



# TFM - Final Project



*Healthful Foods for Both People and Planet*

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# EXECUTIVE SUMMARY

## Overview

Food is the defining issue of our generation. We live in a world that has prospered tremendously from the abundance of food thanks to modern farming technology and globalization, connecting billions of people to a variety of foods that was previously inaccessible.

Along with it, an immense challenge has risen: food is now threatening the health of both people and the planet. While the current global food system produces enough for all human beings, over 820 million people still suffer from hunger and malnutrition and many more have diet-related health issues such as obesity, heart disease and diabetes. Global food production is also *the leading* cause of environmental degradation, accelerating both the climate crisis and food insecurity. As climate change threatens crops through rising temperatures, extreme weather and increased droughts, food production, in turn, is a major driver of climate change.

Agriculture is one of the top emitters of greenhouse gas emissions globally. And in cities, food is among the biggest sources of consumption-based emissions. However, not all foods have the same impact: consumption of animal-based food constitutes 75% of consumption-based emissions from cities. Within this group, beef and lamb are the most damaging by far.

By 2050, the global population is projected to grow to 10 billion people and urbanization in cities is set to grow dramatically, consuming 80% of all food produced in the world. We must ask ourselves -- can we sustain feeding the global population without destroying the planet?

The answer is yes. Just as destructive, food is also the single most powerful lever we have to achieving many of the Sustainable Development Goals set by the United Nations and the Paris Agreement of keeping temperature rise below 1.5 degrees Celsius. A 2019 report published by the EAT-Lancet Commission concludes that a major transformation in the way we eat -- to a diet rich in plant-based foods and few animal source food -- is the key to bringing our food systems back to operating within planetary boundaries (e.g. within biophysical limits of the Earth system to ensure a stable and resilient planet). This transformation would optimize the health of both humans and the environment and ensure conditions necessary to foster prosperity for future generation.

We cannot sit idly knowing that we have a powerful tool readily available that can contribute to a more sustainable and food-secure future. Even though animal products are two to three times more environmentally damaging than non-animal source products, they are consumed daily and in large quantities by many. If we want to see universal adoption of a diet that reduces highly carbon-intensive foods (e.g. meat, dairy) by over 50% while doubling the consumption of planetary health foods (e.g. foods healthy for humans and the planet) like fruits, vegetables and whole grains, we need innovative and convincing solutions for consumers to change their behavior.

This is why we have created PlentiHealth, a mobile App that incentivizes consumers to switch to a mostly plant-based diet. Currently there is a lack of tools that combine sustainability education of foods with market-driven incentives for people to change their consumption behaviors. PlentiHealth combines these two aspects to allow users to see the environmental footprint of land, water and greenhouse gas

emissions of food items as compared to others and be financially rewarded (e.g. discounts at restaurants and grocery stores) for making smart purchasing decisions whenever they buy planetary health foods.

We want to make plant-based diets a norm in society and we want to make it easy and fun. With education and a financial reward system, the App intends to create a positive feedback loop between consumers, grocery stores and restaurants to continue driving each other to higher demands for foods that are healthy for both people and planet.

## Target Market, Competition & Strategy

PlentiHealth will be launched in Madrid with the goal of going global. Our customer base focuses on millennials between the ages of 22 to 40 who do their own grocery shopping. Potential App users would likely have a college degree and are concerned with sustainability, animal welfare, and/or their health and therefore are actively reducing the amount of animal source foods they eat. They are also likely to be concerned with their budget. In Madrid alone, there are 1.7 million residents between 20-39 years old. Knowing exactly how many among this group falls within in our target customer base is difficult however, as flexitarianism (e.g. someone who is mostly vegetarian but occasionally eats meat and fish) is still an emerging market. Therefore, questions remain in terms of quantifying the number of flexitarians that fall under our intended market segmentation.

Despite this challenge, research in general shows that the number of flexitarians is growing in popularity, precisely because it is *not* a restrictive diet. The exponential growth of sales of alternative meat and dairy products is also evidence that demand is rising. In the US, demand for vegan meat grew 20% between 2017 and 2018 and the trend doesn't stop there. Kellogg-owned MorningStar plans to make its entire lineup of packages foods vegan by 2021. In Europe, flexitarianism is already very popular in the UK and Germany while in Spain, the sale of plant-based products accelerated especially during COVID-19 when supermarkets and vegan meat producers greatly expanded the production and availability on shelves. All of this points to a rapidly growing market of flexitarians that our App can tap into.

In terms of the mobile App market in Spain, it is one of the most developed in the world with 88% of the population possessing smartphones. But competition in the mobile App space is high. Just in the iOS Spain store alone, there are hundreds of Apps listed under the Health & Fitness category. Based on detailed analysis of five potential competitors and our interview findings however, we have concluded that PlentiHealth uniquely fills a gap in the market by combining sustainability education of food products *with* market-driven incentives (e.g. cash-back rewards) to attract users.

PlentiHealth will be gradually rolled out in three stages every six months. The first stage will introduce Version 1.0 which is detailed in the full report. Our marketing plan for Version 1.0 will be replicated in pushing out Versions 2.0 and 3.0 as well. Specifically, the marketing plan is divided into pre-launch, launch and post-launch strategies. A major portion falls in the pre-launch phase, where we actively use wide-ranging tools to generate brand awareness and create a dedicated following for the App. Activities will involve creating Facebook, Twitter, Pinterest accounts and our own website (see Annex) to amass subscribers using a content calendar that includes news, blogs, photos, videos and articles. We will use Google Analytics to analyze the effectiveness of our posting channels and frequency to continuously improve our reach, as defined with click rates and number of subscribers.

We plan on tailoring a script of our pitch for influencers and the EAT Foundation to generate brand awareness and traction. We will also use the same strategy to pitch to restaurants and grocery stores in Madrid as partners prior to launching Version 2.0. We will fully utilize App Store Optimization strategies to increase visibility of our App in both iOS and Android App stores as well as placing ads to draw in users. In conjunction, our other post-launch goal is to retain existing users through reliable, data-driven content and making updates to the App based on user-feedback.

## Operational Overview

As the entire business is centered around offering an App, our business operations in terms of employees and workload are completely focused on generating awareness, bringing in partners and creating a well-functioning App that is easy to use with minimal glitches. The App will be free to download and use (with a premium version launched after six months) and will be available in both Google Play and iOS App Store.

The main areas of the company such as Outreach, Marketing and Finance will be initially carried out by the partners themselves. For this reason, we are not planning on hiring any employees in the beginning. Regarding the development and maintenance of the App, we will outsource it to external developers. Any other function that the partners cannot carry out themselves will also be outsourced.

Leading up to the launch of Version 1.0, four of the five partners will have been working on marketing, outreach and all other business logistics, including a crowdfunding campaign. In parallel, the remaining partner will dedicate fulltime to map, select and pursue the most adequate acceleration or incubation opportunities, as well as tournaments and bootcamps. That person will also be in charge of identifying new partners beyond potential investors. One step will be to broaden the scope of stakeholders to nutritionists, and experts in the healthcare sector in quest of validation. Another step would consist in seeking the support of those in a position to expand our visibility: such as influencers promoting a healthy lifestyle, or environmental activist youtubers.

A software company will have been identified and hired to begin App development. We will determine an optimal date to launch the App, taking into account any other events that might overshadow the App in order to avoid that possibility. In addition, the service that PlentiHealth offers in Version 2.0 requires the participation of various partners, such as restaurants and supermarkets that will provide a discount to the users of the App. Therefore, we will also begin to conduct early outreach to potential partners in Madrid in order to ensure that Version 2.0 will be launched on time (six months after the launch of Version 1.0). After Version 2.0, we will reach out to non-governmental organizations in order to feature them in Version 3.0 after an additional six months. The idea is to amass as many subscribers as possible in Version 1.0 so that restaurants and grocery stores will want to partner with PlentiHealth to gain customers and visibility. The premium version in Version 2.0 will charge a small monthly fee to customers by offering them cash-back rewards. Version 3.0 will be available to all users.

## Forecasting & Investment Needs

There are four main sources of income. The first, and most profitable, is through in-app advertising in the form of a banner that users will see in our App. This works through third-party companies that provide the service and deliver an amount of income to PlentiHealth for each click from each user.

