

ATMÓSFERA

CONSULTANTS



June 2020



Foreword__

Below you will find the report: 'Atmósfera Consultants Business Plan'. This document has been written as final project from the International Master in Sustainable Development course at the EOI in Madrid. This report was written by five students who worked on it from December 2019 until July 2020. The intention has been to set up a business that is both sustainable and successful, we got it!

We would like to thank Maryse Labriet for her guidance and support 24/7 and Pablo Valcárcel for teaching us all about launching a startup.

We cannot forget to thank each professional who has given us his vision and support, allowing us to continue working, and the EOI for giving us this opportunity, although online, it has been a pleasure.

We wish you a lot of reading pleasure,

Cristina Ajamil de Salazar
Miguel Barrenechea Moreno
Camila Belloso Gonzalez
Jorg Matheus Henricus Peters
Ana Heredia Salis

Executive Summary

The Business

Atmósfera Consultants is a Spain based consultancy firm that will provide professionals from the agricultural sector with tools to become more resilient to climate change. By designing adaptation strategies with easily accessible information that has direct application on the field, focused on the best client-experience for our customers.

The origins of Atmósfera Consultants

The founder team of Atmósfera is made up by five students from the International master's degree in Sustainable Development and Corporate Responsibility at Escuela de Organización Industrial in Madrid. The team, with a multi-disciplinary background (two business administration professionals, a specialist in marketing and public relations, a food science expert and a veterinarian), joined together to create a project that would help both to promote sustainable development, while protecting the environment and the local communities. When the project began the aim was being able to develop a service towards the agricultural sector, achieving a sustainable way of developing while protecting the population and the environment.

Concerned about the devastating effects that climate change will have on the agricultural sector, this team carried out an in-depth study to find out the situation of this sector in the face of this threat in Spain. This is the origin of Atmósfera, when the team realized the great gap of information that this sector had regarding climate change and how to adapt to it.

Thus, the company arises with the perfect conditions: a reality, climate change, a need, to protect the agricultural sector against it, a lack of services, those applied directly at the farm level and a large market, the entire agricultural sector in Spain.

What is the problem Atmósfera Consultants detected?

For centuries, the agricultural sector has played a key role in the Spanish economy. In 2017 it represented **2,7% of Spanish GDP** and provided more than **749.000 direct jobs**, generating **17.430 M€ in product exports** (PWC, 2019). At the same time, Spain was ranked by the Economist Intelligence Unit to be the **4th country in the world with the highest exposure to climate change**. Spain received an score of 77,8, being 0 no adverse effect and 100 countries with great exposure to climate change (PWC, 2019).

In this context, agriculture is one of the most exposed sectors to climate variability, and it already suffers and will continue to suffer if the necessary measures are not taken into place. Currently there are no tools or products to help bring this scientific knowledge down to the field, and make it useful for farmers to gain resilience to climate change and optimize their yields at the same time. And that is where Atmósfera Consultants comes in. What makes this company different is that it will be able to bring scientific knowledge into customer-friendly tools and services, giving them the necessary tools to adapt to climate change.

Service offered

Atmósfera Consultants offers two different services *Plan Agua* and *Plan Sol*, from which it will arise it's revenues:

PLAN AGUA: free service with relevant climate information to improve crop management solutions and reduce risks related to climate variability based on climatic events and yield production, presented on an easy to use design. The product is based on the development of an easy-to-use toolkit, **Atmósfera Smart Decision-Making Toolkit**, aimed to help farmers to manage climate-related risks and opportunities, and to help them building resilience to extreme climate events. Farmers will have access to a suite of past, current and projected maps directly related to agricultural aspects, with tips helping them on the decision management process.

Plan Agua is free service for the customers, the objective is to promote the company, by providing relevant information and creating a desire of knowing more and obtaining more advantages by hiring *Plan Sol*. However, the App and Website will also be used as a revenue stream by including advertisement, related companies could use this space for their own products and Atmósfera could also create partnerships.

PLAN SOL is a personalized risk assessment and adaptation strategy for farmers, developed by a team of Climate Change Adaptation experts. By providing the knowledge of specialized consultants in this area, *Plan Sol*. will be able to generate a service that unifies the latest scientific advances in this area and applies them in a personalized way to each of the clients that contract the service. This service is based on a three-steps process:

1. Climate impact and vulnerability assessment will be carried out
2. Identify an adaptation action plan for implementation at a farm level
3. Follow up, clients will have a follow-up and re-evaluation service of their Action Plan, in order to optimize and adapt to each situation.

Our innovative product, based on excellence and synchronization with our client's wishes, will be unique in the market, as no private initiatives are offering anything similar have been developed so far. The revenue that arises from Plan Sol is the money clients will pay for the consulting services.



	Year 1	Year 2
ROE	28,1%	72,70%
ROI	27,4%	66,50%
Pay-Back period	1,14	

FINANCIAL INFORMATION

How will Atmósfera Consultants be financed?

To launch Atmósfera an initial investment of 58.000€ is required, an initial amount of 15.000€ will be contributed by the founders in the form of 3.000€ each. **For the remaining 43.000€ external investment is needed.**

What Atmósfera offers to its investors are the following numbers, ensuring a recoup of the investment in February, year 2.

Who is Atmósfera Consultants aimed at?

The agricultural sector in Spain represents a large part of Spanish GDP, generating approximately a total of 25.3 billion € per year, and being one of the main branches of the Spanish economy (PWC, 2019).

Currently, the agrarian sector in Spain is made up of 114.707, both agricultural and livestock farms, of which more than half 725.323 belong to small farmers (INE, 2016 & 2009). Moreover, in Spain there are 3.699 cooperatives (Cooperativas agro-alimentarias, 2017). The distribution of the different agrarian in Spain farms is very varied, being predominant in areas such as Andalucía with 241.972 farms and the Valencian Community with 118.128 farms (INE, 2013). In turn, the south-eastern region of the peninsula is the most vulnerable to the events produced by climate change, especially desertification. However, the whole península will be exposed to extreme events due to climate change. Through a study carried out on the vulnerability of small farmers and ranchers to the events produced by climate change twenty years from now, it has been determined that approximately 40% of them will be affected by these events, especially desertification. Taking into account the market study carried out, the main customers of Atmósfera Consultants will be small farmers and cooperatives distributed throughout the national territory.

How will Atmósfera Consultants be positioned in the market?

Atmósfera will position themselves as a brand specialized in a customer intimacy aspect, offering their clients a personalized service that adapts to their lifestyle and needs. To follow this strategy a marketing plan has been developed, offering digital marketing with innovative technical solutions but at the same time directing considerable efforts in offline marketing to reach with a personal connection with the customer. 10,8% of the sales will be directed to the marketing strategy.

Online marketing will be based around the website and App, where those interested can follow the company. In addition and in order to build brand awareness there will also be content on various social media platforms (Facebook, Instagram and Twitter). Complementary to this will be Youtube in which various videos will be posted that provide more in-depth information. To develop brand affinity and loyalty blogs and newsletters will be written with educational information and updates of the organization.

The offline marketing will be mainly focused at increasing sales and brand awareness, and will be as follows, newspaper and Specialized Magazines: Relationship will be developed within the media sector for press releases, branded content and events. Most efforts will be allocated to local papers and events.

In addition, Atmósfera will be present at many trade fairs and events in the sector, this will facilitate the contact with the potential customer. In addition, the company will give special attention to attend to events of Cooperatives and associations of farmers, offering services of workshops and trainings on how to use Plan Agua.

The main channels where interested clients could access Atmósfera's services:

- Online: through the website and app, users will be able to contact the company for further information
- App store: to download Atmósfera's application
- Sales representatives farmers, cooperatives and associations.

Who are the main competitors?

Different types of competitors have been analyzed, being the main one Suez Agriculture. Other companies such as AgriAdapt and Agroclimate differ in the business model or service, although their offer could potentially conflict with Atmósfera's possible clients. Therefore further analysis has been carried out to analyze these companies' strengths and weaknesses and can be seen in the following figure.

COMPANY	What They do	Similarities	Differences
Suez Agriculture	Advices agricultural entrepreneurs to face challenges of the sector and improve profitability of their farms through an integrated solution that includes the improvement of farming systems and a more efficient use of their resources. Suez Agriculture is currently the most considerable and direct competitor for Atmósfera, their services directly compete with Plan Sol.	• Services start through the whole process • Improving efficiency of the agriculture and farming sector • Technology and digitalization • Increasing resilience to Climate Change	• No free service to assess farmers, but they use other channels (website, youtube) to inform the agricultural sector. • Very big company, based in excellent service. Familiarity with Atmósfera's clients. Working hand to hand to deliver a high quality service.
AgriAdapt	Eu project that aims to demonstrate that three of the most important farming systems in the EU (livestock, arable and permanent crops) could be more climate-resilient through the implementation of feasible and sustainable adaptation measures which also could have positive cross cutting environmental benefits. AgriAdapt represents a competitor for Plan Agua, offering a free service online with products such as vulnerability tool, map with Yield and climate information, adaptation measures, and other relevant information in the sector.	• Free service • Adaptation strategy on Farm Level with short, medium and long term recommendations • Cover the gap between scientific knowledge and adaptation measures on climate change	• Easy to use Website and app, adapted for farmers (effectively) • Is not a business, its an european project and there's no profit
U.S. Climate Resilience Toolkit	The U.S. Climate Resilience Toolkit is a website designed to help users find and use tools, information, and subject matter expertise to build climate resilience. The Toolkit offers information from all across the U.S. federal government in one easy-to-use location. The Climate Resilience Toolkit is not a direct competitor for Atmósfera but it has been analyzed in order to determine what Tools for the sector exists in the market, the practicality of them, and its usages.	• Toolkits • Vulnerability assessment information • Adaptation measures	• No follow up • Is not personalized

TABLE 3 - ATMÓSFERA COMPETITORS

What makes Atmósfera Consultants unique?

Atmósfera aims to become the best in the class. In order to excel in this business the company's strategy is to not only offer a high quality service but to do it in a specific way. In this line, Atmósfera has two main pillars, one its direct relation with the customer, creating a close relationship based on trust, where their success is Atmósfera's success; the other one user experience, in a sector in the middle of digital transformation, Atmósfera aims to offer a user friendly technology that does not require a lot of time an energy to use.



Table of Contents

3	Foreword__
4	Executive Summary__
10	1 The Story Behind Atmósfera__
12	2. The Business Model
12	2.1 The problem __
13	2.2 Empathy Map __
14	2.3 Our Solution__
16	2.4 Idea Validation__
17	2.5 Prototype Validation__
19	2.6 The Service__
20	Plan Agua__
22	Plan Sol__
24	2.7 Business Canvas__
26	3. Market Analysis__
26	3.1 Analysis of the sector in Spain
28	3.2 Our Customers__
28	3.3 Market Size__
29	3.4 PESTEL__
31	3.5 Competitors__
32	4. Strategic Plan__
33	5. Human Resources__
35	6. Operational Plan__
37	7. Marketing Plan__
40	8. Financial Plan__
43	Bibliography__



1 The Story Behind Atmósfera

The team, made up by five students from the International master's degree in Sustainable Development and Corporate Responsibility at Escuela de Organización Industrial in Madrid

Is a multidisciplinary team highly concerned about the environment, natural capital and biodiversity. When the project began all team members felt a strong interest towards agriculture and farming, to find solutions to feed population in the following years and specially intrigued about achieving a sustainable way of developing, using nature's resources and taking always into account the problematic with biodiversity.

After several meetings to explore current problems and its possible solutions the founder team got to the point where saw a real need in agriculture and livestock sector as climate change events are affecting its businesses. Farmers need to take action and find solutions while becoming proactive by adapting their companies to climate change and mitigating it in the long term, due to projects in efficiency improvement. This project aim is to improve businesses resilience, and the first step in order to do so is to run a climate change risk assessment and an adaptation plan.

This is how Atmósfera was created, a consultancy firm focused on providing agriculture and farming professionals the knowledge and tools to become more resilient to climate change and to improve their performance.

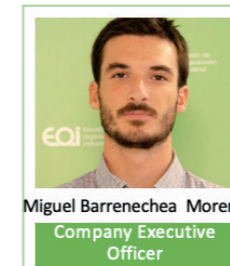
The team is made up by two business administration professionals, a specialist in marketing and public relations, and experts in food science and technology and veterinary medi-

Team



Food science and technology specialist

"I decided to join the team in December when the conversations begun, for me to get to know such a team with so many different backgrounds has been the best opportunity and learning from my colleagues the best experience. Being able to keep learning and creating in a part of the food sector that is often forgotten is incredibly enriching, I just love it!"



Business administration expert

"Although it may sound cheesy, from my passion, surf, I developed a high sensibility towards nature that pushed me to look for ways to protect the environment, so future generations can enjoy as much us thanks to it. Atmósfera will bring technical solutions down to earth, helping farmers to excel and be more efficient, achieving a sustainable way of producing food."



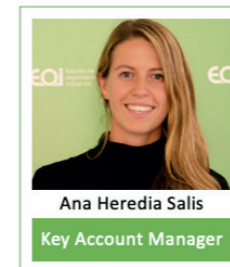
Marketing and public relations expert

"For me it's been a wonderful journey to work with my colleagues and bring to life the design of this company. To be able to fully develop a marketing strategy has allowed me to use all my knowledge and experience, helping me to keep improving my professional experience while finally doing it on a topic that really is important for me, address climate change."



Business administration expert

"I absolutely love animals, I always knew I wanted to develop a business that would help the environment and protect biodiversity, adapting business strategies to face climate change will make them more resilient, and will hopefully help to create a sustainable mindset and a systemic change in society."



Veterinary medicine expert

"This has been the best opportunity to design a company that will actually create value and help to the process of fighting climate change. With my veterinary medicine background I have been able to establish real communication with professionals understanding their problems in order to be able to create the product they really need"

2. The Business Model

This section describes how the company created. First of all, the problem is mapped out that Atmósfera Consulting will solve. After that, the empathic map is described with the feelings of the most important stakeholders. Then a solution is given to the problem and a description is given of how this solution has been verified.

Finally, a prototype of the product is designed. It also describes how this prototype has been verified. After which the entire company is mapped out using the Flourishing Business Canvas model.

2.1 The problem

For centuries, the agricultural sector has played a key role in the Spanish economy.

In 2017 it provided great economic, social, and environmental value, representing 2,7% of Spanish GDP. Providing more than 749.000 direct jobs and generating 17.430 M€ in product exports, contributing to improve the Spanish trade balance at 6.555 M€ (PWC, 2019). Agriculture is one of the sectors that suffers most from climate conditions variability, mainly through increased soil erosion, deforestation, rising temperatures, altered precipitation patterns, the increase of the weeds, pests and diseases.

