture offerings, which exhibit a high degree of heterogeneity. The most commonly found offering is a typical farm management app that works as a digital diary. It allows farmers to record static information about their farms such as size, location, irrigation system etc., along with dynamic information such as crop type for each parcel, recording of irrigations, application of fertilizers and crop protection. In other cases, smart farming offerings are applications that provide various types of generic or farm-specific information and data to the farmers without providing guidance on how to make use of them nor an easy to use advice to help them get the most out of this information. Similarly, the operation of other smart farming services is bound to the use of specific agrochemicals such as pesticides from specific companies.

The most popular smart farming offerings identified are the ones that make use of data for providing advice for the irrigation, fertilization or crop protection of a crop. However, in most cases, these services apply to a limited number of crops, or they offer advice for irrigation OR fertilization OR crop protection - but not all of them. On top of that, these services typically make use of one data source only, i.e. only earth observation, agrometeorological etc., but not a combination of various data.

A distinct service category consists of solutions that are developed in the context of funded projects, which usually do not find their way towards their commercial availability after the end of the project's lifetime.

On the other hand, gaisense is an holistic approach; it makes use of a combination of various data, including agrometeorological from the gaisense telemetric stations, satellite images, on-farm observations etc. In addition, gaisense provides a suite of services for the irrigation, fertilization and crop protection of more than 30 crops at this time, along with other services like a detailed 3-day weather forecast at parcel level enriched with early warning for extreme weather phenomena and notification for the most appropriate times for pesticide applications.

On top of that, the development, operation and other aspects of gaisense are mostly funded by NEUROPUBLIC, a Greek SME that is positioned among the most financially healthy ICT companies. This ensures a constant cash flow for the operation of gaisense and therefore its long-term sustainability. While funding from other sources, such as EU and state-funded projects in which NEUROPUBLIC participates, contributes to the funding of various updated components of gaisense and the development of new ones, this is not the main funding source of gaisense.

A detailed description of the existing competition in each target country has been presented in the deliverables **B9.3 "Market analysis & initial recommendations"** and **B9.4 "Initial marketing Plan"**.

7. Marketing strategy

The initial version of the marketing strategy has been defined in the deliverable **B9.4 “Initial Marketing Plan”**. This initial version outlined the various activities to be undertaken as part of the marketing of gaia sense in the target markets. In this section, a more refined and detailed version of the marketing plan will be presented, with more details on specific actions.

NEUROPUBLIC has been promoting and marketing gaia sense in Greece for the last years, based on a flexible marketing strategy. The approach followed is focusing on the specific characteristics of potential end users and customers in Greece, as well as the main communication channels used by farmers, such as printed and digital press (e.g. newspapers and magazines), online media like websites, news portals and blogs, TV and radio channels etc.

This tested & validated approach will be used as the basis for the marketing strategies to be applied in the target markets, with the necessary adaptations based on the specificities of each target market, in order to better meet the needs of farmers in each country.

7.1 Traditional marketing strategy

7.2 Digital marketing strategy

7.3 Combining marketing techniques

7.4 Branding

Branding is important for all marketed products, as it defines the visual identity of the product. A successful branding allows the correlation of the product with colors, shapes and mottos.

NEUROPUBLIC has worked on the branding of its gaia sense smart farming system in Greece. The gaia sense system has established its visual identity with its own logo with characteristic colors and distinctive fonts, while its brand identity is supported on its website at www.gaia sense.gr/en.



Figure 8: The original gaia sense logo (left) and the updated version (right)

NEUROPUBLIC is active at European level, through its participation in EU-funded projects and collaboration with established organizations like the European Space Agency (ESA). It is also a member of high-profile networks, like the European Association of Remote Sensing Companies (EARSC)⁹, the Big Data Value Association (BDVA)¹⁰, the Global Open Data for Agriculture & Nutrition (GODAN)¹¹ and the Hellenic Emerging Technologies Industry Association (HETiA)¹², among others. Through its participation in such large networks, NEUROPUBLIC establishes the visual identity of gaiasense.