Based on the strong marketing campaign mentioned above, we envision securing 500 users initially followed by a monthly growth rate of 20% in the first year and 30% in the second year. Out of the total number of downloads, we envision 30% to be active users (e.g. use the App daily). The second source of income is during phase two, Version 2.0 -- users who want to access the premium version with a cash-back rewards system would pay 1,99€/month. Also, during this phase, restaurants and grocery stores that want to be featured in our App will pay a subscription fee of 20€/month. Finally, the last revenue stream would come from franchising the App in other cities in the future to make our vision of going global.

The costliest items are associated with the development of the App by a third-party company and with marketing campaigns. These two areas alone will require 43.000€. The other costs are maintenance of the App through this same external company, annual salaries for the partners, ongoing marketing, and other operational costs. Once the App has been launched, there will only be one variable direct cost, which corresponds with the commission fee required by Google Play and Apple iOS store when users subscribe to the premium version.

We foresee an initial investment need of approximately 75.000€. Each partner will invest 5.000€ (totaling 25.000€). We expect to raise 30.000€ through a crowdfunding campaign and an equal amount of 30.000€ from investors.

Based on our calculations, we begin to see an important growth in profit at the beginning of the second year. The return on equity (ROE) obtained after the second period is of 89,6%, which is a very positive gain. The return on investment (ROI) for the same period is 86.3%, again a positive number since it returns on the investment at that rate. Finally, the pay-back period for the recovery of the initial investment is 1.15 years.

# GLOSSARY OF TERMS AND ABBREVIATIONS

<b>Alternative meat</b>	Mock meat made from vegetarian ingredients.
<b>App</b>	Short term for <i>application</i> , it is type of software that allows you to perform specific tasks.
<b>ASO</b>	App Store Optimization.
<b>CO<sub>2</sub></b>	Carbon dioxide.
<b>EAT Foundation</b>	EAT is a non-profit startup dedicated to transforming our global food system through sound science, impatient disruption and novel partnerships.
<b>EAT-Lancet Commission</b>	The first of a series of initiatives on nutrition led by The Lancet in 2019, followed by the Commission on the Global Syndemic of obesity, undernutrition, and climate change.
<b>GDPR</b>	General Data Protection Regulation.
<b>HR</b>	Human Resources.
<b>Flexitarian</b>	A semi-vegetarian diet, also called a flexitarian diet, is one that is centered around plant foods and with the occasional inclusion of meat.
<b>GHG</b>	Greenhouse gas emissions.
<b>LCA</b>	Life Cycle Analysis.
<b>MVP</b>	Minimum Viable Product.
<b>Millennials</b>	Born within the range of early 1980s to early 2000s.
<b>NDCs</b>	Nationally Determined Contributions.
<b>Net-zero emissions</b>	Net-zero carbon footprint, or carbon neutrality, refers to achieving net zero carbon dioxide emissions by balancing carbon emissions with carbon removal or simply eliminating carbon emissions altogether.
<b>NGOs</b>	Non-governmental organizations
<b>Paris Agreement</b>	A 2015 international environmental accord that aims to substantially reduce global greenhouse gas emissions in an effort to limit the global temperature increase in this century to 2 degrees Celsius above preindustrial levels, while pursuing means to limit the increase to 1.5°C.
<b>Planetary boundaries</b>	A concept involving Earth system processes that contain environmental boundaries. In this paper, we refer to it as being within biophysical limits of the Earth system to ensure a stable and resilient planet.
<b>Planetary health</b>	The health of human civilization and the state of the natural systems on which it depends.
<b>Planetary health food</b>	Foods healthy for both people and planet (staying within planetary boundaries).
<b>Plant-based food</b>	Foods derived from plants, including vegetables, grains, nuts, seeds, legumes and fruits, and with no animal products.
<b>ROE</b>	Return on equity.
<b>ROI</b>	Return on investment.
<b>SDGs</b>	Sustainable Development Goals.
<b>Vegans</b>	A person who does not eat any animal-source products.
<b>Vegetarians</b>	A person who does not eat meat or fish but eats dairy products.
<b>WHO</b>	World Health Organization.

# 1. INTRODUCTION

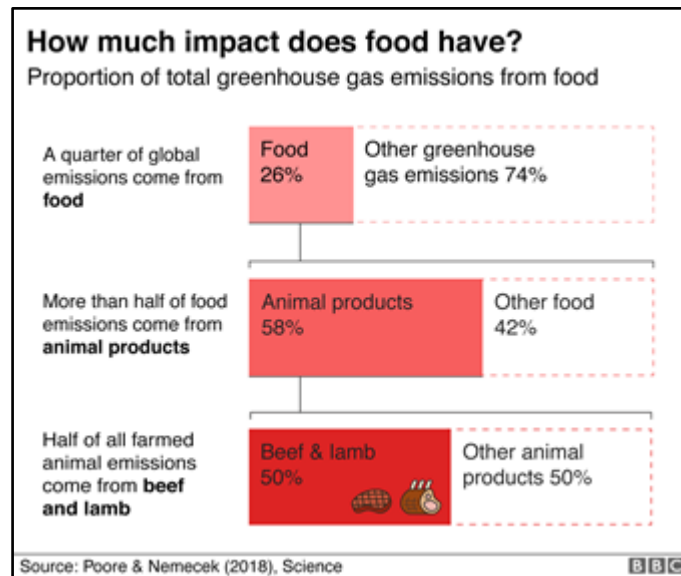
Innovation and technology in the food sector for the last 50 years has brought tremendous advances in reducing world hunger, improving life expectancy and falling child mortality rates. However, rapid urbanization, globalization and a vast growing middle class have shifted global diets to high in calories, heavily processed and animal-based. In our lifetime, food has become one of the greatest challenges to human health and the environment. In fact, food production is the single largest cause of global environmental damage in terms of greenhouse gas (GHG) emissions, freshwater use and land degradation. The international community has tried to tackle these issues by setting the 2030 Sustainable Development Goals (SDGs) and the Paris Agreement target of keeping global temperatures below a 1.5°C rise. However, there are more carbon dioxide (CO<sub>2</sub>) emissions in the atmosphere today more than any time in history and current projections show that we are nowhere near meeting the SDGs nor the Paris Agreement.

Fortunately, there is one thing we *can* do. There is wide scientific consensus that avoiding meat and dairy products is one of the biggest ways to prevent further environmental degradation and achieve the SDGs and the Paris Agreement. According to a study by Oxford University, cutting consumption of meat and dairy reduces an individual's carbon footprint from food by two-thirds. This would be a massive reduction when scaled globally. Our company, PlentiHealth, intends to tackle food insecurity, climate change, and rising health issues with an innovative App, which provides education and financial incentives for people to change their consumption habits to a mostly plant-based diet.

## 1.1. Food and the Environment

The food system and climate change have an undeniable connection. On one hand, rising temperatures and extreme weather significantly impact crops and livestock and therefore our food supply. On the other, agriculture -- together with forestry -- account for 26% of GHG emissions globally. However, the environmental impact of different foods varies greatly. Livestock rearing contributes to methane, a potent greenhouse gas, and also to deforestation due to expansion of pastureland and land used to grow crops for feeding livestock. Hence, meat and other animal source foods generate more than 50% of all food-related emissions, and within this group, beef and lamb are the biggest culprits. In cities, consumption of animal-based food constitutes 75% of consumption-based emissions.





Source: BBC

Another study from the US done by the Natural Resources Defense Council found that one kilogram of beef emits 26 kg of CO<sub>2</sub>, the highest of all the 197 foods examined. It also found that between 2005-2014 when there was a reduction in beef consumption, it was the “single biggest” contributing factor in a reduction in total GHG emissions during those same years. In terms of water, it is estimated that producing one kilogram of animal protein needs 100 times more water than producing one kilogram of grain protein for human consumption. Animal agriculture is also the leading cause of deforestation, land degradation and desertification.

Further, studies show that long-term consumption of increasing amounts of red meat, particularly of processed meat, is associated with an increased risk of total mortality, cardiovascular disease, colorectal cancer and type 2 diabetes. In Spain, out of the average meat consumed daily per person, 42% comes from red meat such as beef, with the majority of that being processed meat, which according to the World Health Organization (WHO), is why colon cancer is the most common form of disease in Spain. Additionally, the increase in deforestation to create more farmland for crops and livestock breeding puts human populations ever closer to wildlife and exposes communities to more pathogens than ever before.