And Spain is one of the most exposed countries to climate change effects. This country was ranked by the Economist Intelligence Unit to be the 4th country in the world with the highest exposure to climate change, the indicators takes into account the increase of temperature droughts, increase of sea level, severity of storms and political commitment to manage climate change. Spain received a score of 77,8, being 0 no adverse effect and 100 countries with great exposure to climate change. (PWC, 2019)

In this context, the agricultural sector is very vulnerable to climate change in Spain. This are indeed one of the activities that are suffering and will continue to suffer if the necessary measures are not taken into place. While adaptation to climate change is currently a hot topic, the present approach is primarily scientific. In Spain there are several research groups aimed at studying ways of adapting to the climate variability resulting from climate change; however, there are no tools to facilitate the application of this knowledge in the field. Farmers, the main stakeholders in the situation described above, do not have the necessary instruments to deal with the changes and protect their business based on their crop management decisions, making it impossible for them to be resilient to climate change.

2.2 Empathy Map

The Main Stakeholder:

To really understand the problem and those suffering from it, and empathy map has been developed and can be seen in Figure 1.

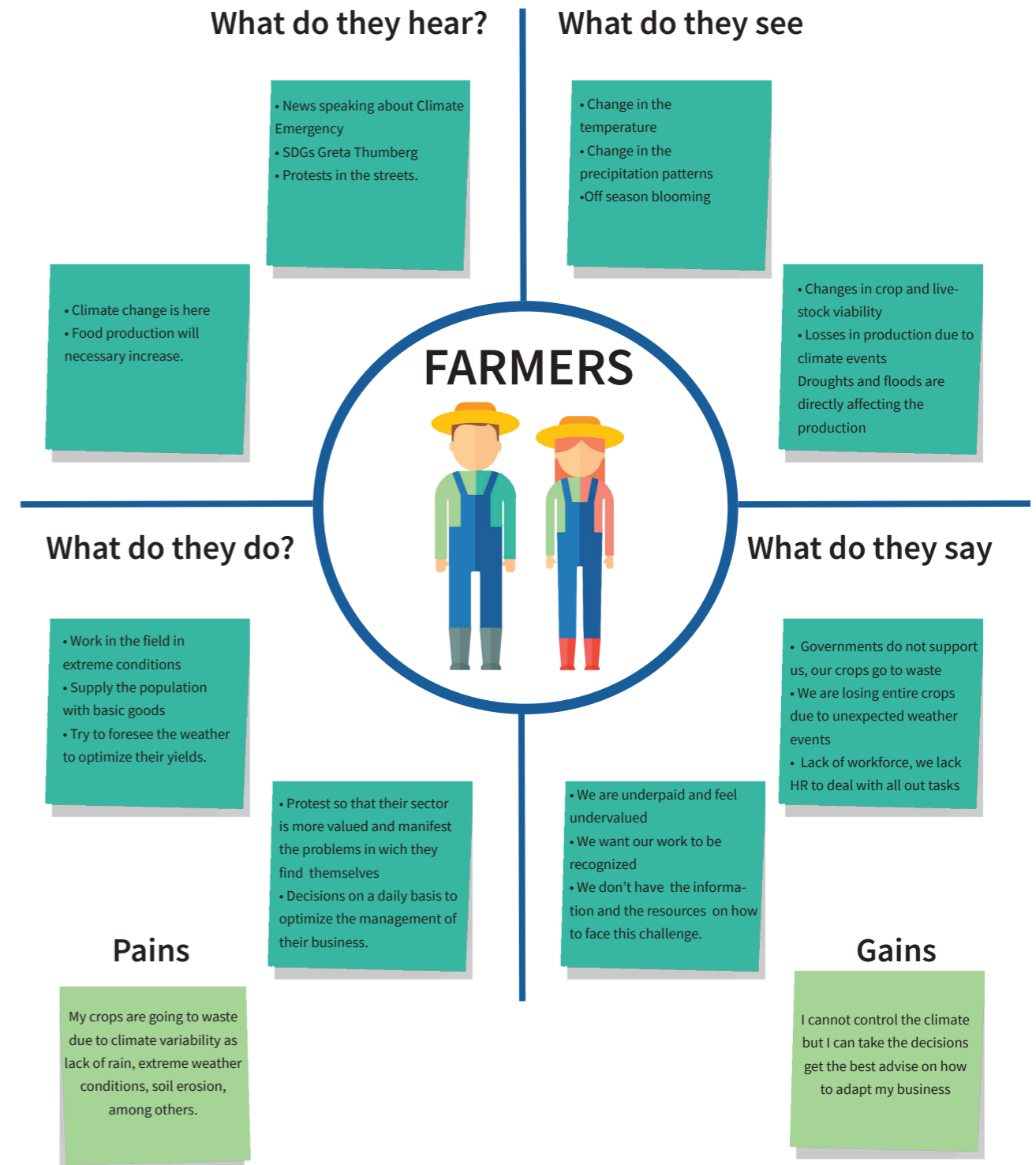


FIGURE 1 - EMPATHY MAP

2.3 Our Solution__

ATMÓSFERA

CONSULTANTS

Atmósfera aims to provide a highly personalized consultancy service to agriculture professionals to help their business to become more resilient to climate change. This will be achieved by creating adaptation strategies with easily accessible information that has direct application on the field.

Mission

We aim to support the agricultural and livestock sector with the necessary measures to improve their performance and protect themselves against imminent climate change events.

Vision

At Atmósfera we believe that everyone deserves equal opportunities. Climate change can no longer guarantee these opportunities fairly within the agricultural sector. We want to put a stop to this by ensuring that everyone within the agricultural sector is has the option to be armed against climate change.

Values

- Integrity: We are honest and compromised to communicate with transparency with all our stakeholders.
- Sustainable development: We are here for the environment, the reason we launched this project is to reach a sustainable development, and this will always be part of us. We will fight for what we believe, and we believe that you deserve to be able to perform your best.
- Trust: Our business relies on the trust between our customers and us. We are a family and as such we want you to feel part of it your success will be our success.

- Innovation: We believe in change, we aim for the world to evolve to a sustainable world with an active contribution of our customers, we are determined to fulfill this objective by thinking out of the box, creating and designing new solutions, doing always our best for the welfare of our customers and of the planet.

- Quality: We work to create value and we will not settle until we can truly provide the best quality service for our customers

Our Added Value

We believe we offer the best service in the market, we work to deliver the best quality service while doing it in a specific way. We work on two main pillars, one our direct relation with the customer, creating a close relationship based on trust, where their success is our success; the other pillar is user experience, in a sector in the middle of digital transformation, Atmósfera aims to offer a user friendly technology that does not require a lot of time an energy to use.



2.4 Idea Validation__



FIGURE 2 - ATMÓSFERA'S TIMELINE

Because of the impact climate change is having on agriculture, the first step was to follow an investigation in order to be able to know the real potential of the idea to develop a consultancy firm dedicated to the elaboration of a climate change risk assessment and an adaptation plan.

In order to validate the idea and making sure there is a market interested in its services, Atmósfera has developed a validation plan designed with two main objectives: analyze the sectors knowledge about climate change and analyze the sectors interest in hiring services. The validation plan has consisted in the following 3 main phases: Interviews, surveys and literature and external reports [view annex 1](#) for full idea validation information, in the figure 2 it can be viewed a timeline about the idea validation process.

Three different types of interviews to different groups have been performed in order to understand mainly the following points:

- Level of awareness and concern about climate change effects in agriculture and farming
- Willingness to hire an external service in order to do a climate change risk assessment.

Interviews:

1. Active professionals on the agriculture and farming sector

9 Interviews have been performed where the questions were the following:

- 100% of interviewed assure that they have suffered climate events effects such as droughts, cloudburst, high temperatures, amongst others.
- 50% of interviewed would accept an outsource service in

order to adapt their business against climate change.

- A reluctance about climate change was perceived by the interviewees, as some interviewed did not believe in the relation between climate events and climate change.

2. Active professionals working in companies

whose activity is related at some stage to agriculture and farming. The companies Ence and Greenalia answered the following questionnaire:

- Clear conclusion of a higher level of awareness, compared to individual professionals or small business, climate change denial disappears, and their business strategies tend to include sustainability and risk assessment performance.
- With an already ongoing strategies in the case of Ence, who would only be interested in Atmósfera if the technology or knowledge is not available in house. In the other hand, Greenalia, was highly interested in Atmósfera's services, due to the complexity of their supply chain, were they have an elevated number of contracts with individual producers and Greenalia's risk assessment is difficult to calculate.

3. Assurance sector

A conversation with Agroinsurance was carried out in order to understand how insurance companies work within the agriculture sector. The conclusion has been that due to the current system, they won't be interested in Atmósfera. And it was concluded that the ones to contact in the future are not insurance companies but governments.

After this deep analysis the conclusions were clear, there is a market for climate change adaptation within the agriculture and farming sector and there is clear evidence that farmers not only want information but also action.

2.5 Prototype Validation__

The first product prototype included three levels called *Plan Agua*, *Plan Tierra* and *Plan Sol*.

Plan Agua the more basic level was designed to be a free application for smartphones and a website, where reliable, useful and ready to use information about how climate change can affect the farmer's business could be consulted for free. In this section easy tips will be provided in order to improve resilience.

Plan Tierra, the second level consisted on an online platform where clients could introduce information about their business such as type of crops produced, region, etc. and an automated vulnerability assessment and adaptation report would be created. The final report and recommendations would be sent to the client, with the possibility of an online meeting where the analyst/consultant will present and address further questions. This level would have an intermediate price between *Plan Agua* and *Plan Sol*, and is designed to provide useful information when funds for *Plan Sol* are not available.



The conclusions were the following ones:

- The future of the project depends on the way of managing and presenting data, specially in the case of *Plan Tierra*.
- *Plan Tierra* must be presented and offered in a way that is more credible to users.
- To study in the future the possibility of developing a green label for Atmósfera
- 100% of the farmers interviews are interested in the most personalized service, *Plan Sol*.
- After this validation the decision taken was to postpone

Plan Sol was the last level and the most personalized one, were a team of experts would evaluate the client's business in order to elaborate a assessment and adaptation strategy to improve efficiency and resilience.

In order to validate the product prototype a tryptic (Figure 3) was design to show the clients the possibilities, three interviews were carried out with the following results (table 1).



FIGURE 3 - ATMÓSFERA'S PRODUCT TRYPTIC

Interviewees	Plan Agua	Plan Tierra	Plan Sol
Roa Wine Producers	✓	✗	✓
Yecla Wine Producers	✓	✗	✓
Hydroponic Peppers	✓	✓	✓

TABLE 1 - PROTOTYPE VALIDATION INTERVIEWS

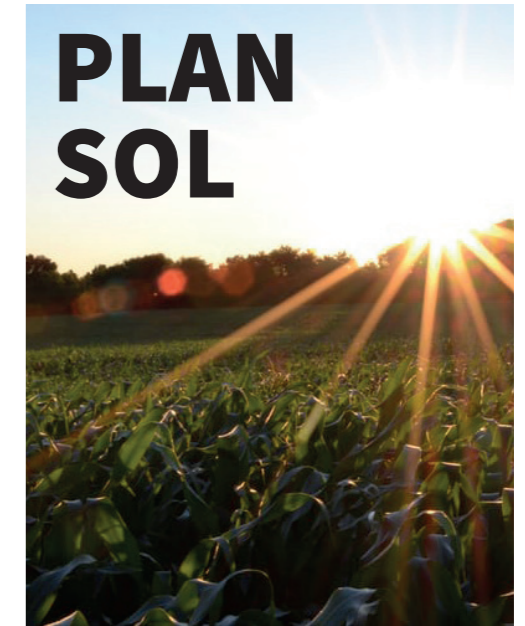
Plan Tierra for the future due to the reluctance of interviewed about this level. Therefore at the moment, only *Plan Agua* and *Plan Sol* will continue being developed. [Go to Annex 2 to learn more about Plan Tierra and the Interviews.](#)



2.6 The Service__



Free service with relevant climate information to improve crop management solutions and reduce risks related to climate variability based on climatic events and yield production, presented on an easy to use design.



Personalized risk assessment and adaptation strategy for farmers, developed by a team of climate change adaptation experts.



FIGURE 4 - PRODUCT DESIGN

Plan Agua__

Free service with relevant climate information to improve crop management solutions and reduce risks related to climate variability based on climatic events and yield production, presented on an easy to use design.

Internal Purpose:

The purpose of *Plan Agua* is to attract customers through reliable and detailed information, creating awareness of the existence of real problems in small and medium farmer, and giving relevant and easy to understand information to improve crop management decisions.

The Product:

Plan Agua is based on the development of a toolkit that will be used both from an Smartphone and tablet app as from the website, aimed to help farmers to manage climate-related risks and opportunities, and to help them in building resilience to extreme climate events. The goal of this service is to create a practical and easy to use tool. Users will be able to access it from their mobile phone or tablet from any location, facilitating its handling in the field. It is based on the Development of the Atmósfera Smart Decision-Making Toolkit, a user-friendly interface that will enable users to easily choose from a comprehensive range maps and projections and make informed management decisions.

This toolkit will help the farmers to explore the hazards they are exposed to and asses their main risks. It combines local weather information and agricultural data to help farmers make informed management decisions in the near-term. Atmósfera Smart Decision-Making Toolkit will be based on relevant agricultural weather related information. This toolkit provides a downscaled short-term climate change projection for weather conditions that are particularly relevant to producers of specific agricultural commodities and projects the risk of climate events.

The Problem:

Weather data are essential for decision making in modern agriculture, as it requires up-to-date weather information to guide production processes. The accelerated pace of climate

change has led to variations in the usual dynamics, directly affecting the agricultural sector. Currently, farmers in Spain have to analyse and interpret these data themselves, as there is no platform that unifies these information into a single one, and that relates them directly to their effect on the crops.

The Purpose:

Through the development of this tool, Atmósfera wants to provide farmers with access to past, current and short-term projections weather data, in order to be able to know this information in their region in previous years, observe the climate dynamics in their area and relate them directly with specific agricultural factors. This data is basic for the farmers on their decision-making process as we can see in the next examples:

- Knowing the air temperature is important for calculating the speed of development of crops and insects
- Relative humidity allows the prediction of frosts along with the temperature, and is also key to the prognosis of crop diseases
- Knowing the wind speed and direction are basic due to their effect on soil erosion and crop damage, as well as in the programming of applications of phytosanitary products

The Solution:

Farmers will have access to a suite of past, current and projected maps directly related to agricultural aspects. It will include from temperature and precipitation maps, data on standardized precipitation indexes, air temperature, relative humidity, wind speed and direction, cooling degree days, heating degree days and atmospheric pressure, water deficit calculations to specific data on Winter Cover Crop Planting Schedules, Fresh Fruits Freeze Damage Probability, Seasonal Drought Indexes, among others, helping the farmer to make informed management decisions in the short-term.