Through its participation in these networks, NEUROPUBLIC promotes the smart farming services of gaiasense, seeking collaborations that would contribute to its technological advances and collaborating on testbeds that would allow their application under different conditions. The same applies for GAIA EPICHEIREIN, NEUROPUBLIC's strategic partner, which participates in various international organizations and for a, like COPA COGECA and Farm Europe. The activities taking place in the context of these collaborations allow NEUROPUBLIC, GAIA EPICHEIREIN and other partners to present updates about gaiasense and make the corresponding audiences familiar with the visual identity of gaiasense through digital and printed material used in each case.



Figure 9: Examples of gaiasense-branded visual content used on social media platforms

Generally, the branding identity of gaiasense is used in all communication activities in printed and digital formats, like newspaper articles, social media, website posts etc.

⁹ <https://earsc.org/>

¹⁰ <https://www.bdva.eu/>

¹¹ <https://www.godan.info/>

¹² <https://hetia.org/>

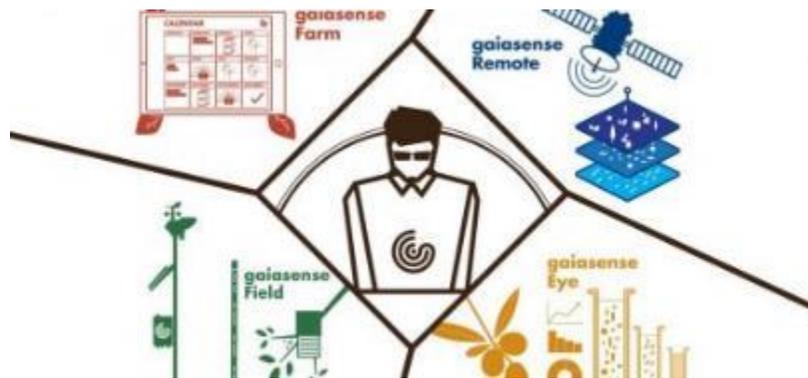


Figure 10: Example of a gaiasense graphic frequently used in presentations

7.5 Use case: Marketing of gaiasense in Greece

NEUROPUBLIC, as the company that designs, develops and supports gaiasense, has been marketing gaiasense in Greece for the last years. Its marketing approach is hybrid, making use of both traditional and digital marketing tools. More specifically, during a recent marketing campaign for gaiasense the marketing activities of gaiasense included the following:

TV

A gaiasense TV ad was broadcasted in the majority of Greek TV channels, focusing on the PanHellenic ones but also including key regional channels. The latter included more than 10 regional channels in 7 prefectures. In addition, interviews with gaiasense team members in the news or in agriculture-themed TV programmes take place whenever possible.



Figure 11: TV interview of NEUROPUBLIC's Commercial Director about gaiasense on Delta TV (Greece)

Radio

Radio spots about gaisense were broadcasted by 34 radio stations in 32 selected prefectures - out of the 52 of Greece in total. Radio is particularly popular among Greek farmers, and is a relatively inexpensive and efficient means for promoting gaisense. Interviews of gaisense team members in local and regional radio programmes also takes place before or after the participation of gaisense in a local event, in order to bring gaisense closer to local stakeholders.

Printed

Refers to the publication of articles related to gaisense and smart farming in general. Articles were published in 6 different printed newspapers, and in several cases the articles were also included in the digital version of the newspaper or the newspaper's website. On top of that, there were printed full-page ads in relevant newspapers & magazines.

Another option is the design and production of printed material like leaflets, brochures etc. This material is used at various events, points of sales, when visiting potential customers etc. In the context of its participation in various events in Greece like the Agrotica Fair, the Thessaloniki International Fair and the Annual Congress of GAIA EPICHEIREIN, NEUROPUBLIC has distributed high volumes of printed materials to visitors, while roll-up banners and posters are set up in highly visible spots of its booth. In several cases, gaisense-branded bags are used for handing the printed dissemination material to the visitors of these events.



Figure 12: gaisense promotional material at Thessaloniki International Fair 2021

Events

The gaisense smart farming system was disseminated during the **7th Panhellenic Congress for the Development of Greek Agriculture**¹³, organized by LIFE GAIA Sense project partner **GAIA EPICHEIREIN**,

¹³ <https://www.c-gaia.gr/en/conferences/7o-panellinio-synedrio-gia-tin-anaptyxi-tis-ellinikis-georgias/>

which took place in November of 2020. The event was organized in a hybrid format, with online participation and speakers both online and with physical presence. Engaging more than 1.000 participants, the event involved 28 speakers from Greece and the EU. The same goes for the **8th Panhellenic Congress**¹⁴ which took place between 30/6 and 1/7/2022, during which NEUROPUBLIC members talked about smart farming, the gaisense smart farming system and on top of that there was a presentation of the LIFE GAIA Sense project as a good practice of promoting the sustainability of agriculture in Greece, Spain and Portugal.