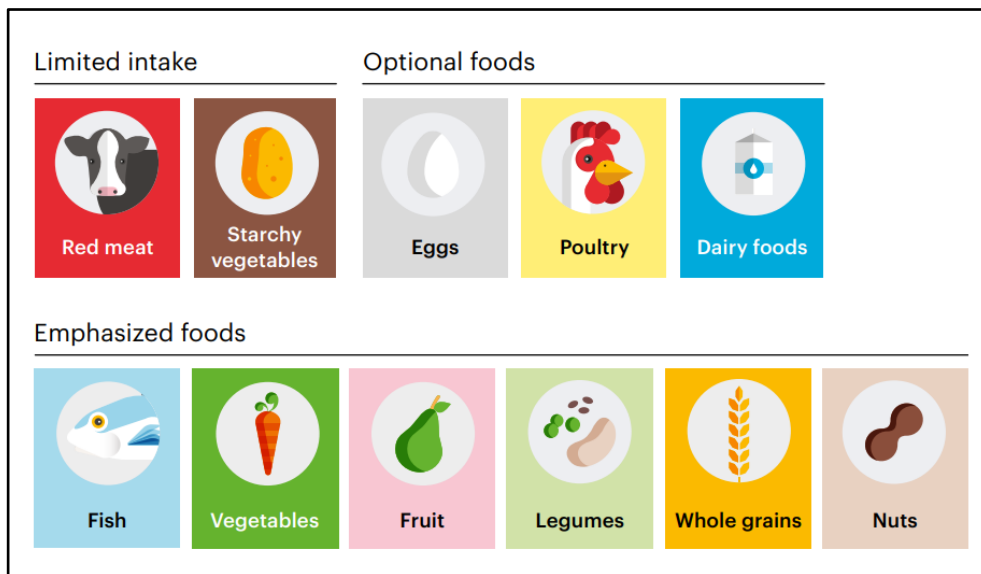
By 2050, among the 10 billion people projected to live on the planet, 80% of all food produced globally will be consumed by cities dwellers, as urbanization is set to grow dramatically. Without transforming the global food system, we will face an acceleration of the climate crises, food insecurity, and increased health issues.

## 1.2. Food as the Solution

In order to transform the food system, the way people view and consume food must undergo dramatic shifts. On a daily basis, consumers make choices multiple times in what they eat. By consuming much more plant-based foods over animal-based foods, consumers can act as major change agents in the transformation of the global food system. However, current behavioral change interventions have been

mostly information and education led by governments and NGOs that has had some<sup>1</sup> but not enough impact at a global level. A study published by the World Resources Institute found that 70-80% of food retail sales in the US and France in 2000 came from supermarkets in urban areas, while people were dining out more than ever before. The report also found that consumers tend to buy products and brands they recognize, and that price is an influential factor in their food purchases. So, if consumers are making their food choices within supermarkets and restaurants, then the food & beverage industry has a major role to play in shifting dietary habits. Together, they have the potential to transform the food production system.

Now, for the first time, we have scientific data on what foods should be consumed in order to keep food production within planetary boundaries. In 2019, a report published by the EAT-*Lancet* Commission not only adds to the scientific community’s conclusion that a major transformation in the way we eat - - to a predominantly plant-based diet -- is the key to bringing our food systems back to operating within planetary boundaries but details *exactly* how much of meat, dairy, vegetables and other food products people should eat.



Source: EAT-*Lancet* Summary Report

<sup>1</sup> Education is still a highly important factor as evidenced by its role in reducing the consumption of shark fin soup in China and Hong Kong.

	Macronutrient intake (possible range), g/day	Caloric intake, kcal/day
<b>Whole grains*</b>		
Rice, wheat, corn, and other†	232 (total grains 0–60% of energy)	811
<b>Tubers or starchy vegetables</b>		
Potatoes and cassava	50 (0–100)	39
<b>Vegetables</b>		
All vegetables	300 (200–600)	..
Dark green vegetables	100	23
Red and orange vegetables	100	30
Other vegetables	100	25
<b>Fruits</b>		
All fruit	200 (100–300)	126
<b>Dairy foods</b>		
Whole milk or derivative equivalents (eg, cheese)	250 (0–500)	153
<b>Protein sources‡</b>		
Beef and lamb	7 (0–14)	15
Pork	7 (0–14)	15
Chicken and other poultry	29 (0–58)	62
Eggs	13 (0–25)	19
Fish§	28 (0–100)	40
<b>Legumes</b>		
Dry beans, lentils, and peas*	50 (0–100)	172
Soy foods	25 (0–50)	112
Peanuts	25 (0–75)	142
Tree nuts	25	149
<b>Added fats</b>		
Palm oil	6.8 (0–6.8)	60
Unsaturated oils¶	40 (20–80)	354
Dairy fats (included in milk)	0	0
Lard or tallow	5 (0–5)	36
<b>Added sugars</b>		
All sweeteners	31 (0–31)	120
<p>For an individual, an optimal energy intake to maintain a healthy weight will depend on body size and level of physical activity. Processing of foods such as partial hydrogenation of oils, refining of grains, and addition of salt and preservatives can substantially affect health but is not addressed in this table.</p> <p>*Wheat, rice, dry beans, and lentils are dry, raw. †Mix and amount of grains can vary to maintain isocaloric intake. ‡Beef and lamb are exchangeable with pork and vice versa. Chicken and other poultry is exchangeable with eggs, fish, or plant protein sources. Legumes, peanuts, tree nuts, seeds, and soy are interchangeable. §Seafood consist of fish and shellfish (eg, mussels and shrimps) and originate from both capture and from farming. Although seafood is a highly diverse group that contains both animals and plants, the focus of this report is solely on animals. ¶Unsaturated oils are 20% each of olive, soybean, rapeseed, sunflower, and peanut oil.   Some lard or tallow are optional in instances when pigs or cattle are consumed.</p>		
<b>Table 1: Healthy reference diet, with possible ranges, for an intake of 2500 kcal/day</b>		

Source: EAT-Lancet Full Report. Developed using the planetary boundaries framework as a guide in proposing a diet that encompasses human health and environmental sustainability.

### 1.3. Emergence of a Business Idea

This is how we came up with the idea of creating a mobile App that uses financial incentives to motivate consumers to buy more planetary health foods and less animal source foods. We have named it PlentiHealth because we want to promote foods that contribute to an abundance of health for both people and planet. The App intends to combine education on a food's environmental footprint with a cash-back rewards system to help incentivize a shift in diet choices, with the end goal of transforming our food system and ensuring the ability for future generations to continue thriving on this planet.



App Logo

In terms of education, users will be able to calculate how much impact a type of food has on CO<sub>2</sub> emissions and freshwater and land use compared to other foods in the same category. The food calculator will be similar to one created by BBC as seen below, which calculates the impact of food on the environment based on how often a person consumes it on a weekly basis. The deliberate decision to take into account only the food product itself rather than provenance, is based on the finding that GHG emissions relating to the transport phase remains relatively low. It accounts for less than 10%, and it's almost insignificant for the largest GHG emitters, such as beef (0.5%). Besides transport, processes in the supply chain after the food left the farm, *in extenso*, processing, transport, retail and packaging mostly account for a small share of emissions (see Figure 1 in Annex).

Once equipped with this knowledge, they can start being financially rewarded for making responsible purchasing decisions. The healthier the food, the higher the points users can accumulate when making purchases. Points will be totaled in the App and users will be able to select how they want to apply it -- in the form of discounts at restaurants or grocery stores or donations to NGOs.


### How do your food choices impact on the environment?

Which food would you like?

Beef ▼

How often do you have it?

3-5 times a week ▼



75g, equivalent to one typical fast food hamburger, per serving

Over an entire year your consumption of beef is contributing **1,611kg** to your annual greenhouse gas emissions.

That's the equivalent of driving a regular petrol car **4,112 miles (6,618km)**.