Extras - Free Access Library:

- Plan Agua will include access to case studies and reports related to climate change adaptation Action Plans.
- Access to case studies to see how people are building resilience on their farms.
 - Reports about climate change and how it will affect the agricultural sector (fields, crops, the way of harvesting...) in Spain (free reports from public and private entities (i.e. United Nations, Spanish ministry, consultancy firms, NGOs...))



FIGURE 5 - EXAMPLE OF APP DESIGN



Plan Sol

Personalized risk assessment and adaptation strategy for farmers, developed by a team of Climate Change Adaptation experts.

Internal Purpose:

The objective of *Plan Sol* is to develop an exclusive and personalized service for each client, in which the aim is to increase the resilience of their farms against climate change. *Plan Sol* will be a top quality service, with relevant results in the clients' production, in order to strengthen and improve the market positioning of our company.

The Product:

After evaluating threats and opportunities that climate change might pose the context of the farm present, ad hoc projects will be put into place. Short and medium term adaptation measures will be included in a Strategic Plan for farmers. The Atmósfera team will do a follow up to ensure the actions are well implemented, and re-evaluate the measures if necessary in order to improve resilience and optimize the yield production. An example of a report developed by Atmósfera can be seen in Figure 6, for full report information see [Annex 3](#).

The Problem:

There are currently multiple research groups focused on climate change adaptation, with a wide range of scientific services. However, this information is not accessible to farmers, as it is presented in scientific format without direct application to the field. This means that scientific advances in this field, which are of great importance, are not currently applied in a practical way.

The Purpose:

The service offered within *Plan Sol* seeks to cover this information gap in direct access to the farmer to adaptation measures that will allow him/her to be more reluctant to the effects of climate change. By providing the knowledge of specialized consultants in this area, *Plan Sol* will be able to generate a service that unifies the latest scientific advances in this area and applies them in a personalized way to each of the clients that contract the service.

The Solution:

Methodology. *Plan Sol* consists of three basic steps:

- 1. Assess climate impacts and vulnerabilities:** team experts in the area will first carry out the collection of past data from the farm, including specific information on the crops, weather, phytosanitary measures applied, etc. This step is fundamental to know the farm and to be able to decide which will be the best strategy. The consultants will attend directly to the farm in order to know the field and to be able to interview directly with the farmers, and to collect information in an exhaustive way. The second step is the detection of the main agri-climatic indicators (MACI), useful in conveying climate variability and change in the terms that are meaningful to farm. Based on this information, future projections based on a specific modelling software will be developed by the Data Analyst.
- 2. Identify adaptation actions and tactics for implementation at a farm level:** the aim of this step is to determine what actions can be taken to enhance the ability of the area to adapt to anticipated climatic changes and meet management goals. In order to achieve this, once the specific software for this farm has been developed, the analysis of the different future scenarios and the selection of recommended adaptation measures for this farm will be carried out. The information will be included in a final report that will include climate risk assessment, as well as the recommended measures and a practical guide on how they should be implemented, including how and when they should be applied (material needed, start date, end date...)
- 3. Monitor effectiveness of implemented actions:** This step identifies metrics that can be used to assess whether tactics were effective in achieving management objectives and reducing climate-related risks. If objectives are not achieved, the measures will be re-evaluated in order to optimize the results.

Extras

Subsidies to implement adaptation strategies:

Given the importance of adaptation to climate change for the agricultural sector, there is currently a wide range of subsidies at European and national level to support the agricultural sector in implementing these measures. Given the importance of these services for farmers, Atmósfera offers a service included in the *Plan Sol* of advice in the search and presentation of projects to this type of subsidies.

Atmósfera community events

Plan Sol will also include the service Atmósfera Network. Clients will become part of a unique network, where information on the latest trends in relation to climate change will be provided, as well as training in this field for those interested

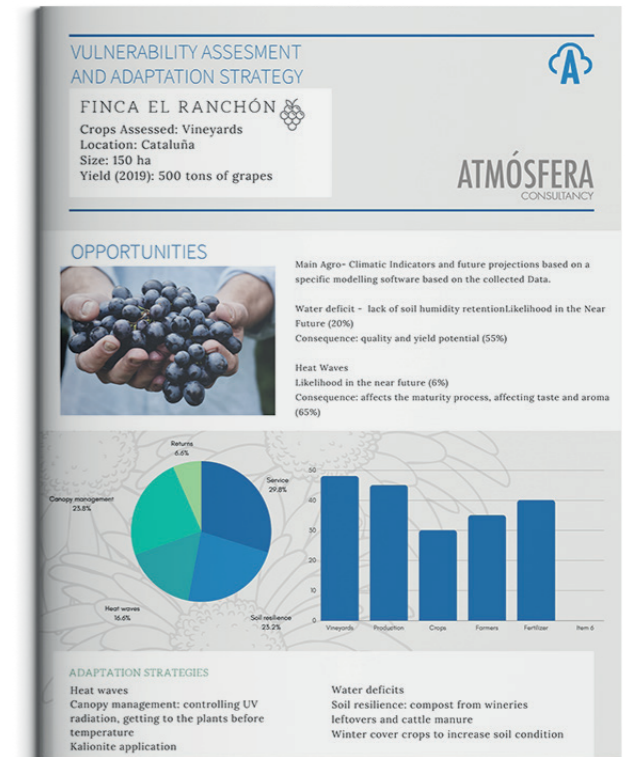


FIGURE 6 - EXAMPLE OF A VULNERABILITY ASSESSMENT AND ADAPTATION STRATEGY DEVELOPED BY ATMÓSFERA



2.7 Business Canvas

This Canvas (see figure 7) has been chosen instead of the original because this model takes social and environmental aspects into account.

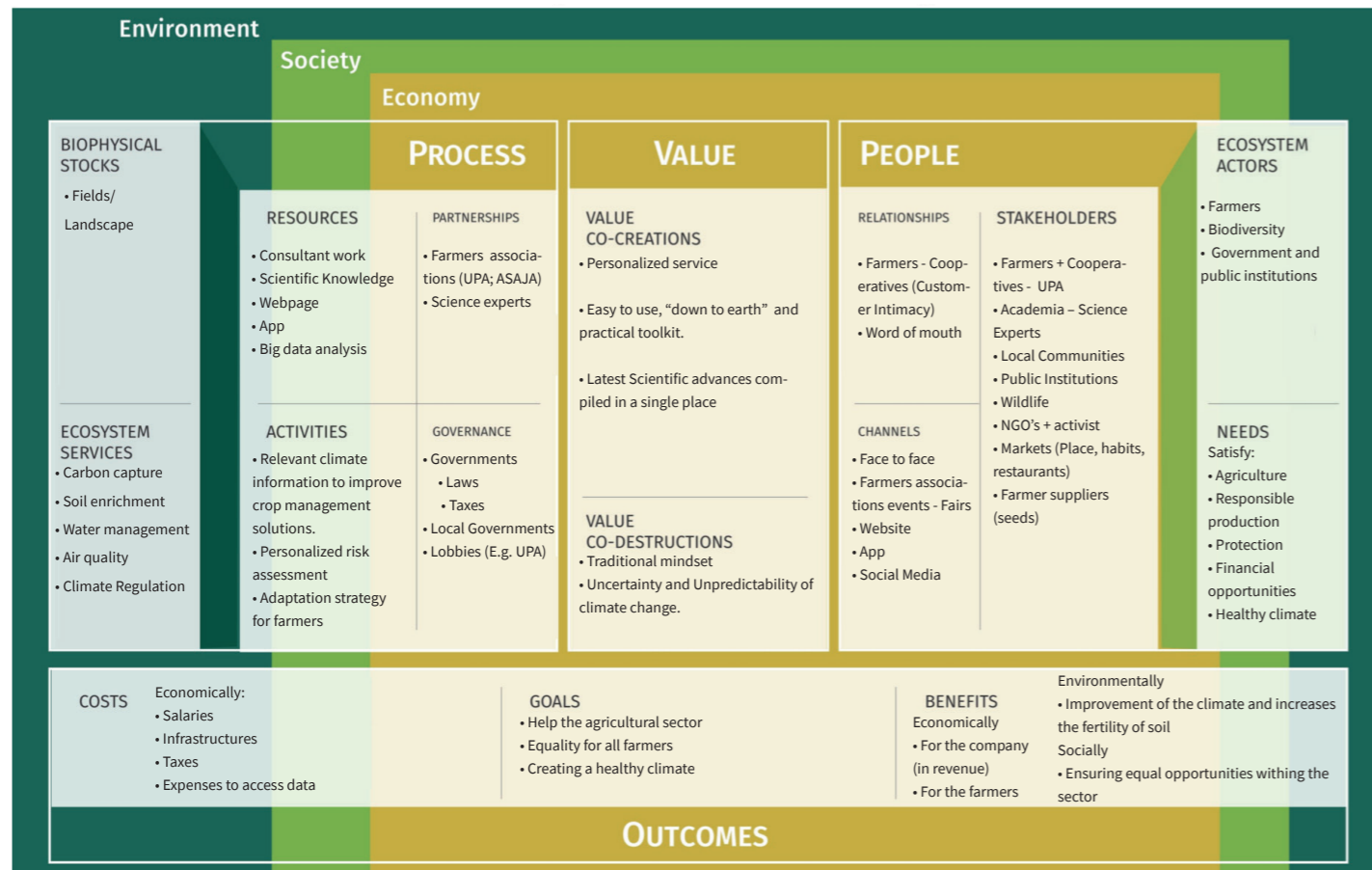


FIGURE 7 - ATMÓSFERA BUSINESS CANVAS

The Flourishing Business Canvas model was developed by Edward James consulting. In this model the business plan is described according to four categories; process, value, people and result. Each category describes a number of subcategories that together form the Flourishing Business Canvas model. These are described below:

Process:

Biophysical Stocks: within Atmósfera these are the fields and landscapes that will be redeveloped in order to create climate-proof farms.

Ecosystem services: the service given by Atmósfera has several advantages. For example, more carbon can be absorbed

from the air because more bio-diversity is created around the farms. This increases the air quality. In addition, the soil will become more fertile and water will be better managed.

Resources: these are the employees (e.g. the consultant and big data analyst). There are also intangible resources such as knowledge, the web page and the app that are essential for the organization.

Partnerships: farmer associations (e.g. UPA, ASAJA) because they ensure the agricultural sector is informed with the latest trends, including the effects of climate change in their businesses. In addition, scientist are partners, this is because they ensure that new information is brought to the market that is essential to continue to provide a good service.

Activities: the company offers relevant climate change crop management improvement information. In addition, Atmósfera makes personal risk assessments and helps farmers with adaptation strategies.

Governance: These are both local and national government. The rules and policies they make have a direct impact on business operations. In addition, lobbies of large organizations also have an influence on business operations because when they make certain decisions, the choices made by the market can influence the demand for Atmósfera's services.

Value:

Value co-creation: personalized service, where close contact with the customer is a priority. The tools that are offered are down to earth and therefore easy to use for everyone, even for people who normally aren't that technical. Thanks to the partners and good data analysts, the most current and accurate data can easily be displayed in one place.

Value co-destruction: the traditional mindset that farmers often still have. Farmer's businesses are often surrendered from father to son. As a result, they often feel that they already know what to do. This makes them less motivated to choose the services of Atmósfera. In addition, the climate is unpredictable and things can happen that are beyond Atmósfera's control. As a result, the service offered might seem to be of inferior quality.

People:

Relationships: the customer is central. This creates a bond with the customer. In the end, this will potentially lead to word of mouth advertising.

Channels: mainly face to face. For example, Atmósfera will also be present a lot at fairs and events in order to keep in touch with customers. In addition, Atmósfera also has an app and a web page with which customer contact is established.

Stakeholders:

Farmers + Cooperatives: customers of Atmósfera. In addition, the wishes and ambitions of this stakeholder can influence Atmósfera's business operations.

Academia – Science Experts: ensures that the knowledge and data shared by Atmósfera is up-to-date and accurate. This allows the service to remain of good quality.

Public Institutions: this institution has an interest in ensuring that air quality and biodiversity, etc. are not unduly affected. Through the consulting that Atmósfera can offer these factors can not be negatively impacted.

Wildlife: Within the advice that Atmósfera gives, wildlife will always be taken into account. This is why this stakeholder is also interested in the existence of this organization to ensure better protection of wildlife.

NGO's + activist: Atmósfera provides climate proof advice which also ensures equal opportunities for farmers. This often overlaps with the goals of NGOs and activists. This allows us to work together for a better future.

Farmer suppliers: Atmósfera gives advice that can lead to other crops being grown. As a result, the demand from the supplier of seeds, for example, may increase or decrease.

Ecosystem actors: includes mainly the agricultural sector in Spain and all the people that depends direct and indirectly from this sector. Also, Public Administration will be impacted, as Atmósfera will help them to achieve to of their main goals, gain resilience to climate change and fight inequality at the same time.

Needs satisfy: the service offered by Atmósfera contributes to responsible agriculture, protection of nature, a cleaner climate and brings financial opportunities for all farmers.

Outcome:

Costs: at Atmósfera the financial cost are the salaries and expenses to access data.

Goal: Atmósfera's goal is to help the agricultural sector become climate-proof based on the implementation of adaptation measures. In order to create equality for all farmers but also by creating a healthy climate in which biodiversity is as little affected as possible.

Benefits: These benefits go beyond just financial benefits. The economical benefits for the company (in revenue) as for the farmers who are more resilient and can therefore create more financial benefits for themselves. In addition there are benefits for the climate because the consulting provided will help nature to thrive around farms. This results in the improvement of the climate and increases the fertility of soil. And Socially Farmers would have equal opportunities.

3. Market Analysis

In this section the market in which Atmósfera will be active is described. First of all, a description of the total market has been made. Then a description is made of the niche on which Atmósfera will focus. Finally, a PESTEL analysis has been made which describes the factors influencing the market and a competitive analysis is mapped out.

3.1 Analysis of the Agriculture and Livestock Sector in Spain

To better understand the environment of Atmósfera, and to have a better perspective of potential customers and define a strategy, the agricultural sector in Spain has been studied through a segmentation of the agricultural sector.

The variables to take into account in market segmentation have been; the types of crops and livestock that are produced the most, the number of farms by their size, the ages of the producers, the gender of the producers in Spain, and finally the geographical distribution of the agricultural exploitation by autonomous communities. These variables have been chosen due to the relevance they have when it comes to having a clear image of how the agricultural and livestock sector currently works and thus being able to offer the best possible service. Variables such as age and gender make Atmósfera more familiar with the type of customer it may have in Spain, the geographical location of farms and farm sizes helps Atmósfera to understand how the sector is composed in general terms and what are the Autonomous communities with more possibilities to generate business and finally the types of crops and livestock help Atmósfera to know what type of production is likely to be the most worked.