NEUROPUBLIC organized an invitation-only **press event**¹⁵ in July 2021 in order to present its revamped gaisense smart farming system and the recently launched gaisense mobile app to selected Greek journalists covering agricultural topics. The event took place at one of the gaisense pilot sites in Marathon, Greece, and included a field visit to a gaisense-supported organic vegetable field.



Figure 13: The gaisense press event at Marathon, Greece: Presentation (left) and field visit (right)

In September 2021, NEUROPUBLIC was among the exhibitors of the **85th Thessaloniki International Fair**¹⁶, participating with an external booth. A large part of its booth was dedicated to gaisense, with plenty of printed material available to the more than 87.000 visitors, monitors playing gaisense videos, smartphones demonstrating the recently-launched gaisense mobile app and gaisense staff available to answer all smart farming-related questions.

¹⁴ <https://www.c-gaia.gr/en/8th-congress-gaia/>

¹⁵ <https://www.neuropublic.gr/nea/press-event-paroyisiasi-toy-olokliromenoy-systimatos-eyfyoyis-georgias-gaisense-tis-neuropublic/>

¹⁶ <https://www.thessalonikifair.gr/en/2021-85th-tif>



Figure 14: The joint gaia sense – NEUROPUBLIC booth at Thessaloniki International Fair 2021

NEUROPUBLIC also participated in the **BEYOND 4.0 Expo**¹⁷, in October 2021, with a modern booth. In this technology-oriented event, NEUROPUBLIC promoted gaia sense as an innovative technology-driven system for the digitization of agriculture, using both digital and printed material.

NEUROPUBLIC was also among the invited speakers of the **Emerging Tech Forum**¹⁸ organized by **HETiA - Hellenic Emerging Technologies Industry Association**¹⁹ in December 2021. The panel consisted of technology-oriented speakers and highlighted the role of emerging technologies in various sectors, including agriculture, and NEUROPUBLIC focused its presentation on the implementation of new technologies in the gaia sense smart farming system.

On top of that, other types of events complimented the marketing strategy of gaia sense. For example, key gaia sense team members visited selected rural areas in Greece and in collaboration with local partners organized informational events.

Other types of event activities were also considered, for maximizing the gaia sense outreach. An example is the participation of gaia sense in the **Green Awards 2020**²⁰ competition, where gaia sense was awarded the **Silver Award in the Green Technology Concept category**. The participation in this competition allowed gaia sense to receive publicity and the award was an acknowledgement of the technological aspects of gaia sense.

¹⁷ <https://www.beyond-expo.gr/>

¹⁸ <https://hetia.org/hetia-organizes-the-emerge-tech-forum-december-9-2021-hotel-grande-bretagne-en/>

¹⁹ <https://www.hetia.org/>

²⁰ <https://www.neuropublic.gr/en/news-en/neuropublic-s-gaia-sense-smart-farming-system-awarded-at-green-awards-2020/>



Figure 15: The gaiasense award at Green Awards 2020

Social media

Paid posts were published on the Facebook page of gaiasense on a periodic basis, with variable content and visuals. This significantly increased the visibility of gaiasense among Facebook users and consequently increased the number of followers of the gaiasense Facebook page. Facebook was selected as it was the most successful social media platform used by gaiasense; its Twitter & LinkedIn were also popular, but not as popular as its Facebook page.

Apart from the paid content, the social media accounts of NEUROPUBLIC and gaiasense are updated on a frequent basis, sharing information about related activities, news and updates, featuring eye-catching visual content.

8. Communication strategy

The communications strategy is the strategy used by a company or individual to reach their target market through various types of communication. It includes the **message** (what is to be said), the **medium** (where it is to be said), and the **target** (to whom the message is reaching). Having already provided information about the media and the target audience, this section will focus on the message part of the communication.