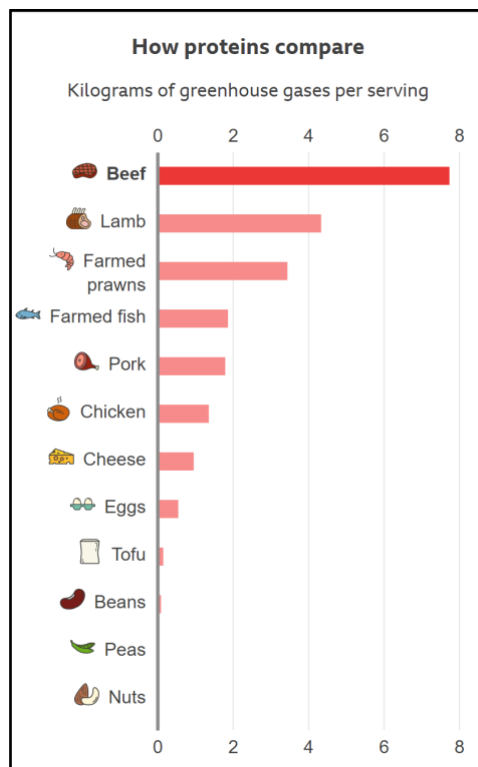
OR

the same as heating the average UK home for **255 days**.

OR

like taking **5 return flights** from London to Malaga.

Your consumption of beef also uses **4,625m<sup>2</sup> land**, equal to the space of **17 tennis courts**.



Source: BBC climate change food calculator. All figures for each food in the calculator are based on global averages.

Another feature of the App, demanded by our early adopter interviewees, is a creating a recipe-sharing function to build a community of conscientious consumers where they can add and share healthy recipes with social network. Initially adopted by conscientious consumers, the App has the potential to achieve critical mass and create a total transformation in our diet preferences.

## 2. OUR MISSION, VISION & VALUES

### 2.1. Mission

PlentiHealth seeks to promote plant-based diets and create new eating habits across communities that is healthy for both people and planet. We strive to use the power of individuals and the food choices they make daily as a powerful leverage to transform our food system to one that is healthy and sustainable.

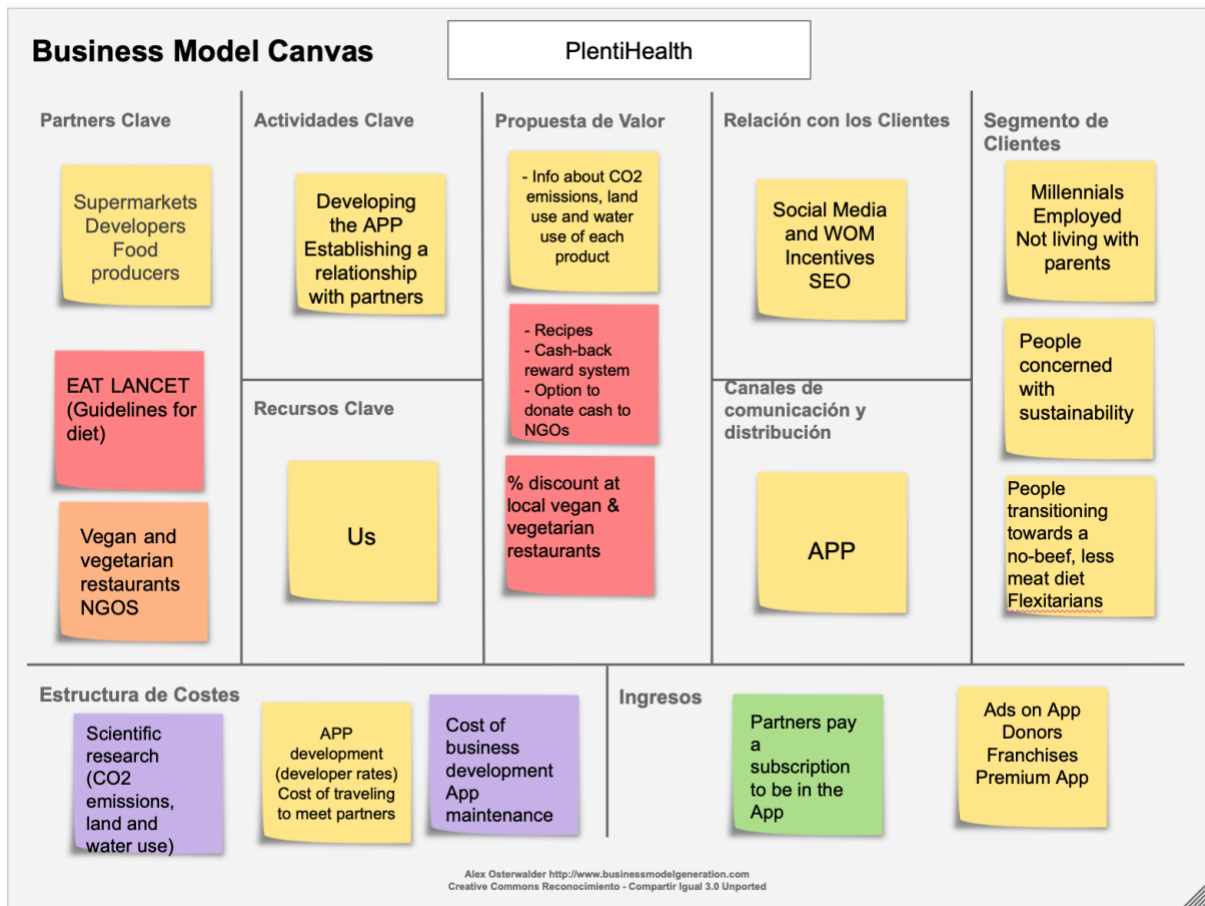
### 2.2. Vision

When US President John F. Kennedy set a goal of landing on the moon by 1970 in 1961, no one believed it would happen. Astonishingly, this goal was achieved just a little over eight years later. At PlentiHealth, we have set three moonshot goals that we are working to achieve. We want to 1) Make plant-based diets a social norm; 2) Reduce animal source foods by at least 50% globally and double the consumption of planetary health foods by 2040; and 3) Completely transform the way we view and eat food as a society.

### 2.3. Values

Our actions are driven by four core values which are centered around our mission. We are deeply **committed** to creating positive, long-lasting changes to the world. We are **conscientious** of the power of individual actions in the well-being of future generations and the planet, and we want to see collective action to living more sustainably. We want to strengthen our communities through **inclusiveness**, not only encouraging diverse persons to participate but making it fun. Lastly, we are driven by **trust** in our team, our scientific community, and the goodness in people to do what is right for future generations.

### 3. BUSINESS MODEL CANVAS



The segment of clients that we have selected as early adopters will be millennials, who have a job, do not live with their parents and have a real concern for sustainability. In addition, they must be people who are trying to eliminate meat from their diet or are flexitarians.

Our value proposition is to offer information on the environmental impact of food (CO<sub>2</sub> emissions, land and water use) and the option of creating and sharing both vegan and vegetarian recipes. In addition, users can access discounts on vegan and vegetarian restaurants in Madrid as well as brand discounts. Finally, we offer the possibility of donating cash to an NGO or plant a tree.

As for our key partners, we will collaborate with food producers, App developers, as well as the EAT-Lancet commission (from where we have obtained the guidelines for a sustainable diet), and with NGOs, restaurants and supermarkets.

In terms of the cost structure, we have two main costs: the development and maintenance of the App and business operations, including marketing costs.

In terms of revenue streams, we have four main sources: ads placed in our Apps, the creation of a premium version, subscription paid by our partners (restaurants and grocery stores) to be featured in the App, and franchises of the App.

## 4. INVESTIGATION

### 4.1. Phase 1: Customer Interviews & Results

Once we had defined our customer market segment as those millennials, living in Madrid, who do their own grocery purchases - as opposed to those who don't because they live with their parents for example - and are concerned about the environment, our next step was to identify who our early adopters might be. Determining the customer market segment which would potentially constitute our first bulk of users was key as they would be the first ones, we would contact for our customer interviews.

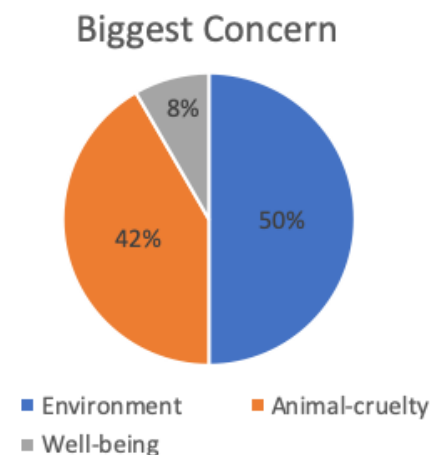
Because our product largely revolves around incentivizing a plant-based diet, our original hypothesis was that this would be extremely easy and important to the vegan community. We believed that they would be our early adopters. We therefore attempted to aim our interviews at people who were vegan, or almost vegan.