As shown in figure 8, the distribution of the types of crops in Spain is very varied. It can be highlighted that the most produced crops in Spain are citrus with a 12% presence over total production, fresh fruit with 15% of total production and fresh vegetables with 33% of total production in Spain. Other types of crops such as grapes, rice or corn are also produced in Spain, but in a smaller proportion than those mentioned above.

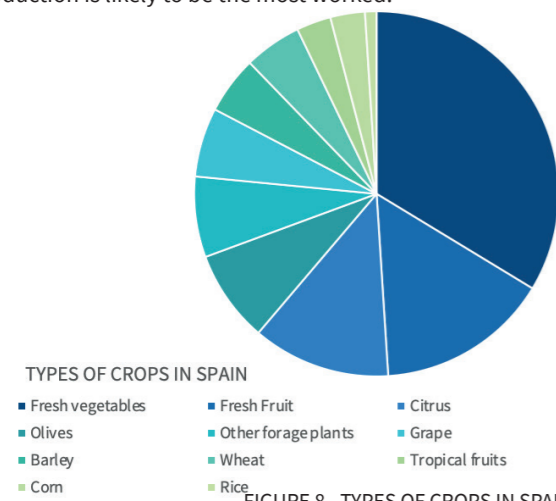


FIGURE 8 - TYPES OF CROPS IN SPAIN
Source: Graph prepared by Atmósfera with data taken from PWC report and Eurostat Agricultural

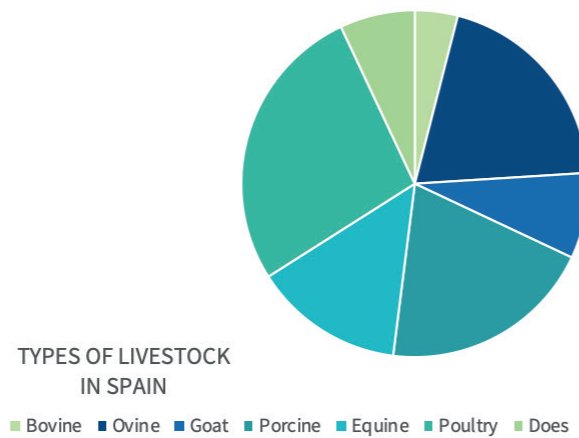


FIGURE 9 - TYPES OF LIVESTOCK IN SPAIN
Source: Graph prepared by Atmósfera from data extracted from INE.

Regarding livestock production in Spain, as it is shown in figure 9, the total number of livestock farms in each area has been analyzed. In conclusion, sheep, pig and poultry cattle predominate in Spain, with poultry being the most important with a 27% presence in Spain. Bovine livestock would be the least produced in Spain.

Size of farmers	Nº of agriculture exploitations	Nº of livestock exploitations
Small farmers	609.814	115.418
Medium farmers	214.679	63.665
Large farmers	102.427	41.044
Total	926.920	220.127

TABLE 2 - SIZE OF FARMS IN SPAIN
Source: Table prepared by Atmósfera with data taken from INE accounts.

To achieve the number of small, medium and long farms and ranches in Spain, the following classification has been considered as it shown in the Table 2:

- Small Farmers: exploitations from less than 1ha to exploitations of 10ha.
- Medium Farmers: exploitations from more than 10ha to exploitations less than 50ha.
- Large Farmers: exploitations more than 50ha.

In Spain there are a total of 926,920 farms dedicated to agriculture. Approximately 65% of the total is made up of small farmers, 23% is made up of medium-sized farmers and only 11% of all farms in Spain are owned by large-scale farmers. Regarding the livestock sector, it can be seen that 52% of the total holdings belong to small cattle farmers, 28% belong to medium cattle farmers and only 18% of the total to large cattle farmers.

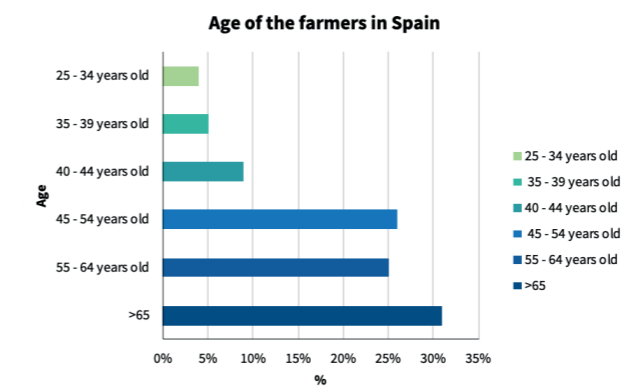


FIGURE 10 - AGE OF FARMERS IN SPAIN
Source: Graph prepared by Atmósfera with data taken from PWC report and Eurostat Agricultural.

The age of farmers and ranchers in Spain is high as can be seen in figure 10. About 82% of the owners of the farms are between 45 years old and over 65 years old. Only 18% of farmers in Spain can be classified as young and middle-aged.

In Spain, the rural exodus affected women more than men, who moved to urban centers to a greater extent than men. Currently, in the agricultural sector in Spain, the segmentation by gender is 76% men and 24% women.

As can be seen in figure 11, not all the communities in Spain have the same number of farms. Andalucía can be highlighted as the autonomous community with the most agricultural holdings. Castilla la Mancha, Castilla y Leon, Valencia, and Extremadura also have a large number of farms. The rest of the autonomous communities have a smaller number of farms.

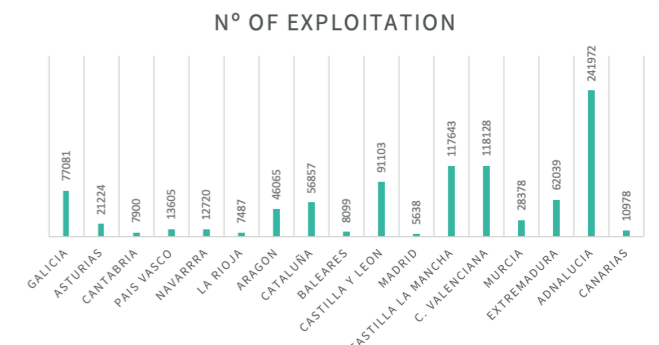


FIGURE 11 - NUMBER OF EXPLOITATION PER REGION
Source: Graph prepared by Atmósfera from data obtained from the Government of Spain.

3.2 Our Customers__

At the moment it has been decided in Atmósfera to start working with smaller companies and cooperatives as they prove to need external risk assessment and wish to be more resilient. Future lines of business could include companies and insurance companies.

Currently, the number of small farms in Spain is high, it is 725.232 farms (INE, 2016 & 2009). This represents approximately 63% of the total agricultural exploitations. The number of cooperatives in Spain is 3.699 (Cooperativas Agro-alimentarias, 2017). Atmósfera has chosen to focus on these types of consumers firstly because of the little diversity of activities that they produce, which means that before climate change events, they would be more exposed than larger farmers with more activities. Secondly, it is due to the small capacity to pay that these farmers have, they are going to need a well-customized service that is personalized to their needs in terms of adaptation to climate change instead, which motivates and encourages Atmósfera to provide quality service to bring their customers a competitive advantage

through adaptation strategies.

Surveys and interviews carried out by Atmosfera have reinforced the idea of creating this business from adaptation services to small farmers and ranchers to make them less vulnerable to climate change.

In Atmósfera a vulnerability study of small and medium farmers and ranchers in Spain has been carried out. To carry out this study, the number of small farms per autonomous community has been analyzed. Using this data and together with data obtained from the effect of climate change in Spain by autonomous communities twenty years from now, the degree of vulnerability of small farmers has been calculated. Currently, and according calculations, approximately 40% of small farmers and ranchers are vulnerable to climate change in the next twenty years. This evolution of climate change can be seen on figure 12. The procedures to follow in calculating vulnerability can be found in the [annex 4](#).

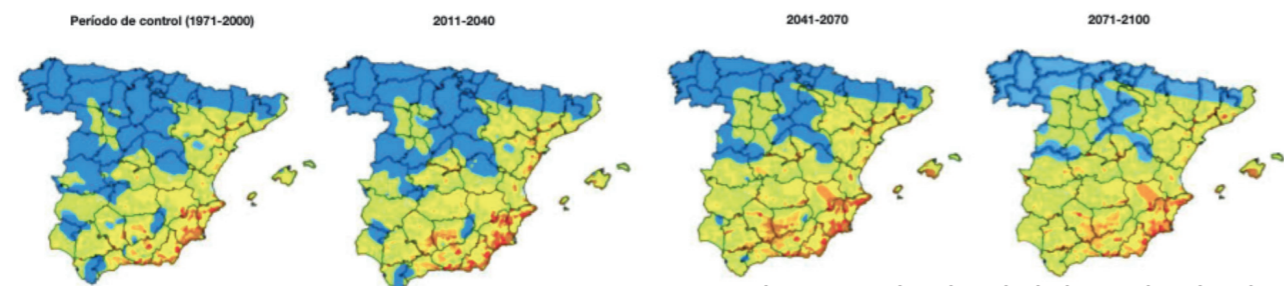


FIGURE 12 - MAP OF EVOLUTION OF CLIMATE CHANGE IN SPAIN
Source: PWC 2019 Informe sector agrícola Español

3.3 Market Size__

To determine the market size of Atmósfera and thus have an estimate of the market opportunity, the study has been carried out, dividing it into three parts. First, various factors of the Total Addressable Market (TAM) have been analyzed, second the Serviceable Available Market (SAM) study and finally, the Serviceable Obtained Market (SOM) analysis. Through this method, it has been possible to get an idea of the potential customers that Atmósfera can aspire to (see figure 13).

Due to the small number of cooperatives that exist in Spain in

comparison to the number of farmers in Spain and the impossibility of finding sufficient data for subsequent calculations, it has been deemed convenient to continue the calculation without taking cooperatives into account, which means that the target calculated later in the Serviceable Obtained Market (SOM) analysis would be even higher.

To carry out the TAM study, data has been analyzed on the number of farms dedicated to agriculture and livestock in Spain and the total income they produce a year.

The result is that the agricultural sector in Spain corresponds to 2,6% of GDP, with a total income of 25.3 M € per year (PWC, 2017). The total number of farms dedicated to agriculture and livestock is 1.147.047 farms (INE, 2016 & 2009) .

To calculate the SAM, the potential consumers that Atmósfera would have with our business model. The total number of small farms dedicated to livestock and agriculture in Spain has been calculated, currently, it is 725.232 farms. The result is that the total possible income for small farmers and ranchers in Spain is 15.996M €.

Finally, the SOM has been analyzed. In order to carry out this analysis, it has been decided to filter small farmers by the percentage that has been calculated in the analysis of vulnerability to climate change. It has been considered convenient to do it this way because it is considered that the service that is offered will be necessary by these farmers twenty years from

now. The aim is to know which is the realistic target that Atmósfera will have. Taking into account that Atmósfera believe that 40% of small farmers are vulnerable to suffer the consequences of climate change twenty years from now, it has been concluded that our SOM will be 290.093 farmers, and these generate according to our calculations 6.398M € year.

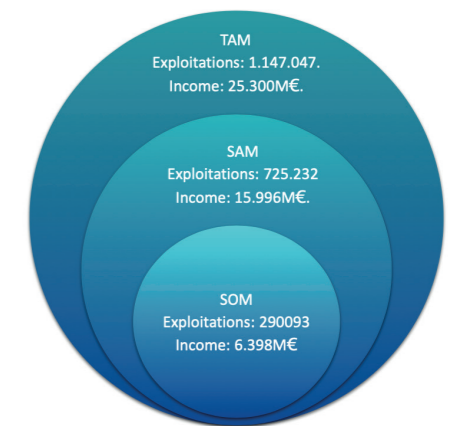


FIGURE 13 - MARKET SIZE

3.4 PESTEL__

Within this section, the market analysis is mapped out. This gives a picture of the current market in which Atmósfera will operate. This has been mapped by means of a PESTEL and various data collected in the field by means of interviews and surveys during the validation.

Political:

New government, Spain is experiencing for the first time a left-wing coalition, PSOE - Podemos, government in which it has a clear tendency towards a “green future”. Spain currently has different ministries that support agriculture and the great challenge facing the sector with climate change; Ministry of Agriculture, Fisheries, and Food and Ministry for the ecological transition and demographic challenge (ministry specifically created to fight climate change, among other objectives).

Economical:

Since the Covid-19 crisis there is a lot of lot uncertainty in the world economics, and so also in the Spanish economy. The Spanish economy had a steady growth the last few years since the crisis and the unemployment rate was dropping as

well (Carreras, Llorens, & Jimeno, 2019)pectations are that due to Covid-19 in the end of 2020 both the GDP and the employment rate in Spain will drop significantly. In 2021 both of these numbers will rise again but will stay below the level of 2019 before the covid-19 crisis.

Agriculture is only 2.8% of the GDP in 2018 and has 4% of the workforce. Spain is the world's largest producer of olive oil and the world's third largest producer of wine. The country is also one of the largest producers of oranges and strawberries in the world. The main crops are wheat, sugar beet, barley, tomatoes, olives, citrus fruits, grapes and cork. Livestock is also important, especially for pigs and cattle. The agricultural sector is important in Spain due to the many jobs and economical value it brings. In 2017, the sector ensured that 749.700+ people got a job. it contributed to improving the Spanish trade balance by 6.555 million euros. Due to the amount of of job and economical value this sector brings it is a relevant sector for Atmósfera to operate in.

3.4 PESTEL__

Social:

As previously stated, the agrarian sector in Spain comprises a population with a high age range. According to the latest data published by Eurostat on the distribution of farms according to the age of the owner, only 4% of owners are under the age of 35, 14% are between the ages of 35 and 44, 51% between 45 and 64 years old and the remaining 31% are over 65 years old. Another fact to highlight is the breakdown of agricultural employment by gender since 76% of those employed are men and only 24% are women.

As observed in interviews, surveys, market studies, and direct contact with potential clients via phone call, there is a certain rejection of external advice on their crops, especially in small farmers. This rejection is due to the lack of trust in the unknown. This trust can be generated or created by the promotion of satisfactory projects already carried out by Atmósfera. There is also an experience-based perception of the negative consequences of climate change.

Technological:

In the PWC report on agriculture in Spain and its future, study show the access to technology in the agriculture sector (see figure 14).



FIGURE 14 - ACCESS TO TECHNOLOGY
Source: PWC 2019 - Bargués & Oller, 2019

The result is that 28% of them use GPS or other systems and 26% use mobile apps. This data shows how the agricultural sector is increasingly using new technologies, whether it is an app or GPS systems. The relevance of this data has been deemed convenient from Atmósfera because *Plan Agua* business line is based on free information via website or app in order to attract new clients. This number is only for farms that are already using their phone for related purposes. The number of farmers that already has access to a phone is high-

er and therefore there is more potential for Amósfera to attract new clients.