8.1 Aims of the communication strategy

The communication strategy of gaiasense will have a triple target: to **inform**, **persuade** and **remind**.

As the gaiasense smart farming system will be a newcomer to the target markets, it is important to communicate it properly, so that potential customers will have a clear image of gaiasense, its concept, portfolio of services, crops covered etc.

The next step is to persuade the potential customers about the benefits of gaiasense, so that they will turn into paying customers. This part of the communication will highlight its benefits, advantages over the competition etc.

Last but not least, the communication will aim at reminding potential users about the benefits of gaiasense, so that they will eventually decide to purchase the offerings of gaiasense, turning into paying customers.

NEUROPUBLIC will make use of all available contacts, connections and channels for introducing and communicating the gaiasense smart farming system in the targeted countries. GAIA EPICHEIREIN, NEUROPUBLIC's strategic partner, will also have a crucial role in this effort, thanks to its established position at EU level. GAIA EPICHEIREIN is a full and permanent member of the European farmers and agricultural cooperative organizations **COPA & COGECA**²¹.

Furthermore, GAIA EPICHEIREIN is a contributor to the European think-tank **FARM EUROPE**²² as well as member of the **European Forum for Agricultural & Rural Advisory Services (EUFRAS)**²³, the network representing private and public agricultural advisors at the EU level. These connections are expected to have a significant positive impact on the marketing activities of gaiasense, with members of the aforementioned networks that are located in the targeted countries to be informed and reach at a higher level through each network and at a national level individually.

²¹ <https://www.copa-cogeca.eu>

²² <https://www.farm-europe.eu>

²³ <https://www.eufRAS.eu>

8.2 Use of selected messages

The use of selected messages, as part of NEUROPUBLIC's communication strategy for gaiasense, will aim at:

- **Meeting the need for formulating a category:** NEUROPUBLIC will try to establish a new product category for gaiasense in the existing market but also to identify it with the company name in order to anticipate competition.
- **Raising brand awareness:** This refers to making the gaiasense system easily identifiable by farmers by building an attractive branding. The messages communicated for this purpose will function as an advertisement for gaiasense.
- **Strengthening intention to purchase the product:** This aims at leading the customer towards the purchase of the product, also functioning as a "Call to Action" message to motivate the consumer to complete the purchase.
- **Remarketing:** With the use of digital tools, a company can now approach potential customers who searched for a product or expressed interest in it after the company targeted these individuals online. Constantly reminding a consumer about a product is a commonly used and effective marketing method.

The aforementioned approach has already been applied in the Greek market, and its results are constantly monitored in order to evaluate the effectiveness of the approach, providing feedback for necessary adjustments.

As regards the messages themselves, they will be properly adjusted in order to "speak the language" of each targeted user group; for example, simpler messages with more practical information will be targeted to farmers and agricultural cooperatives, while more sophisticated ones will be addressed to researchers, policy makers, etc. In any case, with the help of copywriters and native speakers, the messages will be as close to the expected stakeholders as possible.

The definition of the framework for the specific messages will take into consideration relevant existing work undertaken by the LIFE GAIA Sense project. For example, the deliverable **D2 "First policy uptake activities report and material"** has already defined a tone for the messages that were (and will be) communicated.

Among other, the selected key messages will refer to:

- Specific objectives of the EU Green Deal, the Farm to Fork & Biodiversity strategies (such as reducing by 50% the use and the risk of chemical pesticides by 2030 and by 50% the use of high-risk pesticides) and the new Common Agricultural Policy measures. These highlight the need to

produce our food in a more sustainable way, and will introduce the gaisense smart farming system as the most appropriate tool to achieve this goal.

- The ongoing challenge of the green and digital transformation of the agricultural sector, highlighting the ways in which gaisense can help farmers address this challenge in an easy and low-cost way.
- The relevant Sustainable Development Goals (SDGs)²⁴ as defined by the United Nations, and how gaisense can help farmers achieve each goal.
- The way that gaisense addresses concepts such as Circular Economy, Bioeconomy and Sustainability.