We prepared a set of ten questions which focused primarily on diet and grocery purchasing habits, in order to understand what their underlying motivation was to eat plant based as well as the *pains* they encountered. We interviewed 16 people, amongst whom almost half (44%) were vegan and almost half were vegetarian (44%) with a remainder of 8% of flexitarian and/or pescatarian.

#### 4.1.1. The *why*

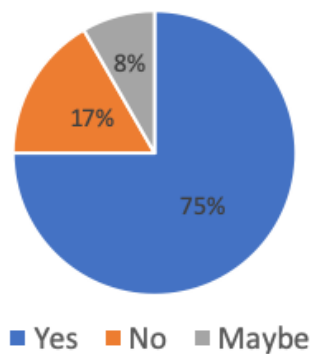
The first pitfall we hit was realizing that the primary motivation or “biggest concern” for the vegan community lied with animal welfare rather than the environment. Only half the interviewees ranked the environment before animal welfare, whereas 44% were more worried about animal-cruelty.

Consequently, since our product's mandate is to foster a more sustainable diet, which allowed a certain degree consumption of animal products, (insofar as it would stay within “healthy planetary diet” boundaries), it didn't go far enough in addressing liberation of animals.





### Interested in Tracking CO2 Footprint



This is very important to the vegan community - more than mere environmental considerations - and thus, when we asked about whether they would be interested to track their carbon dioxide emissions, we only hit a 75% of positive answers.

We thus concluded that we had erred in believing that our early adopters would be vegan, and that the population segment to which we could add most value to were those people who were willing or in process of adapting their diets to make them more environmentally friendly (*i.e.* flexitarians, pescatarians, no-beef).

#### 4.1.2. The *pain*

Fortunately, regarding the pain, we were closer to hitting the nail. Indeed, for those people concerned with the environment, the two issues which were most recurrently mentioned, were on one hand (1) the **affordability** (or at least, perceived affordability) of plant-based diets and on the other hand (2) the recyclability of packaging. These were followed by (3) **accessibility** to vegan or vegetarian products and (4) **variety** of products.

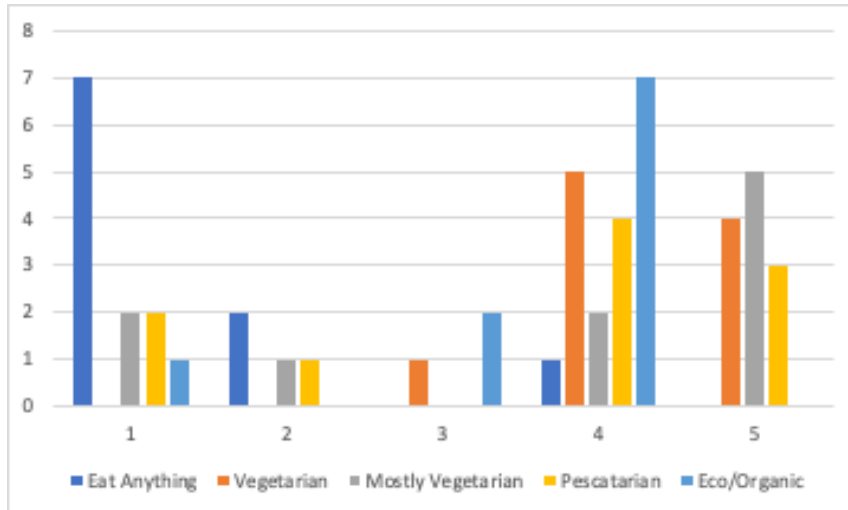
#### 4.1.3. Conclusion of the first round of interviews

In conclusion, our first round of interviews allowed us to redirect our focus for early adopters from vegans to those people who were willing or in process of adapting their diets to make them more environmentally friendly (*i.e.* flexitarians, pescatarians, no-beef). It validated our hypothesis that most people who are concerned with the environment would be interested in tracking the carbon dioxide emissions of their diets. Furthermore, cashbacks could constitute a strong incentive to transition to a more sustainable diet, seeing as the plant-based diet is perceived as more expensive. Therefore, our products two main functions, first the ability to track the carbon intensity of food products and second, the cashback rewards, have the potential to address these two concerns and thus, help transition to a more sustainable diet.

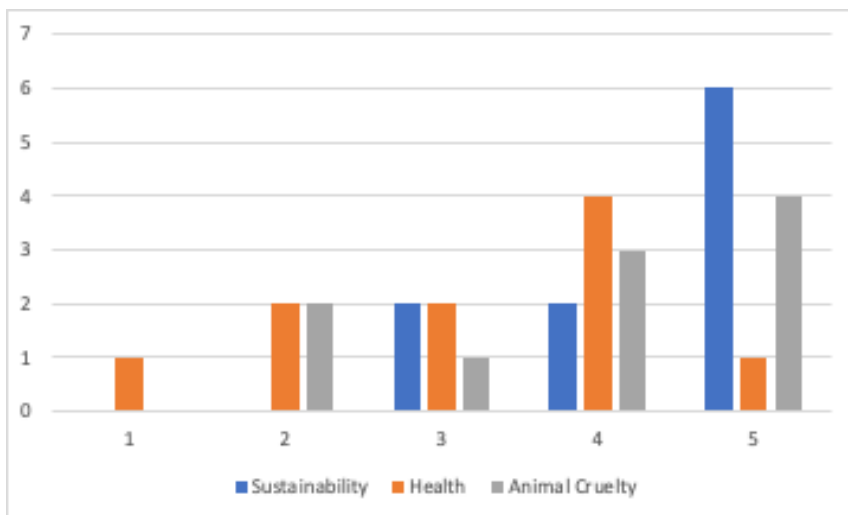
## 4.2. Phase 2: Customer Interviews & Results

For the second round of interviews, we focused on people with some interest on reducing meat consumption and we asked to classify between 1 to 5 if their diet matches the statement whereby 1 would mean “Strongly disagree” and 5 “Strongly agree”.

This is because we’re focusing this time in flexitarian which can be defined by a spectrum of self-imposed and self-created rules, so we are looking at the spectrum from totally non vegetarian to vegetarian.



This time, we obtained a higher score for sustainability versus animal welfare (see figure below). This confirmed that we were interviewing the correct segment this time.



The pains or challenges associated with their diets remained the same: (1) affordability, (2) accessibility and (3) variety of plant-based products.<sup>2</sup>

#### 4.2.1. Interviewees' input

This time, we allowed more leeway for our interviewees to make some suggestions and even discussed our product with them. This had tremendous impacts on our product because many interviewees told us that an efficient way to add value would be by including a recipes function. This would address the challenge of **variety**.

<sup>2</sup> N.B. Plastic in packaging remained a recurrent issue, which was brought up in answers to different questions, but this issue is outside our scope.

The second impact was caused by the interviewees' emphasis on the problems associated with having to enter the foods consumed manually into the App. One concern that arose would be that users would lose their interest in the App if it required frequent input (in other words, that it was too big of an effort). Another concern was that it might foster eating disorders. These findings constituted a turning point for our product, because it is at that point that we decided to include a **barcode scanning feature** which would substitute the need for entering foods manually and focus on the grocery purchasing patterns rather than the individual diet itself.

The third impact was as significant as the first two. It turned out that our interviewees, which are all in the process of reducing animal products consumption, are already well aware of the carbon intensity of the meat and dairy sectors. Their concerns were already a step ahead: they wanted to know the environmental impacts of their quasi plant-based diets. They had heard about the deforestation problems associated with avocados and the draining of the aquifers in California due to the production of almond and hazelnut milks. They demanded that we go beyond what we originally intended. This also constituted a milestone for our product as it made us decide to include the metrics for environmental impacts other than greenhouse gas emissions; consequently, we added two new considerations: **water** and **land use**.

#### 4.2.2. Conclusion of the 2<sup>nd</sup> round of interviews

To sum up, this second round of interview is accountable for what our product looks like at the present time.

Adding **recipes** would tackle two issues: that of **variety** as well as, to a certain extent, that of **affordability**. Indeed, perception remains that vegetarian and vegan products are expensive, but as one of the interviewees pointed out, this holds true only to those products which try to replicate animal products (e.g. cheese, burgers). Eating raw foods (e.g. lentils, chickpeas) is actually cheaper, since meat remains expensive. Furthermore, the cashback function also addresses this issue of costs.