In Spain, small farmers tend to be single-family businesses which means that the family business usually passed on from generation to generation. Currently the average age in the agriculture sector is 62 and 53 in the livestock sector. This generation is more resilient to using a mobile phone. The expectation is that the number of farmers using a mobile phone will increase as the new generation takes over the family business (Peri, 2019).

Environmental:

As is shown in the climate change scenario map *AdapteCCA*, the Iberian peninsula will be severely affected by climate change, especially the south and the east area of Spain (*AdapteCCA*, 2020)

Portugal is the most vulnerable country to the climate change with Spain at number four in that ranking as is shown in the PWC report .

The Mediterranean is very vulnerable to climate change. A combination of humidity, drought and temperatures makes the risk of forest fires very high. In addition, there is a high biodiversity that allows fires to spread quickly and groundwater sinks further into the ground, causing the drought to grow (Especial Life, 2017).

The European Green Deal of the European Commission (EC) is the new strategy for a European economy that is more sustainable, cleaner, safer and healthier.

Research and innovation are important to make this possible. This means that at a European level more money goes to climate change projects. This means that more attention will be paid to climate change which is relevant for Atmósfera, because this will make Atmósfera a more interesting company (European Commission, 2020).

Legal:

Through the data extracted from the master's thesis "Analysis of the sector of ecological agriculture in Spain" by Paula Vázquez San Antonio, it has been determined that the legal framework surrounding Atmosfera is:

- In Spain, organic production began to be regulated in 1989. Currently Council Regulation 834/2007 on production and labeling of organic products developed by Commission Regulations, 889/2008 and 1235/2008 is the one that this in force.

- Regarding European regulation, the Commission's Implementing Regulation (EU) 2017/1862 of October 16, which modifies R (CE) 1235/2008, which establishes the implementing provisions of R (CE) 834/2007 of the Council as regards imports of organic products from third countries.

- Finally, regarding Spanish legislation, Royal Decree 833/2014, of October 3, which establishes the General Registry of Ecological Operators (REGOE) and creates the Coordi-

3.5 Competitors__

Different types of competitors have been analyzed, being the main one Suez Agriculture. Other companies such as AgriAdapt and Agroclimate differ in the business model or service, although their offer could potentially conflict with Atmósfera's possible clients. Therefore further analysis has been carried out to analyze these companies' strengths and weaknesses and can be seen in the table 3, for further information about the complete analysis go to [annex 5.](#)

COMPANY	What they do	Strengths	Weaknesses	Similarities	Differences
Suez Agriculture	Advices agricultural entrepreneurs to face challenges of the sector and improve profitability of their farms through an integrated solution that includes the improvement of farming systems and a more efficient use of their resources. Suez Agriculture is currently the most considerable and direct competitor for Atmósfera, their services directly compete with <i>Plan Sol</i> .	•Wide and diversified offer of products and services. •Clients: cities, public administrations, agriculture industry and others. •More than 160 years of experience.	•Overwhelming number of different services where the final customer can get lost. Due to the size of the company they do not transmit the feeling of being a personalized and familiar service •Not created specifically for farmers.	•Service through the hole process •Improving efficiency of the agriculture and farming sector •Technology and digitalization •Increasing resilience to Climate Change.	•They do not offer a free app to assess other channels (website, youtube) •Familiarity with our clients, working hand to hand to deliver a high quality service.
AgriAdapt	Eu project that aims to demonstrate that three of the mos important farming systems in the EU (lives tock, arable and permanent crops) could be more climate-resilient through the implementation of feasible and sustainable adaptation measures which also could have positive cross cutting environmental benefits. AgriAdapt represents a competitor for <i>Plan Agua</i> , offering a free service online with products such as vulnerability tool, map with Yield and climate information, adaptation measures, and other relevant information in the sector.	•Awa Agri Adapt Tool – Webtool for Adaptation (3 tools) •Quiz •Map with Yield & Climate observations and projections •Sustainable adaptation measures •Farming Adaptation Training pack •They have developed their own tools •Agro-climatic zone tool •Farm vulnerability tool	•It doesn't have a product that could be used in a practical way - in the field directly •No application for Smartphones and Tablets •Information is not user friendly - little intuitive	•Free service •Adaptation strategy on Farm Level with short, medium and long term recommendations •Cover the gap between scientific knowledge and adaptation measures on climate change	•Easy to use •Website and app, adapted for farmers (effectively) •Is not a business, its an european project and there's no profit
U.S. Climate Resilience Toolkit	The U.S. Climate Resilience Toolkit is a website designed to help users find and use tools, information, and subject matter expertise to build climate resilience. The Toolkit offers information from all across the U.S. federal government in one easy-to-use location. The Climate Resilience Toolkit is not a direct competitor for Atmósfera but it has been analyzed in order to determine what Tools for the sector exists in the market, the practicality of them, and its	• Great variety, many approaches to cope with climate change • Information for different moments of the process and for different projects, very wide network	• Information is poorly centralized • Search engine that refers to tool kits • Difficult to find something that really fits with each business and practical. • Generic information on different areas of USA	• Toolkits • Vulnerability assessment information • Adaptation measures	• No follow up • is not personalized

TABLE 3 - ATMÓSFERA COMPETITORS

4. Strategic Plan

Within the strategic plan, the goals set will first be described. Then the strategy will be mapped out how these goals will be achieved. These are divided into short term (0-2 years) mid term (2-5 years) and long term (10 years).

Objectives:

This section describes the objectives of Atmósfera consulting. Also the KPI's are described about how these objectives are measured.

- Helping at least 70 farmers to get more resilience against climate change within the first 2 years. This goal is achieved if at least 70 farmers have used *Plan Sol*. These farmers need to have completed the entire process of *Plan Sol*.
- Create market in Portugal by the end of year 5. This goal is achieved if a significant number of customers come from Portugal. This concerns both the users of *Plan Agua* and the farmers who use *Plan Sol*.
- Create a quality label by the end of year 10. This label is successful if it is recognised by external parties. These are not only the customers of Atmósfera Consulting, but also external stakeholders such as insurance agencies.

Short-term strategy (0-2 years)

In the short term the focus will be on farmers in Spain. Two products will be launched on the market; *Plan Agua* and *Plan Sol*. Within this, the first one will mainly contribute to marketing and brand awareness. Although a small value stream is created with *Plan Agua*, this is not enough to be profitable, however, it will acquire more customers for *Plan Sol* where the largest revenue stream will come from. Within *Plan Sol* the goal is to help 70 farmers with adaptation matters against climate change.

Mid-term strategy (2-5 years)

In the mid term, the organization will mainly focus on expanding in Spain. Nevertheless, the company will not be limited by the Spanish market only. The business will first be expanded to the Portuguese market. The agricultural sector in Portugal is one of the most vulnerable to climate change in the world. Also Portugal is geographically close to Spain which make this an excellent country to expand to.

Long term strategy (5+ years)

In the long term, the expansion of the company will go beyond only Portugal. The focus of this expansion will be the Mediterranean area. This is because the Mediterranean region will be severely affected by climate change. In general not as bad as the Iberian Peninsula. which is why our first priority is to expand into Portugal.



There are three value disciplines on which one can focus. The focus of Atmósfera Consulting will be the 'customer intimacy' aspect (B2U, 2020), as seen in figure 15. Market research has shown that there are already several major players on the market. Each of these players can already offer excellent quality. The difference Atmósfera Consulting will bring is that the focus will be on the relationship with the customer. By adopting a customer intimacy strategy Atmósfera can excel in customer attention and focus on customer service. This allows Atmósfera to distinguish itself from the rest of the market and thus the mission and vision will be safeguarded.

In addition, a quality mark will be developed in the long term. After the brand awareness has increased significantly, this quality mark can be developed. This quality mark shows that a company that has had consulting from Atmósfera is more resistant to climate change and therefore has less risk. In time, this label will also increase the value of the organisation. This is because customers will start to value obtaining this label, which they would not be able to get with another consultancy company. Therefore, this will give Atmósfera Consulting a competitive advantage.

5. Human Resources

This section describes all HR related topics. It describes; the HR values, which employees are needed to keep the company running and the costs that this entails.

Human Resources Department:

Objective: HR department intern objective is the following: "Excellent, highly motivated employees in order to delivered the best service for our clients, based on customer intimacy."

For Atmósfera the relationship with customers is extremely important, it relies on trust, on a personalized service, on a close relation, as a family. Therefore it's essential to find the best professionals that share our values, to be able to deliver the best service.

HR Values:

- Workers will be selected on a non-discriminatory basis, based on their experience, abilities and critical skills, considering the best interests for the organization.
- Human Resource department follows the same transparency rules as the whole company, through all the selection process and during the job length.
- Each position hiring process will be designed specifically to obtain the best results.

Human Resources Necessities:

Atmósfera's human resources will be made up of two main groups, partners and employees, see figure 16 for the organization chart.

Partners: All the founders of Atmósfera consultancy will be working on the company as "autónomos societarios".

The positions would be:

- Miguel Barrenechea: Company Executive Officer
- Jorg Peters: Company Financial Officer
- Cristina Ajamil: Human Resources Manager
- Camila Belloso: Marketing Manager
- Ana Muskilda Heredia: Key Account Manager

During the first year, the five members of the team are willing to work for 1800€/monthly, 21.600€ per year. We believe that we should grow up with our company, therefore we prefer to

invest in other aspects of the company, and receive higher "salaries" in the future. The monthly RETA it 367,80€ per partner. The total cost for the company would be of 109.839,0€ the first year. Salaries will not increase during the first two years, however there will be a 4% increase in third year.

Employees: During the first year, Atmósfera will have two full-time positions and two part-time positions in the company:

1. Information Technology team: a big data analyst full time position

Plan Agua: a big data analyst will be in charge of collecting data from open sources and analyzing it in order to relate weather and agricultural data and develop maps and projections for *Plan Agua*, in this area he will work hand to hand with an outsourced app and web developer, and the User Experience Designer.

Plan Sol: big data analyst will be responsible for the first step of *Plan Sol*, collecting data and analyzing MACI's detected by the consultancy team. Based on this information, a specific modelling software will be developed per case study.

2. Consultancy Team: two climate change experts, one full time position and one part time position

Plan Agua: working hand to hand with the big data analyst, the consultancy team will detect the relevant data to include in this service

Plan Sol: the consultancy team will be in charge of every step of *Plan Sol*.

3. User Experience Designer: one part time position

The user experience designer will be in charge of the design and development of the app and the website, in order to make our services easy-to-use for our clients, based on our "best client-experience" approach.

5. Human Resources

During the first year, salaries will be the same for every employee: 1.800€/monthly for full-time positions and 900€/monthly for part-time position. The Social Security rate is a 32% (contribution for common contingencies (23.60%), contribution for unemployment (5.50%), contribution for professional training (0.60%), contribution to the Wage Guarantee Fund (Fogasa) (0.20%), contribution for work accidents and professional illnesses (2,1%)). Employees costs will be of 85.536€ the first year. Salaries will increase a 4% yearly, starting the third year.

The second year Atmósfera consultancy will hire three new positions, one big data analyst for the Information Technology team and two Climate Change Experts that will join the consultancy team. They will receive the standardized salary for new employees in the company (1.800€ full-time positions and 900€ part-time positions). Employees cost will be of 171.072,0€ the second year.

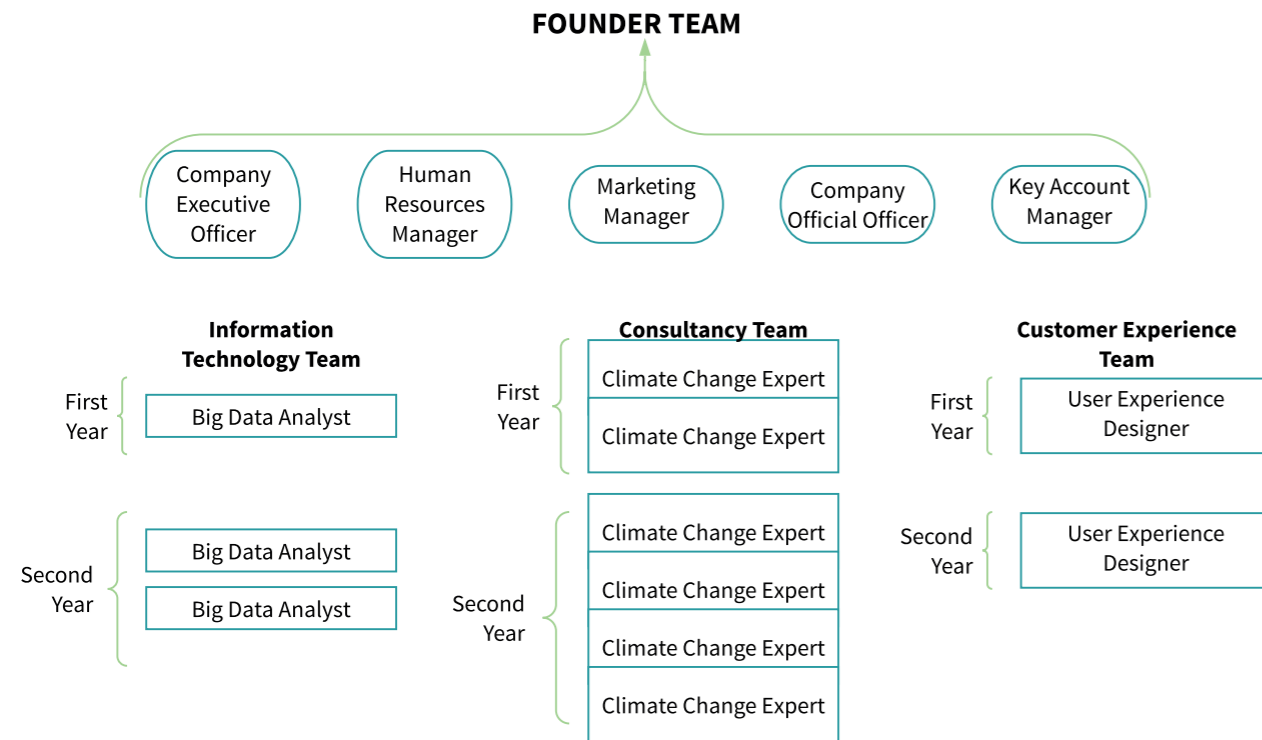


FIGURE 16 - HUMAN RESOURCES ORGANIZATION CHART

HR Annual costs for the company will be of:
 First year: 195.375,00€
 Second year: 280.911,00€

6. Operational Plan

Atmósfera is a service-oriented business, therefore in this section more information about the logistics and the procedures will be given. As it has been explained earlier, Atmósfera offers two services, *plan agua* and *plan sol*.