Deliverable D2 “**First policy uptake activities report and material**” has summarized a selection of key messages that will be used, both as-is and properly modified to the needs of each case, for the marketing purposes of gaisense:

Table 1: Key Messages (KMs) of policy uptake activities

| |
|---|
| <p>KM 1 - Smart farming can bring concrete sustainability benefits to all EU farmers, whichever the size & production orientation of their farm;</p> |
| <p>KM 2 - Smart Farming needs to be understood as a holistic process that involves Precision Farming as part of the process. Smart Farming regards the use of digital technology to improve the overall decisions taken in a farm while Precision Farming focuses on application methods;</p> |
| <p>KM 3 - Smart Farming is closely linked with the provision of smart advice to farmers: it is a human-centered approach where the agricultural advisor plays a key role in the systematic diffusion of knowledge to the farmer, accompanying his sustainability efforts all along the way, based on accurate data and scientific knowledge. The agricultural advisor also acts as innovation broker bringing together knowledge & data from all involved stakeholders & machinery (scientists, agronomists, farmers);</p> |
| <p>KM 4 - Smart Farming is not competitive but compatible to other sustainable agricultural practices (ie organic farming);</p> |
| <p>KM 5 - Collective farmers’ schemes (agri-cooperatives, producer organizations) are advantageous platforms for the diffusion of knowledge & innovation to farmers in an environment of trust, thus contributing to speeding up the digital transition of the EU farming sector;</p> |
| <p>KM 6 - Smart Farming needs to be explicitly recognized as a sustainable practice & be supported with suitable policy tools and financing as such;</p> |
| <p>KM 7 - Smart Farming should be enabled and supported not only within the CAP policy toolbox, but also in the context of other EU policies.</p> |

²⁴ <https://sdgs.un.org/goals>

8.3 Direct and Indirect Communication

The communication approach followed as part of the marketing strategy can be either direct or indirect.

Direct communication: This is mostly achieved with the use of digital marketing, by shaping personalized messages depending on the personas that the company has identified. Direct communication has some key benefits that can work positively for the product market. The data is measurable and the message can be optimized. In addition, the messages are adapted to the needs of the potential consumer, while reminding the consumer about the completion of the purchase.

Indirect / mass communication: With indirect communication, the message aims to reach most of the audience en masse, as in this case the message cannot be personalized. The advantage of indirect communication is that the potential base of message recipients is much larger (mass audience), as well as an audience that is not online, such as older potential customers.

A combination of both direct and indirect communication is used for the communication of gaiasense in Greece, and the results have been positive so far. Both approaches will also be used for the communication of gaiasense in the target countries, with the necessary adjustments according to the characteristics of the target audience.

9. Marketing Plan

9.1 The 4 Ps of Marketing

A fundamental part of a marketing plan is the consideration of the **4 Ps of marketing**; **Product**, **Price**, **Place**, and **Promotion**. These are the key elements that must be combined to effectively foster and promote the unique value of a brand or product like gaiasense, and help it stand out from the competition. Considering all these elements is one way to approach a holistic marketing strategy.

The following sections describe each one of the 4 Ps in the case of the gaiasense smart farming system:

Product

The gaiasense smart farming system is a holistic approach to sustainable farm management. It provides a wealth of services to farmers, so that they can optimize their farming activities like irrigation, fertilization and crop protection. The gaiasense system is diverse and easy to adapt to new crops and microclimatic conditions, currently supporting more than 30 crops. Thanks to its modular design, it can also support different functionalities, according to the needs of each case.

The gaiasense system has been acknowledged as an innovation at European level, thanks to its unique features and its "Smart Farming as a Service" model. Last but not least, the recent launch of the gaiasense mobile app for Android and iOS smartphones makes gaiasense even more accessible to farmers.

In the previous sections of this document there have been references regarding the competitive advantages of gaiasense among the other smart farming offerings, focusing on the low price, the wealth of functionalities and services and the holistic approach in terms of data acquisition and services.

Price

In order to make smart farming affordable to all farmers, even smallholder ones, NEUROPUBLIC developed and used the "Smart Farming as a Service" model. With this approach, farmers do not need to invest in expensive technological infrastructure; instead, they can access the smart farming services of gaiasense through a relatively small annual fee based on various factors. This approach allows farmers, even smallholder ones, to benefit from the smart farming services of gaiasense and improve their competitiveness at a low price, as well as be compatible with the mandates of the new Common Agricultural Policy and high-level strategies like "From Farm to Fork".