Inserting the **barcode scanning feature** would render our App more user friendly.

At last, the inclusion of metrics for **two new environmental impacts** strengthens the informative function of our product, ensuring that our users would not hit the pitfalls associated with a plant-based diet (notably, the examples mentioned above of avocados, almond and hazelnut milks).

### 4.3. Phase 3: Minimum Viable Product & Feedback

Once we had consolidated our findings and ideas for new features into a very basic prototype (e.g. minimum viable product, or MVP. See figure on the right and access to the entire MVP in Annex), we asked 7 potential early adopters to interact with it and give us feedback (some of them had been in the first or second round of interviews).

We were glad to note that our interviewees were extremely happy to have information about environmental impacts beyond just the carbon dioxide footprint. Indeed, there seems to be a growing concern around water use, which is becoming more and more of a pressing issue.

Secondly, those interviewees that validated our App were glad that they didn't have to enter their foods manually into the App - this was a concern which had been raised in the second round of interviews.

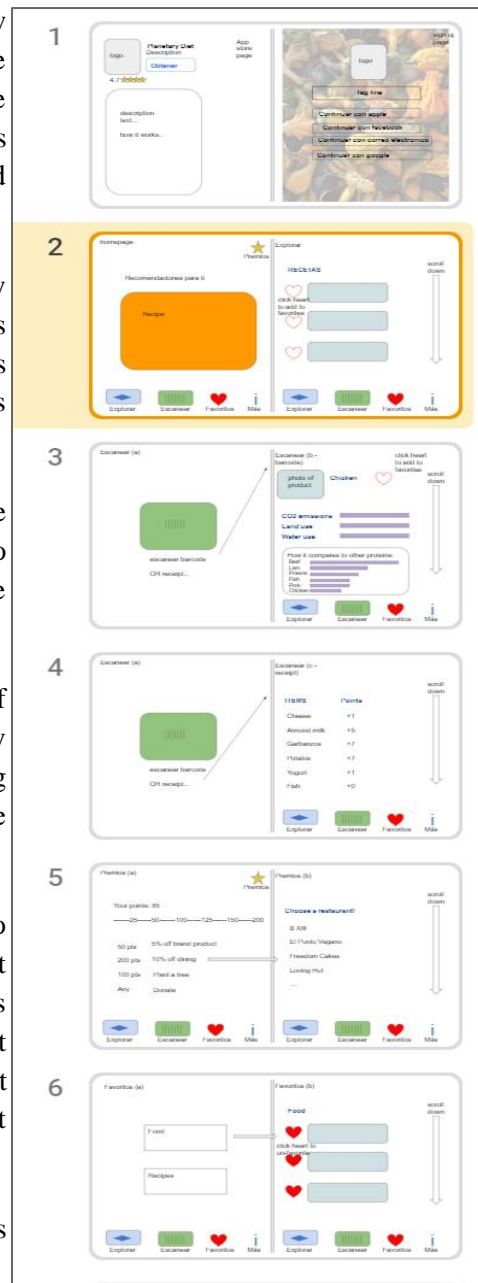
Thirdly, they appreciated that we included their idea of recipe. Nonetheless, one of the improvements they suggested, was to foster even more engagement by creating a sense of community. So, we're considering enabling the creation of groups, and further categorizing recipes.

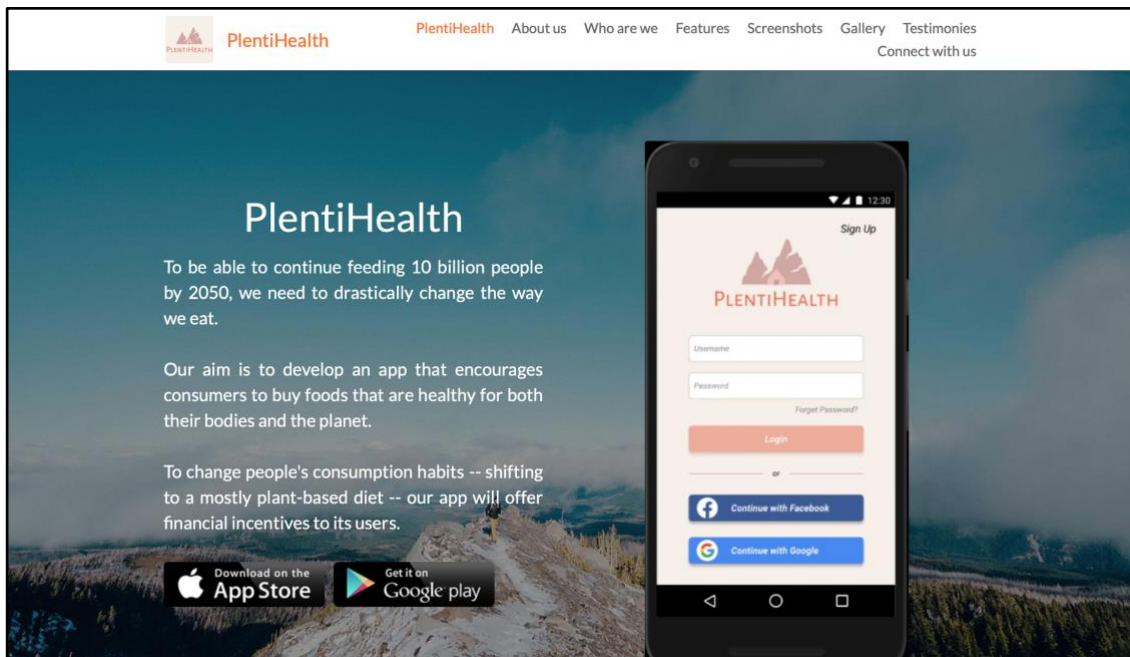
Therefore, this round of validation interviews resulted in no major changes for our product, as it was validated by 6 out of our 7 interviewees. The one reluctant interviewee was more interested in tracking his diet (notably, looking at protein intake) than his purchasing habits. This did not affect our course of action because we deliberately chose to shift away from problematics related to health.

An example of feedback we received from Camille, 27 years old, and user of the Yazio App was the following:

*“It’s awesome, I would definitely use it. I find it much more convenient to scan a barcode, and I think you might get more users if it’s quick and easy to use while scanning. And besides, the goal is to make you think about what you’re buying and consuming, so I think it’s actually more relevant to focus on that rather than the occasional meal at the restaurant, which is usually more of a cheat meal.”*

Considering how successful and comparable the Yazio App is, we felt that we hit the nail in the head. Following the validation of the MVP, we created a more sophisticated prototype (entire version available in Annex) and have featured it on our website (link in Annex).





Screenshot of website and polished prototype

## 5. MARKETING PLAN

### 5.1. Market Overview

PlentiHealth will be initially launched in Madrid. There are 6.7 million residents in Madrid with roughly 1.7 million between the ages of 20-39. As mentioned, our customer base focuses on millennials between the ages of 22 to 40 who do their own grocery shopping. These potential users would likely have a college degree and are concerned with sustainability, animal welfare, and/or their health. They are also likely to be concerned with their budget.

Gathering historical data and future trends on the flexitarian market is challenging as this type of diet is a newly emerging market. Therefore, questions remain in terms of quantifying the number of flexitarians that fall under our intended market segmentation. However, in general, research shows that the number of flexitarians outnumber vegetarians and vegans *combined* and that flexitarianism is rising, as evidenced by the huge boom in the market for alternative meat and dairy products. Research also shows that usually female millennials are more likely to give up meat products than males, and that higher income brackets are more likely to be omnivores. This is a positive sign of the practicality of the cash-back rewards system.

We will be introducing the App first in Madrid but have a goal of going global, therefore we have attempted to research both the domestic and global market. As we continue to monitor new market research on flexitarians, we will be able to better quantify client share with data on diet preference, income bracket, level of education, and monthly budget for restaurants vs. groceries vs. take-away.

## 5.2. Situational Analysis

Within the different internal and external situational factors in the current market, we would like to highlight:

- The current global policy framework;
- The market for mobile Apps, flexitarians, and plant-based foods; and,
- Applicable laws.