PLAN AGUA

Consists mainly on a free service application, this will be designed by the user experience designer so that it is easy to use and applied to the farmer's reality. For its development this area will work directly with the information technology team that will carry out the data collection and treatment, as well as with the consultancy team that will select the most important data, its relation with the real application for the farmer and the tips that will be included for each one of them. For a more visual experience see figure 17.

The development of the application will be done in the first two months after the creation of the company, the four employees involved will devote 100% of their time to this purpose during those two months. From the second month, the user experience designer will be in charge of the application, and the rest of the team will dedicate 10% of their time to updating it during the first year and second year, in order to keep the application active and with updated information.

The user will access an initial screen in which a map of Spain will appear, so that he can select the region in which his farm is located. By clicking on your region, the application will give three options, past, present and future projections. Although the information is closely related, this division makes it easier for the user to focus on a time range, depending on whether he or she is looking to use the application as an information source (past and present), as a decision tool (present and future projections), with access to information that will allow him or her to make informed decisions about his or her operations.

In each time section, the range of options that the user can choose will appear, and an extensive list of different climatological factors related to agricultural management will be included in alphabetical order. To facilitate the search, a search engine will appear at the top so that the user can di-

rectly enter the factor that interests him/her at that moment.

By selecting the factor, past, present and future projections will appear. The latter will be made from projection models based on past and current data. The application will offer tips related to decision making, including simple and concise

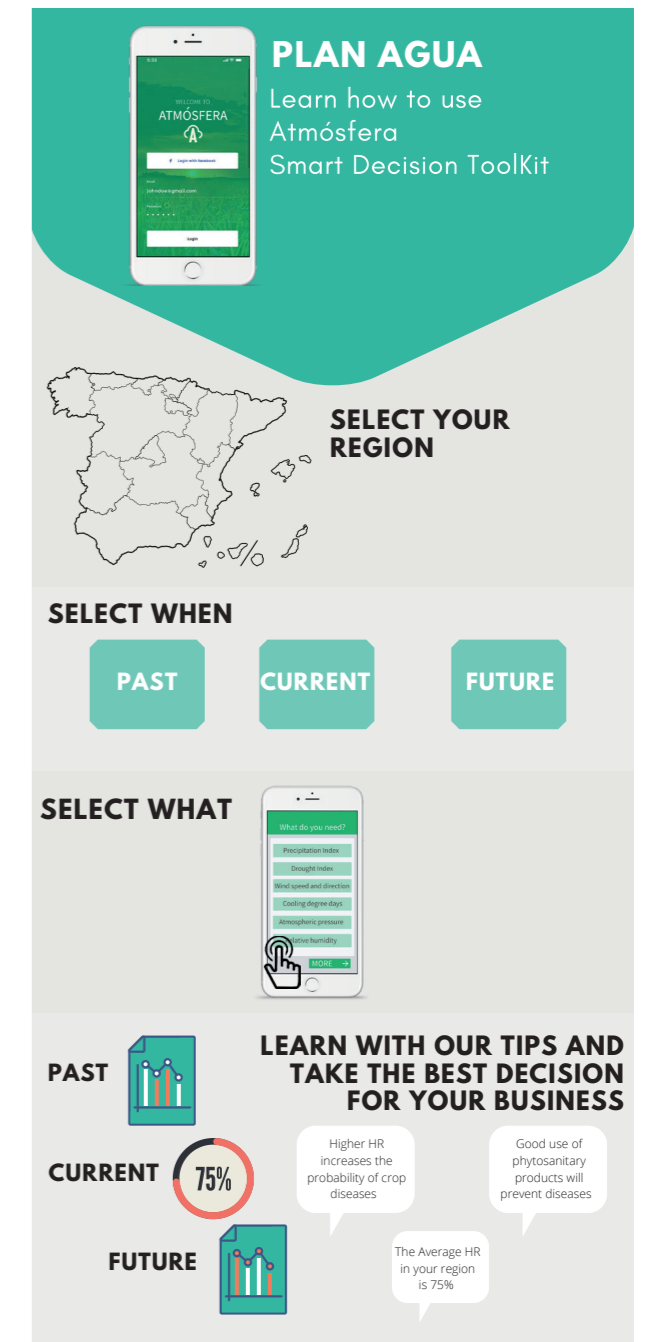


FIGURE 17 - PLAN AGUA

6. Operational Plan

PLAN SOL

Customized service that will be carried out by the information technology team together with the consultancy team. Starting from the second month, employees will dedicate 90% of their working day to this service. This service follows a clear structure, with a three steps process according to the stages and the responsibilities assigned, as seen in the chart flow figure 18.

- STEP 1: Climate impact and vulnerability assessment
- STEP 2: Identify an adaptation action plan for implementation at a farm level
- STEP 3: Follow up, clients will have a follow-up and re-evaluation service of their Action Plan, in order to optimize and adapt to each situation

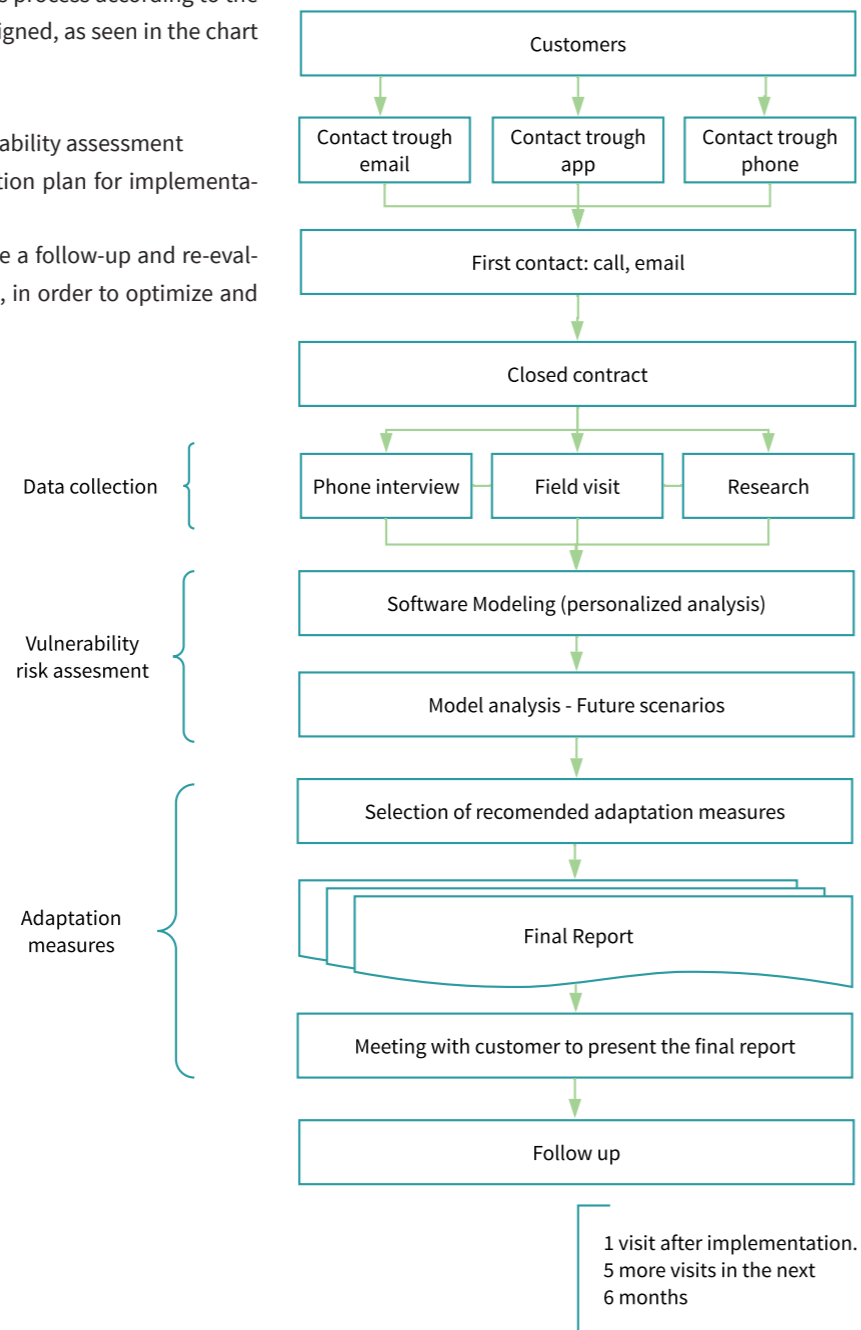


FIGURE 18 - PLAN SOL

7. Marketing Plan

7.1 SWOT Analysis



FIGURE 19 - SWOT ANALYSIS

7.2 Marketing Mix

Positioning:

Following the strategic plan, Atmósfera will be positioned in a customer intimacy aspect, offering clients tailored services and exceptional customer service, this way the company will adapt better to its customers lifestyle, having a closer relationship will allow Atmósfera's services and specially *Plan Sol* to be better tailored to the clients needs and differentiate from competitors that are well based in the market offering excellent quality service.

Segmentation profile:

Alejandro and Andrea are a couple of Spanish Farmers that live in Tauste, a Village near Zaragoza. Alejandro, who is 46 years old, has been managing his family business for the last 10 years, he has been living there since he was a little boy and his family thought him everything he knows about agriculture.

Their life is completely dedicated to their small farm which is specialized in cereals, peppers and wine, they also have livestock at the farm. Alejandro has a yearly income of 16.000 €. The family deeply enjoys the countryside, they work long hours to have the best performance, since the couple and entire family depend directly on it.

The last few years they have been very worried about how climate is affecting their business, and have been hearing a lot in the news and Farmers Unions how climate change could affect agriculture in Spain, whoever they haven't been able to find the relevant information on the effects of climate change and adaptation solutions on the agricultural sector.



7.2 Marketing Mix

Product:



Promotion

BUDGET	% from sales	Year 1	Year 2
Online	4.5%	€ 12.983,7	€ 32.447,4
Offline	6.3	€ 18.177,2	€ 45.426,3

TABLE 4 - MARKETING BUDGET

Digital Marketing:

Website and App: first online contact with our business, the audience will be able to find information about Atmósfera, contact, services: *Plan Agua* (free service with relevant and easy to use information) and inquiries of *Plan Sol*, reviews of clients and access to social media platforms.

An User-friendly website and app design is given much importance for Atmósfera, users will be able to access the information with confidence and easy understanding .

Social Media Platforms:

Facebook, Instagram and Twitter: Information about the business, promotion of services offered, tips and advice about the sector and climate change, communicating awareness of the problem, and cases and reviews of clients.

These platforms will show a more personal side of the business, offering the possibility of the followers/clients to interact with the business.

Youtube: this media will support the previous social media platforms, some of the content has been mentioned, but here is offered more in depth information: explanatory videos on

plan agua (how to download and use tool kit), successful cases with clients, working process of the company, interviews with professionals of the sector and workers of Atmósfera.

Blog: publishing informative articles, in order to keep the customers engaged and grow demand and interest in the services Atmósfera offers. It will be an educational blog that will support and share up to date information on the toolkit of plan agua.

Newsletter: to share relevant updates in the sector and company, these emails will drive the subscribers back to the main website on posts from the youtube channels and blog.

Costs:

Production Company: 85% of the budget of the first year is destined to hire a pack for one year of services, the producer company will develop videos and images that will be used throughout the different media. Pack will include (Videos about company, experience with farmers, images and videos adapted for social media), for details look at Table 4.

The Rest of the digital marketing budget will be reserved for hiring a Journalist that will create the press release and part of the content from the blog and website.

Offline Marketing:

Newspaper and Specialized Magazines: Relationship will be developed within the media sector (examples figure 20) for press releases, branded content and events. The Marketing department will not only focus on big media, but will establish special relationship with local newspapers that will allow to reach the target audience with more trust and warmth.

Participate in Agricultural events and fairs: of the sector such as: feria de Agricultura, ganadería y pesca, FIMA, FIRA, etc (examples figure 21)

Word of mouth: also plays an important role in the communication plan, as previously stated Atmosfera will position themselves following a customer intimacy strategy, the best personalized service and importance is given to each client,

in events and conferences, the company seeks to promote conversations about the company's services and provoke personal recommendations.

Cooperatives and Associations of Farmers: the company will give special attention to attend to events offering services of workshops and trainings on how to use Plan Agua, examples figure 22.

Costs: the biggest share of the offline marketing budget 60% will go to events and fairs of the sector, as specially at the beginning it will be important to get to know the client in real life. 20% will go to the specialized media, and 20% will be go to attend smaller events from cooperatives and associations. For details look at Table 4.

Distribution:

Main channels were interested clients could access Atmósfera's services:

Online: Through the website and app, there's a section where users can contact the company to get further information.

App Store: to download Atmósfera's application

Sales Representatives: commercial work

As seen, the marketing plan has been built only for the first year, results from the marketing actions will be analyzed and with an increase of the budget structural changes made, including in the strategy private events Atmósfera will host for clients, cooperatives and professionals on the sector, digital



Specialized Media

FIGURE 20



Agricultural Events

FIGURE 21



Cooperatives and Associations

FIGURE 22

8. Financial Plan

Within this section the financial plan is described. This is explained per sheet which can be found in [the financial Atmósfera document](#).

Promotion Revenue margins (Sheet 1)

The revenue will arise from two products: Plan Agua and Plan Sol. Within Plan Agua there are two revenue streams. The first revenue stream is the revenue that arises from the clicks that people will do on the webpages. This webpage will have a banner and every time someone clicks on the banner revenue will be created. The second revenue that arises from Plan Agua is the views that the webpage will have. This is because there will be a banner on our webpage which makes companies able to have advertisement on our webpage. The revenue that arises from plan Sol is the money farmers will pay for the consulting services.

The calculations for these plans are as follows:

Plan Agua Pay Per Click: The expected revenue for this plan will be **6€** per click. The variable cost are expected to be **1,5€** per click. These costs consist of payment to the 'google search network' for putting relevant advertisements for clients and server cost. The profit for this product will therefore be $6€ - 1,5€ = 4,5€$ per click, which is a **75%** margin.

Plan Agua Pay Per view: The expected revenue for this plan will be **0,18€** per view. The variable cost are expected to be **0,16€** per view. These variable costs consist of the same cost as for pay per click. The profit for this product will therefore be $0,18€ - 0,16€ = 0,02€$ per view, which is a **11,1%** margin.