Another option is the leasing of the data acquisition infrastructure, which allows customers to have more control on the use of the hardware. In this case, customers have the ownership of the telemetric

agrometeorological stations and they do not receive smart farming advice; however, they may opt to use the collected data in any way they wish.

To help farmers access the smart farming offerings of gaisense at an even lower price, NEUROPUBLIC launched the gaisense mobile app. Currently available only to Greek farmers, the gaisense mobile app allows farmers to access a wealth of gaisense-based information through an easy to use interface using their smartphones at less than €40 per year.

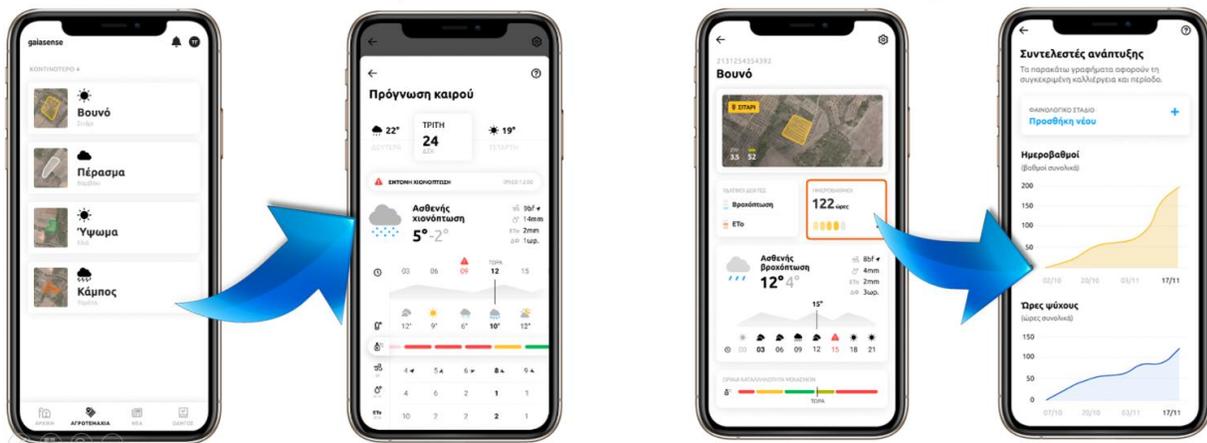


Figure 16: Screens of the gaisense mobile app

Place

Place refers to providing customers access to the product. NEUROPUBLIC provides a variety of means to farmers for accessing the gaisense smart farming system.

Promotion

The promotion of the gaisense smart farming system makes use of a variety of means for reaching out to potential customers. Different channels and customized messages are used for different target groups, taking into consideration special characteristics. In this sense, a well-thought set of communication activities also plays a key role in the promotion of products like gaisense.

9.2 Pricing

Farmers, especially smallholder ones, do not always have the financial capacity to invest in new technologies that aim to improve their production. In the case of Greece, where the gaisense smart

farming system is designed and developed, most farmers are characterized by low income due to various factors, such as their small and fragmented agricultural land, the production of different crops, the increased competition and low added value of their products. In this context, gaisense provides an affordable means for farmers to reap the benefits of smart farming without having to invest in expensive technological tools.

NEUROPUBLIC introduced the “Smart Farming as a Service” model, in order to ensure that even smallholder farmers can afford this innovative system. In this way, the smart farming services of gaisense become available to farmers with a relatively low annual fee. The fee is calculated per case, as it depends on various factors, like the crop, the coverage of the area by the gaisense telemetric stations, the different microclimatic and soil zones in the area etc. As a result, there is no fixed price list for the smart farming services of gaisense.

On top of that, NEUROPUBLIC developed the gaisense mobile app in order to help Greek farmers make the first step in smart farming at even lower cost. The first level of the app, gaisense1, provides its users with information about their parcels, such as detailed 3-hour weather forecast for the next 3 days, early warnings for extreme weather phenomena, identification of the most appropriate hours within the next days for spraying with pesticides, the water content of each parcel compared to the previous week and much more valuable information at parcel level. gaisense1 is currently available at €30 plus VAT per year, making it affordable to everyone.