P	E	S	T	E	L
<ul style="list-style-type: none"><li>- Government policy</li><li>- Political stability</li><li>- Corruption</li><li>- Foreign trade policy</li><li>- Tax policy</li><li>- Labour law</li><li>- Trade restrictions</li></ul>	<ul style="list-style-type: none"><li>- Economic growth</li><li>- Exchange rates</li><li>- Interest rates</li><li>- Inflation rates</li><li>- Disposable income</li><li>- Unemployment rates</li></ul>	<ul style="list-style-type: none"><li>- Population growth rate</li><li>- Age distribution</li><li>- Career attitudes</li><li>- Safety emphasis</li><li>- Health consciousness</li><li>- Lifestyle attitudes</li><li>- Cultural barriers</li></ul>	<ul style="list-style-type: none"><li>- Technology incentives</li><li>- Level of innovation</li><li>- Automation</li><li>- R&amp;D activity</li><li>- Technological change</li><li>- Technological awareness</li></ul>	<ul style="list-style-type: none"><li>- Weather</li><li>- Climate</li><li>- Environmental policies</li><li>- Climate change</li><li>- Pressures from NGO's</li></ul>	<ul style="list-style-type: none"><li>- Discrimination laws</li><li>- Antitrust laws</li><li>- Employment laws</li><li>- Consumer protection laws</li><li>- Copyright and patent laws</li><li>- Health and safety laws</li></ul>

### 5.2.1. Global Policy Framework

To provide context at a global scale, the Paris Agreement and the Sustainable Development Goals (SDGs) are critically important in providing a policy framework that is aligned with PlentiHealth's mission, vision and values. The Paris Agreement sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. As a contribution to the objectives of the agreement, countries have submitted comprehensive national climate action plans (e.g. nationally determined contributions, or NDCs). The European Union and its Member States are committed to a binding target of an at least 40% domestic reduction in GHG emissions by 2030 compared to 1990, to be fulfilled jointly, as set out in the conclusions by the European Council of October 2014. For Spain's NDC, the government is currently drafting a law that would achieve net-zero emissions by 2050.

The SDGs specifically seek to end poverty, protect the planet, ensure prosperity for all, and eradicate hunger and malnourishment. A global transformation in our food system can have profound positive effects on natural ecosystems and human health. Agriculture takes up 40% of land in the world, is the single most important driver of biodiversity loss, and is responsible for up to 30% of global GHG

emissions and 70% of freshwater use. Investing and transitioning to sustainable food production and consumption are major components of meeting several SDGs at once.



United Nations Sustainable Development Goals

- **Goal 1:** End poverty in all its forms everywhere.
- **Goal 2:** Zero Hunger.
- **Goal 11:** Make cities inclusive, safe, resilient and sustainable.
- **Goal 13:** Take urgent action to combat climate change and its impacts.
- **Goal 14:** Conserve and sustainably use the oceans, seas and marine resources.
- **Goal 15:** Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.

### 5.2.2. Market Research

#### Mobile Apps

According to the "Mobile Application Market by Marketplace App Category: Global Opportunity Analysis and Industry Forecast 2019-2026" report, the global mobile application market size was valued at \$106.27 billion in 2018, and is projected to reach \$407.31 billion by 2026, growing at a compound annual growth rate of 18.4% from 2019 to 2026.

In Spain, the mobile market is one of the most developed in the world, with 88% of the population possessing smartphones. Specifically, the Spanish mobile App market is valued at 47 million euros in 2020 and will grow at 7.3% to 63 million euros by 2024. Among Apps by Spanish publishers, 30% are available on both iOS and Android. User penetration is 23.5% in 2020 and will be 27.1% by 2024. Average revenue per user is 4.30€. There are hundreds of Apps listed in the iOS Spain store under the “healthy & fitness” category and we have examined five potential competitors in detail in section 3a. Competing Apps.

## **Flexitarians**

Estimates for flexitarians vary widely due to the reason that it is not a restrictive diet, hence those who are polled could range from very strict flexitarians to those who eat meat-less meals once a week, for example. According to Innova Market Insights, in 2016 there were 38% flexitarians in the US, 53% in the UK, and as much as 67% in The Netherlands and 69% in Germany. Meanwhile, a 2019 YouGov study showed that only 14% of the UK population considered themselves to be flexitarians, but that it was still 10% higher than those who identified as vegetarian or vegan. In the US, a 2018 Gallup poll showed 5% vegetarians (unchanged from 2012) and 3% vegans (up 1% from 2010), meanwhile 31% considered themselves flexitarians.

In Spain, consultancy firm Lantern surveyed 2,000 people in 2017 and found that 6.3% identify as flexitarians, while vegetarians and vegans accounted for 1.3% and 0.2%, respectively. Two-thirds are female and 51.2% live in cities with populations exceeding 100,000 while most fall into the 20-35 age range. Although flexitarian data is lacking for Madrid, it could have a market of at least 1 million people, as it targets a much broader base than pure vegetarians or vegans.

## **Plant-Based Foods**

While data on flexitarians is inconsistent, experts agree that the flexitarian diet is increasing in popularity especially for those who do not want to commit to full vegetarian or vegan diets. Strong rising sales of plant-based foods also indicates a greater overall interest in alternative meat and dairy products. Demand for plant-based products, such as vegan meats and cheeses, has grown remarkably in the last few years. Even meat-eaters who don't consider themselves as flexitarians are regularly purchasing meat substitutes. However, availability and cost could be an issue: meat alternatives are much less available than meat products and cost 6 cents more per gram compared to beef. In the US, demand for vegan meat grew 20% between 2017 and 2018, led by increasing number of vegan celebrities and athletes, attracting more consumers to vegan alternatives and increasing consciousness for what they put into their bodies. For example, Kellogg-owned MorningStar plans to make its entire lineup of packaged foods vegan by 2021. Even Tyson Foods, a giant in the meat and poultry industry, has invested in Beyond Meat, an alternative meat company, and plans to enter the alternative protein space soon. In Europe, the growth is predominantly driven by the UK, Germany, Italy and France, where awareness has risen over the harmful effects of meat consumption in digestion and high saturated fat content. The fastest growth is projected to be in Asia, particularly China, India and Japan, over the side effects of non-vegan products on human health. In total, it is a market valued at 4.4€ billion globally in 2020.

During COVID-19 amid fears of human and environmental health concerns caused by animal agriculture, even more consumers have turned to plant-based diets. In North America, sales of plant-based meat “grew 200% in the week ending April 18th, compared with the same period last year, growing 265% over an eight-week period” according to the Financial Times. Similarly, in Spain,



supermarkets expanded their vegan product offerings during the pandemic. Vegan meat producer Heura expanded its retail distribution by 14.7% while conventional food producer Maheso launched a vegetable protein line called Green Moments.

### 5.2.3. Applicable Laws

App functionalities and data usage would be in full compliance with the General Data Protection Regulation (GDPR):

- The processing of personal data should be “adequate, relevant and limited to what is necessary for the purposes for which they are processed”.
- The period for which the data is stored is limited to a minimum.
- Personal data shall be accurate and kept up to date.
- Personal data shall be protected from unauthorized access, illegal processing and loss. In this instance, the regulation points out pseudonymization and encryption of data. Furthermore, the “ability to ensure availability and resilience of processing systems and services” plays an important role.
- A data protection officer has to be designated who is responsible for monitoring compliance with GDPR and makes sure that personal data is safe and secure.
- All relevant people have the right to receive a copy of their data, the right to correct and restrict their data as well as the right to erase data.

## 5.3. Competition

### 5.3.1. Competing Apps

As we are entering into the market with a new product, it is important to screen and analyze the competition. Although PlentiHealth brings new features into the market, it is not a completely new product as there are similar Apps that allow users to access healthy products, check for recipes or count calories.

Below we have analyzed five of those Apps chosen based on their popularity and number of downloads.

- a) **Yazio:** It is a German App that allow users to follow a healthy diet by counting calories, coaching them along their diet and providing recipes that adjust to each customer. It is a free App although there are integrated purchased products. It has 4,5 stars and more than 10 million downloads. It is available in Android, iOS and on its webpage.
- b) **Yuka:** It is a French App that allows its users to scan a different number of products and gives them information about its quality providing them also with recommendations of similar but healthier products. It is also a free App but with integrated purchased products. It has 4,5 stars and more than 10 million downloads. It is available in Android, iOS and on its webpage.
- c) **HarvestMark:** It is an App that let its users to *follow* their food back to the farm to learn where, when, and how it was grown by scanning the barcode of the product or entering the barcode serial number. It does not appear in Android or iOS but does have a website.
- d) **GoodGuide:** It is an US App and although it appears to be out of the online market now, when it was available it allowed its users to evaluate products through an analysis of their life cycle. Until

its withdrawal from the market it was a free App and it was available to download in Android and iOS.