Plan Sol: The expected revenue from this plan is calculated per consulting. For each consulting the expected amount of hours are **120**. This is for an average of 15 day with 8 hours per day. The expected revenue is **120€** per hour which results in **14.400€** per consulting. The expected cost per consulting are 10% of the income which is **1.440€** for gasoline, hotel, food etc. The profit for this product will therefore be $14.400€ - 1.440€ = 12.960€$ per consulting, which is a **90%** margin. Note that this profit is excluding the the HR Costs. Although the Cost for HR are important cost for each consulting they will not be counted as direct cost. This is because the consultants work on full time basis. This means that if there are less hours

of consulting the HR costs will still be made. The HR cost are further explained in sheet 7.

Income (sheet 2)

Within this section the income will be explained from all the products. These are the net revenues by which this income has been calculated after deduction of the variable costs. Due to good marketing the expectations are that the demand of our products will somewhat equally divided over the year. Nevertheless, for both years the expected revenue will be higher during the spring and summer months.

For both years the expectation is that not all clients pay directly. The expectations are that at least 80% will pay within 45 day and the other 20% within 90 days.

Year 1

For *Plan Agua* it is expected that **27** people will click on the banners on the webpage, which results in a revenue of **162€**. In addition the expectation are that **2.025** people will visit the webpage which results in a revenue of **364,5€**.

Plan Sol will be the main source of revenue. It is expected that **20** farmers will be helped the first year. This results in **288.000€** revenue for *Plan Sol* in the first year.

The total revenue for year one will therefore be: $162€ + 364,5€ + 288.000€ = 288.526€$

Year 2

For *Plan Agua* it is expected that **54** people will click on the banners on the webpage, which results in a revenue of **324€**. In addition the expectation are that **4.050** people will visit the webpage which results in a revenue of **729€**.

Plan Sol will be the main source of revenue. It is expected that **20** farmers will be helped the first year. This results in **718.992€** revenue for *Plan Sol* in the first year.

The total revenue for year two will therefore be: $324€ + 729€ + 718.992€ = 721.053€$

Direct costs (sheet 3)

The variable costs for year 1 are **31.160,9€** and **77.873,7€** for year 2. The cost for transport commission etc. have been put on 0% because these cost are already directly allocated within the variable costs. In addition all cost are expected to be paid within 60 days for both years.

Marketing costs (sheet 4)

The marketing cost are divided into 2 parts; online marketing (4,5%) and offline marketing (6,4%). The total marketing budget is set on 10,8% of the revenue from sales. A normal amount would be between 5-10% but the decision is to go a little higher to get more brand recognition in the first years. Atmósfera has the customer intimacy strategy, therefore the budget for offline marketing is higher so the customer will be targeted in real life.

The total marketing budget for year one will be **31.160,9€** and in year two it will be **77.764,9€**. For more in-depth knowledge of this marketing budget see [Marketing Plan](#).

Human Resources (sheet 5)

Within atmospheres, everyone will receive a similar salary. This applies to both the founders and the employees. The annual salary is 21,600€ net for an FTE and 10,800€ net for a part-time employee. Since the costs for tax and insurance also count, the final costs that Atmósfera has will be 28.512€ for a FTE and 14,256€ for a part-time employee.

The first year will include 5 owner who will receive the salary of a FTE, one data analyst, two climate change experts, one of which is a part-time employee and one experienced designer. This results in a total cost of **195.375€** for year one.

In the second year the demand of the product will rise. Therefore, three extra FTE's are needed which increases **280.911€** the total cost for HR in year two. For more in-dept knowledge of the Human Resource budget see [Human Resources Plan](#).

Profit and loss (sheet 6)

The expectations are that for the first year on the months April to October will be profitable. This is because these are

the peak months. Although the marketing is there to spread the customer over the year this is expected to not be equally divided. The total profit will be 22.658,4€. In the second year every month will be profitable and the net profit will be 214.255,7€.

Financing Plan (sheet 7)

The initial financing will be **58.000€** to cover the first expenses. This is 2.400€ for two computers and some office materials and 2.000€ for an online server. The other 43.600€ are there to the first salary expenses. All founders will put in 3.000€ for a total of 15.000€ as a share of the company. The other 43.000€ will be covered by investors.

Cash flow (sheet 8)

The initial money will be 46.800€ after the first expenses. After a year the expected cash flow **73.375,3€** accumulated cash flow. By the end of year 2 this will be **314.822,9€**

Balance (sheet 9)

the initial assets will be 50.000€ this is the initial investment. After year one this has increase to **€110.380€**. In year two this win increased significantly to **429.351,3€**.

Indicators (sheet 10)

The break even point for Atmósfera is 254.918,2€ in the first year. This means that the sum of the netto revenue should exceed this amount. For the second year this will be 403.331,8€. It is expected that Amósfera will exceed this amount. Therefore, Atmósfera will be a profitable company in year one. This results in an Return on equity of 281,% and a return on investment of 27,4%. In the second year the company will grow and the return on equity will grow to 72,7% and the return on investment to 66,5%.The payback period will be 1,14 years which ensures that the investment will be recouped in February in year 2.

Bibliography —

INE. (2009). Censo agrario 2009. Madrid: Instituto Nacional de Estadística. Retrieved from <https://www.ine.es/jaxi/Datos.htm?path=/t01/p042/a2009/prov00/&file=0708.px#!tabs-tabla>

INE. (2016). Encuesta sobre la estructura de las explotaciones agrícolas año 2016. Madrid: Instituto Nacional de Estadística. Retrieved from <https://www.ine.es/jaxi/Datos.htm?path=/t01/p044/a2016/ccaa00/l0/&file=0101.px#!tabs-tabla>

INE (2013). Encuesta sobre la Estructura de las Explotaciones agrícolas 2013. Madrid: Instituto Nacional de Estadística. Retrieved from https://www.miteco.gob.es/estadistica/pags/anuario/2014/AE_2014_04.pdf

Gobierno de España. (2020). Nuevos Departamentos Ministeriales creados por Real Decreto 2/2020. Retrieved from https://administracion.gob.es/pag_Home/espanaAdmon/directorioOrganigramas/quienEsQuien/gobiernoDelEstado/Ministerios-2020.html#.XtO_apMzZQI.

Vázquez San Antonio, P & Más Verdú, P & Belso Martínez, J. (2018) Análisis del sector de la agricultura ecológica en España (TFM). Universitat Politècnica de Valencia, Valencia. Retrieved from <https://riunet.upv.es/bitstream/handle/10251/110662/V%C3%A1zquez%20-%20An%C3%A1lisis%20sector%20de%20la%20agricultura%20ecol%C3%B3gica%20en%20Espa%C3%B1a.pdf?sequence=1&isAllowed=y>

Cáceres, P. (2020). Analizamos la agenda verde del nuevo gobierno. El Ágora, diario del agua. Retrieved from <https://www.elagoradiario.com/politica/un-gobierno-mas-verde-que-nunca/>

AdapteCCA. (2020, June 24). Visor de Escenarios de Cambio Climático. Retrieved 24 June 2020, from http://escenarios.adaptecca.es/#&model=multimodel&variable=tasmax&scenariopc=rcp85&temporalFilter=YEAR&layers=AREAS&period=MEDIUM_FUTURE&anomaly=RAW_VALUE

B2U. (2020, March 28). Value Disciplines: Customer Intimacy, Product Leadership and Operational Excellence. Retrieved 28 March 2020, from <https://www.business-to-you.com/value-disciplines-customer-intimacy/>

Bargués, J. E., & Oller, R. A. (2019). El futuro del sector agrícola español. PWC. Retrieved from <https://www.pwc.es/es/publicaciones/assets/informe-sector-agricola-espanol.pdf>

Carreras, O., Llorens, E., & Jimeno, I. (2019, December 17). The Spanish economy in 2020: things are not looking so bad. Retrieved 15 April 2020, from <https://www.caixabankresearch.com/en/spanish-economy-2020-things-are-not-looking-so-bad>

ESpecial Life. (2017, March 27). Klimaatverandering in Zuid-Spanje. Retrieved 18 May 2020, from https://www.especial-life.com/klimaatverandering_8824-2/

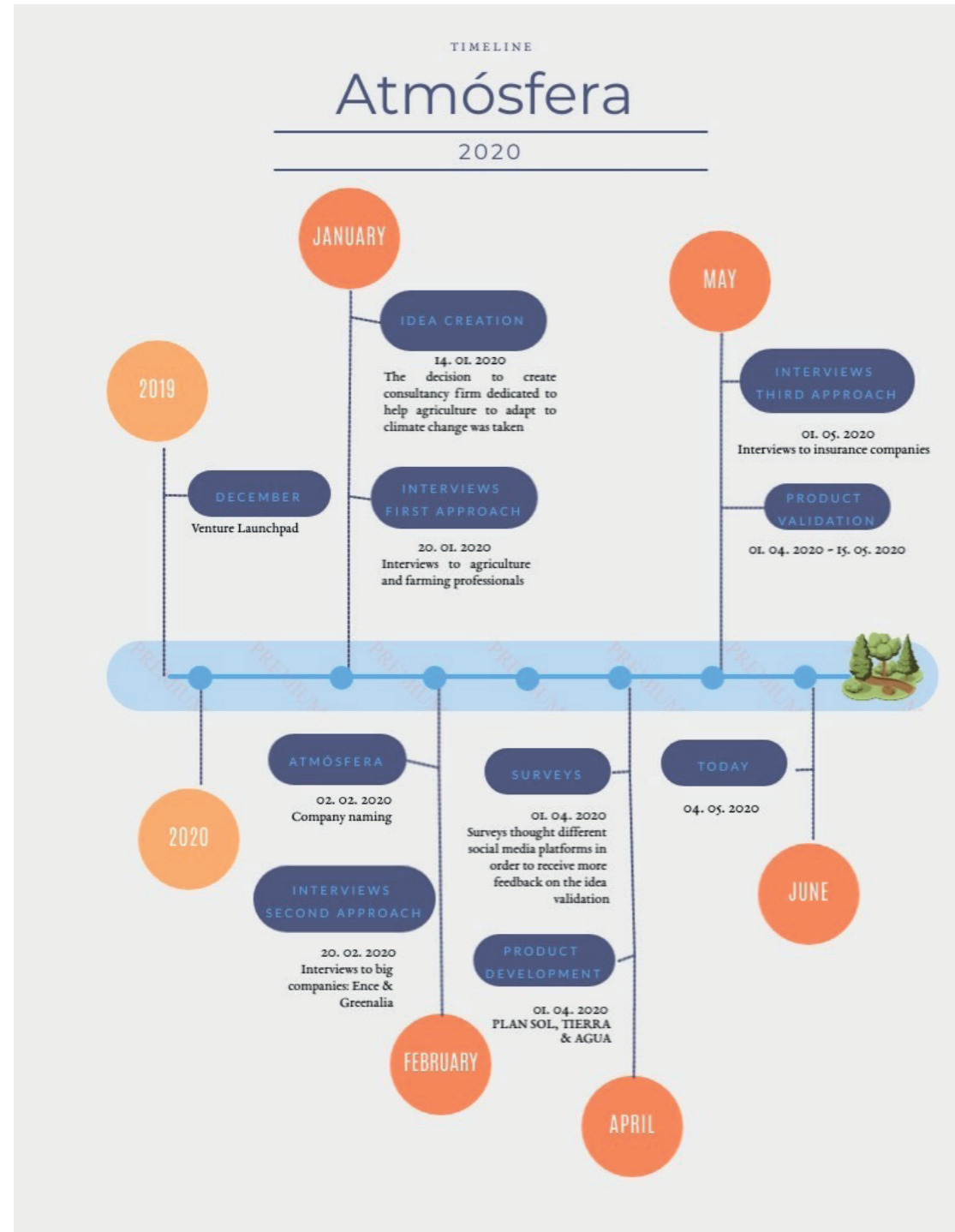
European Commission. (2020, November 5). Sustainable agriculture in the CAP. Retrieved 18 May 2020, from https://ec.europa.eu/info/food-farming-fisheries/sustainability/sustainable-cap_en

Peri, E. (2019, December 12). La edad media de los titulares de explotaciones supera los 60 a. Retrieved 15 May 2020, from https://www.elperiodicoextremadura.com/noticias/extremaduraagraria/edad-media-titulares-explotaciones-supera-60-anos_1205783.html#:~:text=La%20edad%20media%20de%20los%20titulares%20de%20explotaciones%20agr%C3%ADcolas%20de,referencia%20el%202017%20para%20cultivos



ANNEX 1

As it has been mentioned, for the idea validation 3 different methods that will be explained in the next page were used through the whole process, that can be seen in the following timeline.



ANNEX 1
FIGURE 1

INTERVIEWS

Three different types of interviews to different groups have been performed in order to understand mainly the following points:
 Level of awareness and concern about climate change effects in agriculture and farming.
 Willingness to hire an external service in order to do a climate change risk assessment.

Interviews to active professionals on the agriculture and farming sector. 9 Interviews have been performed where the questions were the following:

- What type of farming are you specialized in?
- What is your position in the company?
- Where is it located?
- How long have you been doing this? (exactly same crop/cattle)
- Has the production of the business improved?
- Has the income of the business improved?
- Have you experienced any kind of weather event that have affected t?
- Heavy rainfall, heat, droughts, floods, pests?
- Are you developing your activity in a sustainable way? Why? Why not?
- What are the main challenges your sector will face in the short-term?
- Are you aware of climate change?
- Have you contracted any external services for you company? If yes, which ones?
- Would you be open to hire external services to make climate change risk assessment?

Conclusions

100% of interviewed assure that they have suffered climate events effects such as droughts, cloudburst, high temperatures...
 50% of interviewed would accept an outsource service in order to adapt their business against climate change.
 A reluctance about climate change was perceived by the interviewees, as some interviewed did not believe in the relation between climate events and climate change.
 Interviews to active professionals working in companies whose activity is related at some stage to agriculture and farming. The companies Ence and Greenalia answered the following questionnaire:

- What is the name of your company? Where is it located?
- What is the core activity of your business?
- Could you explain the supply chain of your company?
- What is your position in the company?
- Who are you main competitors?
- Is your company taking any measures related to climate change adaptation?
- Do you ask you supply change to take care of climate change related issues?
- Are you assessing them in this issues?
- Are you aware about how climate change can affect your supply chain?
- Would you be open to contract external services to make climate change risk assessment?

Conclusions

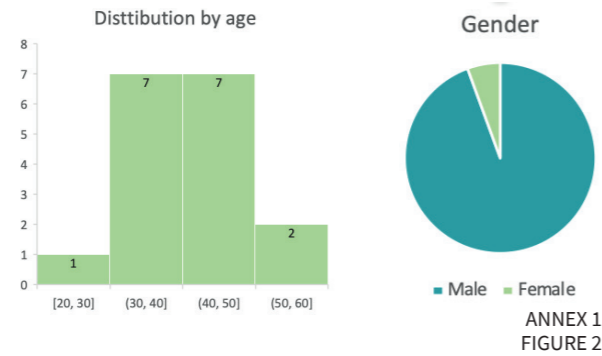
Clear conclusion of a higher level of awareness, compared to individual professionals or small business, climate change denial disappears, and their business strategies tend to include sustainability and risk assessment performance.