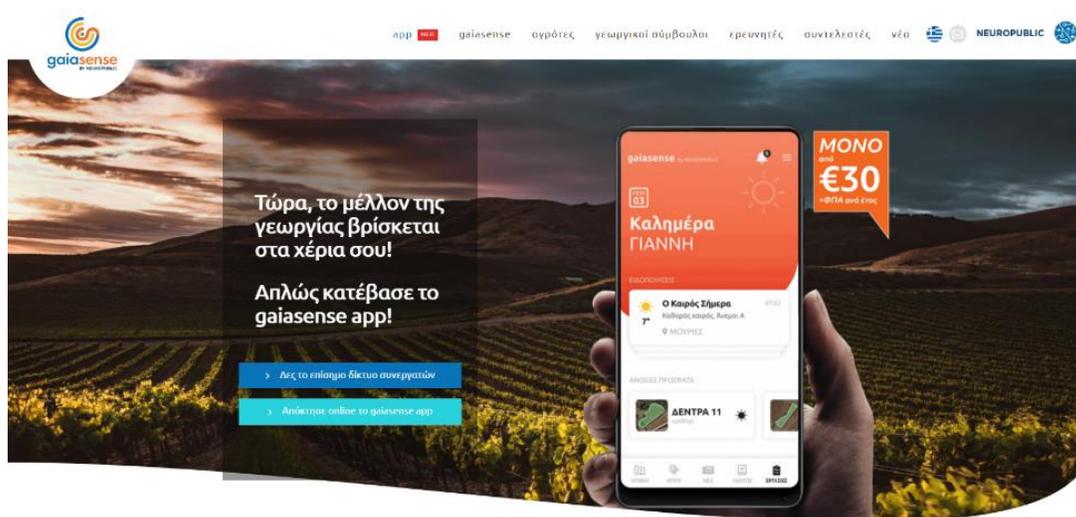


Figure 17: Direct access to the gaisense services and mobile app through the gaisense website



In general, the pricing strategy of gaiasense in the targeted new markets will focus on large-scale sales and discouraging the competitors by offering the gaiasense services at low prices. The combination of market features, such as high elasticity of demand, economies of scale, high acceptance of the product, the lack of direct competition and of substitute products will allow gaiasense to benefit from such pricing policy.

Based on the specific characteristics of each market, along with the potential for expansion, gaiasense may follow a differentiated pricing policy both compared to Greece and compared to each targeted country.

9.3 Budget

The budget to be allocated for the implementation of the marketing plan is of high importance for the successful marketing of gaiasense - both in Greece and abroad. It refers to covering the expenses of any activities undertaken for the marketing of gaiasense in Greece and abroad.

The budget to be used for marketing activities in each one of the target countries cannot be defined at this point, as it heavily depends on various factor. However, the available budget will be allocated to the various activities described in this deliverable.

9.4 Tracking the success of marketing activities

One of the most essential components of the marketing plan is the evaluation of the marketing activities. Simply put, this will indicate the activities that prove to be more successful so that they can be further supported, while the activities that do not work as expected in the specific context will either be revised or discarded.

A valuable tool for the evaluation of digital marketing activities is Google Analytics, which allows the monitoring of website conversions. For example, by using custom URLs for the different digital channels used in the context of a marketing campaign, the most prominent channels can be identified.

In addition, a simple Excel worksheet can be used for comparing the budget used against the actual ROI. As a rule of thumb, organized activities can take place over the course of a 30- to 60-day period, and then the results can be evaluated. In this context, activities that prove to bring sales or e.g. sign-ups to the gaiasense email list can be reused and fine-tuned, while other activities can be either significantly revised or even discarded.

10. Plan for marketing activities in target countries

Based on the information presented in the previous sections, a plan for the marketing of gaiasense in the market countries will be compiled and developed. The plan will be mostly based on the one successfully implemented in Greece, combining all traditional and digital means available in each country, with all the necessary modifications due to the specific characteristics in each country.

The successful marketing of gaiasense in each one of the target countries requires a good understanding of the specificities of each country's market unique characteristics. The gaiasense system currently supports more than 30 different crops, most of which are common between the target markets.

The main marketing activities to take place in each target country are mentioned in the following table.