With an already ongoing strategies in the case of Ence, who would only be interested in atmósfera if the technology or knowledge is not available in house. In the other hand, Greenalia, was highly interested in Atmósfera's services, due to the complexity of their supply chain, were they have an elevated number of contracts with individual producers and Greenalia's risk assessment is difficult to calculate.

Interviews in the assurance sector. A conversation with Agro Insurance was carried out in order to understand how insurance companies work within the agriculture sector. The conclusion has been that due to the current system, they won't be interested in atmósfera. An we conclude that the ones to contact in the future are not insurance companies but governments.

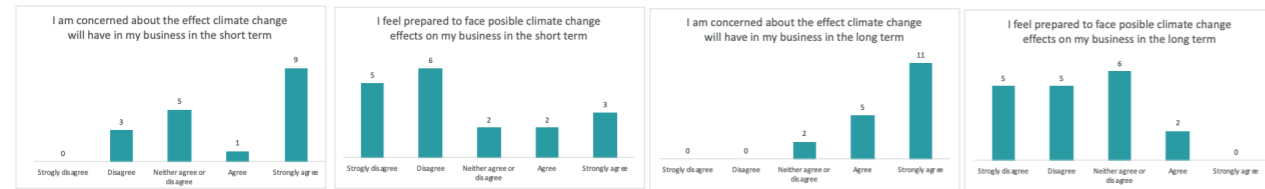
2. SURVEYS

An anonymous survey has been carried on through the month of April using social media to active professionals on the agriculture and farming industry. 18 answers were obtained with the following information explained in the next chapter.

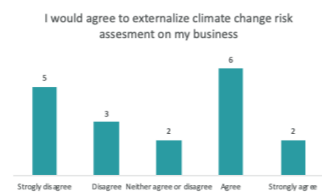


Most answers corresponded with professionals aged from 30 to 50 years old, with clear men predominance. 50% of respondents are engaged in agriculture, 10% are engaged in livestock and 20% of respondents are engaged in both agriculture and livestock, 10% are suppliers, and another 10% work in a company dedicated to sustainability. The average size of the companies surveyed is 29 employees per company. In the study of the sizes of companies in the people surveyed, very extreme maximum and minimum values are observed, which makes us take this value as not representative. Regarding market penetration, the east, north, and west of Spain, according to our surveys, would have a higher penetration ratio than in the south of Spain.

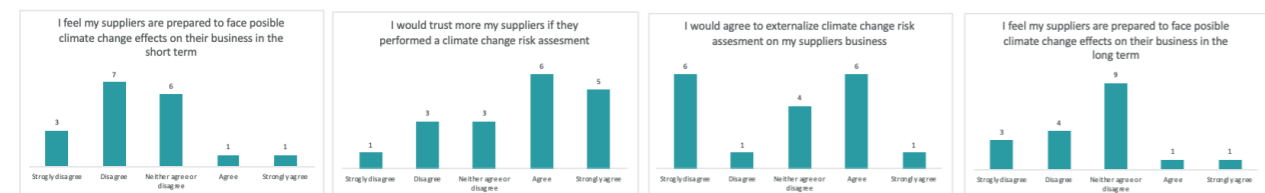
The intention was to understand and measure to what extend their concern about their business were resilient against climate change, amplifying the sample size we already had from the surveys.



High levels of concern about climate change effects can be perceived from the surveys, especially in the long term, on the other hand most of them do not feel prepared to face those changes. In the next chart, half of the interviewed would accept to perform an external climate change risk assessment on their business.



Furthermore, responders concern on the topic would increase when they were asked about their suppliers as can be seen in the following figures.



ANNEX 2

FUTURE PLAN TIERRA

Plan Tierra is an adaptation of the *Plan Sol*, in which the client will introduce on an online platform basic information of its farm, and will receive information on the climate risk to which their farm is exposed and a set of measures that can be adopted.

Purpose: Based on the data entered by the farmer (region and crop) an automated vulnerability assessment and adaptation report is created. The final report and recommendations will be sent to the client, with the possibility of an online meeting where the analyst/consultant will present and address further questions (this service will be paid separately).

Why PLAN TIERRA?

Plan Tierra is a cheaper and less personalized product for those clients that want to start to apply adaptation measures in their farm, but are on a budget or don't want to pay *Plan Sol* prices.

Why in the future?

The main variable costs of *Plan Sol* come from the data collection (mainly area and type of crop) and the creation of a model to analyze the risk (exposure and consequence) of the farm.

Once this has been done for a specific area and crop, the model can be replicated for similar cases.

Plan Tierra requires the previous accumulation of data and specific software made for specific clients in *Plan Sol*. Atmósfera has a sufficiently solid database that covers a high percentage of regions and crops in Spain, it can offer this almost automatic service in *Plan Tierra*.



PROTOTYPE VALIDATION

In order to validate the product prototype a tryptic was design to show the clients the possibilities, three interviews were carried out with the following results.

The first interviewed, Roa Wine Producers had a high acceptability to the business in general but were slightly skeptical with Plan Tierra and would be interested in Plan Sol depending on the price. In second place, Yecla Wine Producers do like the idea of grant consulting and they would be interested in a green certification for the assessment.

Finally, Hydroponic Peppers producer who are a big company, accept to pay any amount in order to have the best service for it's business. It is what they live from. Moreover, face to face assessment is what really is me.

Interviewees	Plan Agua	Plan Tierra	Plan Sol
Roa Wine Producers	✓	✗	✓
Yecla Wine Producers	✓	✗	✓
Hydroponic Peppers	✓	✓	✓

ANNEX 2
TABLE 1

ANNEX 3



Example of Final Report

Vulnerability Assessment and Adaptation Strategy Finca El Ranchón

Crops Assessed: Vineyards

Location: Cataluña

Size: 150 ha

Yield (2019): 500 tons of grapes

1. Data collection

- Climatic data from the last 30 years
- Historic yields (regional and specific data from the farm)
- Specific information (interview)
- Climatic Risk Score (RCP Scenarios)

ANNEX 3
FIGURE 1

2. Main Agro- Climatic Indicators and future projections based on a specific modelling software based on the collected Data.

- Water deficit - lack of soil humidity retention
 - Likelihood in the Near Future (20%)
 - Consequence: quality and yield potential (55%)
- Heat Waves
 - Likelihood in the near future (6%)
 - Consequence: affects the maturity process, affecting taste and aroma (65%)

3. Adaptation Strategy

Heat Waves:

- **Canopy management:** controlling UV radiation getting to the plants and therefore temperature
- **Kaolinite application:** natural spray that reduces temperatures and sunburn effects (and control green mosquito plagues)

Water deficits:

- Soil resilience: compost from winery leftovers and cattle manure
- Soil resilience: winter cover crops to enrich soil conditions

Follow up with the client:

- Regular fields visits
- Subsidies application to implement adaptation measures (EU, national...)
- Monitoring: evaluation and adaptation (replanning)

ANNEX 4

In order to know the need of small farmers and ranchers in Spain to face climate change and therefore, to know the customers who would need the Atmósfera's business, it has been decided to create a vulnerability study of the small farmers and ranchers in Spain to change the climate.

To carry out this calculation, the following process has been carried out:

1. The data of the farms for each autonomous community has been obtained.
2. The number of small farms that exist in each autonomous community has been reduced. To carry out this segmentation and due to the lack of data, a procedure has been carried out based on an assumption. It has been assumed that 63% of small farms exist in each Autonomous Community because, in Spain, of the total number of farms, approximately 63% are small.
3. The different action maps of climate change that have been accessed, such as the AdapteCCa and the PWC in the Iberian Peninsula, have been seen, and different risk percentages have been assigned to the autonomous communities according to their exposure to climate change events.
4. Lastly, with the risk percentage, what affects small farms in the autonomous communities has been affected.

For this analysis, livestock farmers and cooperatives have not been taken into account because it was not possible to find data on the distribution of farms by autonomous communities, and it was not considered convenient to make the calculation based on assumptions. For the moment, this calculation has been made as an assessment. In a future Atmósfera, by obtaining data from the business done, you will be able to provide a more accurate figure of all types of customers and thus understand more about the problem that exists.

	Nº EXPOITAIONS	Nº SMALL EXPLOITATION	SMALL EXPLOITATION ASSUMPTION BASED IN 63%	
			CLIMATE CHANGE EVENTS RISK	VULNERABLE EXPLOITATIONS
GALICIA	77081	48561,03	0%	0
ASTURIAS	21224	13371,12	0%	0
CANTABRIA	7900	4977	0%	0
P VASCO	13605	8571,15	0%	0
NAVARRRA	12720	8013,6	10%	801,36
LA RIOJA	7487	4716,81	0%	0
ARAGON	46065	29020,95	20%	5804,19
CATALUÑA	56857	35819,91	20%	7163,982
BALEARES	8099	5102,37	100%	5102,37
CASTILLA Y LEON	91103	57394,89	10%	5739,489
MADRID	5638	3551,94	10%	355,194
CASTILLA LA MANCHA	117643	74115,09	30%	22234,527
C. VALENCIANA	118128	74420,64	80%	59536,512
MURCIA	28378	17878,14	100%	17878,14
EXTREMADURA	62039	39084,57	40%	15633,828
ANDALUCÍA	241972	152442,36	60%	91465,416
CANARIAS	10978	6916,14	0%	0
	926917	583.958		231715,008

% OF VULNERABLE SMALL	39,68010081
-----------------------	-------------

Source: created by Atmósfera by data retrieved from the INE

ANNEX 5

COMPANY	What they do	Brand Heart (mission, vision, values)	Strengths
Suez Agriculture	"At SUEZ Agriculture we accompany and advise agricultural entrepreneurs to face the challenges of the sector and improve the profitability of their farms through an integrated solution that includes the improvement of farming systems and a more efficient use of water and energy."	Vision: To be a benchmark in the management of the entire agricultural production cycle, acting as strategic partner for agricultural entrepreneurs. Mission: Help agricultural entrepreneurs to make their farms profitable and minimize the environmental impact, adapting to their real needs. Values: Passion for food, commitment, closeness, sustainability, environmental responsibility, innovation and excellence.	<ul style="list-style-type: none"> Service through the hole process since the beginning of the production cycle, helping to increase production and efficiency, lowering costs and environmental impact. Financing Wide and diversified offer of products and services. Clients include agriculture, nevertheless they advise cities and public administrations. Well established in the market, with more than 160 years of experience. Worldwide reputation in environmental activities. Emphasis on the use of technologies for agriculture development. Strategy based on four pillars: digitization, innovation, sustainability and social commitment (DISS)
AgriAdapt	The overall objective of the AgriAdapt project is to demonstrate that three of the most important farming systems in the EU (livestock, arable and permanent crops) could be more climate-resilient through the implementation of feasible and sustainable adaptation measures which also could have positive cross cutting environmental benefits.	<ul style="list-style-type: none"> To promote sustainable adaptation measures among farmers, farmers' associations, technical consultants, food standard organizations and agricultural assurance companies To raise awareness and train current and future farmers on sustainable adaptation options at farm level To transfer best practices and know-how to political, agricultural and food business stakeholders and contribute to the development and implementation of EU, national and regional policies. 	<ul style="list-style-type: none"> Awa AgriAdapt Tool – Webtool for Adaptation (3 tools) <ul style="list-style-type: none"> Quiz that test the knowledge users know about climate change, agricultural impacts on different agricultural productions and possible adaptation measures at farm scale. Map with Yield & Climate observations and projections Sustainable adaptation measures: as per division of regions in Europe, they propose adaptation measures for each system studied. In each region you find solutions recommended each one offering an overview of its overall sustainability through its possible impact (neutral, positive or adverse) on a set of 9 components: emission of greenhouse gases, air quality, soil, water etc. Capacity Building: workshops and webinars Farming Adaptation Training pack Policy making They have developed their own tools <ul style="list-style-type: none"> Agro-climatic zone tool: an assessment of crop vulnerability to climate change at Agro Climatic Zone Scale is performed Farm vulnerability tool: A farmer interview to get a farm description with information about the last cultural campaign, which includes economic, climatic and agronomic data (rotation practices, livestock management). All the data is at farm level and for each of the main crops or activities.
U.S. Climate Resilience Toolkit	The U.S. Climate Resilience Toolkit is a website designed to help people find and use tools, information, and subject matter expertise to build climate resilience. The Toolkit offers information from all across the U.S. federal government in one easy-to-use location.	<p>Some of the tools that would be a direct competitors would be:</p> <p>AgroClimate: innovative web-resource for decision-support and learning, providing interactive tools and climate information to improve crop management decisions and reduce production risks associated with climate variability and change.</p> <p>AgBiz Logic: is a suite of economic, financial, and environmental decision tools for businesses that grow, harvest, package, add value, and sell agricultural products.</p>	<ul style="list-style-type: none"> Great variety, many approaches to cope with climate change Information for different moments of the process and for different projects, very wide network

COMPANY	Weaknesses	Similarities	Differences
Suez Agriculture	<ul style="list-style-type: none"> Overwhelming number of different services where the final customer can get lost. Sense of lack of closeness. Due to the size of the company they do not transmit the feeling of being a personalized and familiar service Not created specifically for farmers, less small-scale farmers oriented. Overwhelming number of different services where the final customer can get lost. 	<ul style="list-style-type: none"> Service through the hole process Improving efficiency of the agriculture and farming sector Great importance of technology and digitalization Increasing resilience to Climate Change 	<ul style="list-style-type: none"> They do not offer a free app to assess farmers they use other channels, but an app for agriculture allows to check it while on the working field Familiarity with our clients, working hand to hand to deliver a high quality service.
AgriAdapt	<ul style="list-style-type: none"> It doesn't have a product that could be used in a practical way - in the field directly No application for Smartphones and Tablets Information is not user friendly - little intuitive 	<ul style="list-style-type: none"> Offer a free service where farmers can get solutions on how to adapt to climate change. Adaptation strategy on Farm Level with short, medium and long term recommendations that Cover the gap between scientific knowledge and adaptation measures on climate change 	<ul style="list-style-type: none"> Easy to use Website and app, adapted for farmers (effectively) Is not a business, its an european project and there's no profit
U.S. Climate Resilience Toolkit	<ul style="list-style-type: none"> Information is poorly centralized It is a platform that refers you to others, it is a search engine Its overwhelming It is difficult to find something that really fits with each business Difficult to solve problem with this toolkit, it is more for generic information 	<ul style="list-style-type: none"> Toolkits Vulnerability assessment information Adaptation measures 	<ul style="list-style-type: none"> No follow up Is not personalized