Table 4: List of marketing activities per medium

| Media | Frequency | Type | Comment | Estimated budget |
|--------------------------------------|--|--|---|------------------|
| Domain-specific printed media | One publication per month for the 1st year | Full page ads Advertorials Interviews | Farming-focused newspapers, magazines etc. | |
| TV & Radio | 3 TV and/or radio broadcasts in the 6th months before the cultivation period | TV spots/ads Radio spots/ads | Planning of relevant activities in collaboration with an experienced local/regional media house | |
| Events | At least two per year, depending on the availability of events | Physical: Exhibitions, Fairs, Symposia Digital: Webinars, Workshops, Round table discussions | Both digital and physical ones, focusing on agriculture, agritech, digital farming etc. | |
| Online campaigns | Every 2 months | Google ads Social media ads | Ads and paid content on Google and social media | |

As regards the **frequency** of the marketing activities, it will also depend on various factors such as the availability of events of interest to gaiasense over a specific period, the participation of gaiasense in other events, the beginning of the cultivation period for key crops of a specific area/region/country etc.

The **types of marketing activities** will include a wide variety of both offline (printed) and online (digital) activities. A thorough evaluation of each activity in each country will allow the identification of the most successful ones, which will turn into the spearhead of the marketing plan in the corresponding country. In this way, the resources will be allocated to the most successful marketing channels and tools, ensuring the most effective use of the available budget for each country.

The **budget** available for the marketing activities in each target country will be defined taking into consideration various factors, such as the dynamic of the country. At the same time, there will be flexibility in the reallocation of budget between different categories after assessing the most successful channels and tools in each country.

Domain-specific printed media

The most popular agriculture-themed newspapers, magazines and other types of media will be identified and considered for the publication of news, interviews, advertorials, ads and any other relevant type of content for the promotion of gaiasense.

TV & Radio

The most popular TV and radio stations in each target country, along with agriculture-themed broadcasts in both means will be identified and contacted for the possibility of hosting interviews, presentations and ads related to gaiasense. Local and regional channels will be considered, especially the ones based in rural areas, as they tend to be closer to the agricultural sector and especially popular among farmers.

Events

The key agriculture and agtech themed events like Fairs, Exhibitions, Workshops, Conferences and Symposia will be identified and the participation of gaiasense for the dissemination of the system to a wider audience will be considered. All types of relevant events will be considered, from Trade Fairs and Exhibitions to scientific workshops and conferences, as they will allow gaiasense to reach different types of audiences, from farmers and agronomists to researchers and policy makers.

Based on the type and the size of the event, the participation may be limited to the physical presence or a participation through a dedicated branded booth may be an option. In some cases, even the possibility of sponsorship will be considered, as it may increase the visibility of gaiasense among the participants of the event.



Online campaigns

The online campaigns are an essential part of a digital marketing plan, as they significantly facilitate the process of drawing the attention of potential customers to a specific product or service like gaiasense. Online campaigns will be targeted to a specific area or region of a target country, generic or focusing on a specific crop and will make use of all available online platforms (i.e. Google ads, Facebook ads, paid content on Twitter & LinkedIn) for further promoting the theme of the campaign.

Core components of such campaigns are the text (copy) and the visuals. In this context, the text will be prepared by copywriters, native speakers of the language of each country so that the texts will be precise and meaningful. On top of that, an experienced graphic designer will be responsible for the visual part of the content, ensuring that visual messages are easily understood by the target audience, and will be consistent with the brand identity of gaiasense.

11. Conclusions

The Final Marketing Plan described in this document, provides the guidelines for the marketing activities to take place in each one of the target countries, when gaisense is commercially launched. This country-generic marketing plan is based on the marketing plan designed and implemented in the Greek market, which has been tested and validated for the last years.

It is expected that minor revisions will be needed before the implementation of the marketing plan in each country, as all types of different characteristics will need to be taken into consideration. In fact, by targeting its marketing activities on area, region or country specific crops, issues of the agricultural sector and distinct features such as events, gaisense will get closer to its potential customers and will be marketed as the ideal solution to specific issues faced by farmers and other stakeholders.

The role of local partners is crucial for the marketing of gaisense in countries outside Greece, as they have the valuable country-specific knowledge regarding the country's agricultural sector, which goes beyond the information available through reports and desktop research. They have access to updated information, in several cases they have connections to local stakeholders, such as media (TV channels, radio stations, newspapers and magazines, etc.), media agencies that can compile a media plan at a state or regional level, print agencies etc.