- e) **MyRealFood:** It is a Spanish App that teaches its users how to eat healthy by allowing them to scan the barcode of products and providing their nutritional information. It also provides them with healthy recipes that its users can share with the online community *realfooders*. It is a free App, although there is a subscription plan if you want to access some of their premium features. It has 4,7 stars and more than 500.000 downloads. It is available in Android, iOS and on its webpage.

Based on the analysis of these five potential competitors and the interviews conducted, we have concluded that PlentiHealth uniquely fills a gap in the market by combining sustainability education of food products *with* market-driven incentives (e.g. cash-back rewards) to attract users.

### 5.3.2. SWOT analysis

In order to develop a good and compelling marketing strategy we first need to know the internal and external factors that will affect our company’s future performance. To do so we did a SWOT analysis that allowed us to be aware of and evaluate the **Strengths**, **Weaknesses**, **Opportunities** and **Threats** of our company, PlentiHealth. In addition, the purpose of this diagnosis is to align our strategies with the reality of our company environment in order to:

- Maintain and build on our strengths
- Take advantage of our opportunities
- Fix or eliminate our weaknesses
- Counter threats

Strengths	Weaknesses	Opportunities	Threats
Knowledge and contrasted data. Easy to navigate. Educational info on the impact of food. Point system. Sense of community	New in business. No reputation yet. Not diversified enough. Lack of funding/capital.	Fast growing market. Meet customer demands. Partnerships with restaurants/grocery shops.	Strong competitors. Saturated market.

#### Strengths

- Knowledge and quality data: All data found in the App comes from scientific data, the EAT-*Lancet* Commission and verified footprint calculations. Plus, behind this App there is a team of people with different masters in sustainability and environmental management.
- Easy to navigate: It’s a self-explanatory App with not too many elements of text that allows our customers to *visualize* what they are looking for.

- Educational information on the impact of food: Every time one of our users scans the barcode of a product, they will have access to the environmental footprint of that product and also will be able to compare it to other products.
- Sense of community: PlentiHealth will not only allow people to obtain information about the products they are buying but also will allow them to become part of a community to share recipes and pursue a healthy and sustainable diet.
- Reward point system: This system will encourage our users to buy healthy sustainable products because by doing so they will be able to get discounts in restaurants and/or grocery stores or donate to NGOs.

### **Weaknesses**

- New business: As any new business that goes out into the market it will take a bit of time to be known and gather a *fanbase*. And as was mentioned before, there are hundreds of Apps listed in the iOS Spain store under the “healthy & fitness” category.
- No reputation yet: PlentiHealth is the first App that our company will launch so we are still unknown to the public. Although this could be considered beneficial as people are drawn to use new things even if it is just for one time, some reputation (of any kind) would be better than none.
- Not diversified enough: Although PlentiHealth adds a new feature that none of our competitors have (information on water, land and CO<sub>2</sub> footprint of food products), all of the rest of the features are similar to those in the Apps already in the market.
- Lack of funding/capital: Although we will use our money to have the App running in the first place, as a new company we will mainly depend on money from our different investors.

### **Opportunities**

- Fast growing market: As mentioned in previous sections, plant-based diet was already a growing tendency among people in some countries and now after COVID-19 the sale of plant-based products has been accelerated in many countries, with Spain being one of those countries.
- Meet customers’ demands: Our App has a community feature where our users will be able to share recipes and experiences, enabling the creation of groups, and further categorizing recipes. This feature was added after our second-round interviews as it was something our early adopters asked for.
- Partnerships with restaurants and grocery stores: It will be a mutually beneficial partnership. Because of their investment in PlentiHealth, users of the App will be able to choose to go to their restaurants or grocery stores as part of the reward system.

### **Threats**

- Strong competitors: There are similar Apps to PlentiHealth that have been in the market for years and already have a huge community created around them. Some of them were shown in a previous section.
- Saturated market: There are already similar Apps that allow customers to know product information by scanning the barcode or have a community to share information with.

### 5.3.3. Four Ps

The four Ps of marketing are the four key factors that are involved in the marketing strategy of a service. Product, Price, Promotion and Place will help determine a clear and effective strategy to bring our product to the market.

<p style="text-align: center;"><b>Product</b></p> <p style="text-align: center;"><b>Mobile App (PlentiHealth)</b></p> <ol style="list-style-type: none"> <li>1. Shows sustainability scale of products.</li> <li>2. Financially incentivizes healthier, plant-based products and less animal products.</li> </ol>	<p style="text-align: center;"><b>Price</b></p> <p style="text-align: center;">Free to download. Possibility to subscribe to a <i>Premium</i> account after 6 months.</p>
<p style="text-align: center;"><b>Promotion</b></p> <p style="text-align: center;">Influencers among our target audience. Social media accounts (Facebook, Twitter) Ads in websites, forums and blogs.</p>	<p style="text-align: center;"><b>Place</b></p> <p style="text-align: center;">App Store and Google Play (compatible with iOS and Android).</p>

### 5.4. Roll-out Plan

We intend to roll out the PlentiHealth App in three stages:

- **Stage one:** The initial version (Version 1.0) includes educational information on the impact of food (GHG, water and land compared to other foods) and a function to create and share recipes. This is intended for our early adopters who are already conscientious consumers and would like to form a community to share recipes. We would also keep them posted on future features of the App to generate a wider following.
- **Stage two:** Within six months, the second version (Version 2.0) will be rolled out that will feature partner restaurants and grocery stores who can give discounts to their plant-based products in return for more customers and visibility. We intend to target vegan/vegetarian-friendly restaurants in Madrid because they are usually family owned and would benefit by attracting more visibility to their business.<sup>3</sup> The grocery stores we intend to target initially include Aldi, Lidl and Carrefour, as they already offer a range of vegan products that may be pricier than traditional foods (e.g. vegan ice cream, alternative meat burgers). In this phase, App users would be able to accumulate points with healthy foods they buy and obtain financial rewards for their sustainable purchasing decisions. This would be a benefit enjoyed by those who sign up for the premium account at a cost of 1,99€ per month.

<sup>3</sup> Apus Vegan, Chilling Cafe, El Buda Feliz, Punto Vegano, Smok Mok, Viva Burger, Los Andenes Vegan, Kakuna Matata Vegano, Thunder Vegan, Bunny's Deli, Pixie & Dixie Pizza, Freedom Cakes, Delish Vegan Donuts).

- **Stage three:** The third version (Version 3.0) is to partner with NGOs where App users can have more choices on how they want to spend their cash-back rewards. For instance, they could choose to plant trees or donate to an NGO of their choice.

#### 5.4.1. Pre-launch: Building brand awareness


A major portion of the marketing plan falls in the pre-launch phase of Version 1.0, where we actively use wide-ranging tools to generate brand awareness and create excitement for the App. Cost-free activities include 1) building a website where visitors can subscribe to our updates; 2) creating Instagram, Facebook, Twitter and Pinterest accounts to accumulate followers; and 3) creating a content calendar including news, blogs, photos, videos, interactive content like quizzes and influencer articles.

Channel	Instagram	Twitter	Newsletters	Facebook	Pinterest	Website
<b>Frequency</b>	1-2 posts/day 8-16 stories/ 2x week	3-10/ day	1/month	1-2/day	5-10/day	1/week
<b>Time</b>	7-10:00	9-14:00	Last Fridays each month at 10:00	9-12:00	19:00- 21:00	Any

Paid activities involve generating content such as videos and publicizing content through various means such as post boosts and influencers. The posting strategy of the various content would be spread across different platforms at the most optimized times/days to generate traffic to our website where visitors can subscribe. We intend to test and analyze this strategy with Google Analytics and improve reach, click rates, and subscription numbers.

We plan on boosting posts on Instagram (4€ per post) and on Facebook (40€ - 80€ per post). The Facebook posts are aimed at women in Madrid between the ages of 22-40 who are interested in environmental protection and a flexitarian diet. One boost would last 5 days and reach up to 350,000 people.

Sample post:

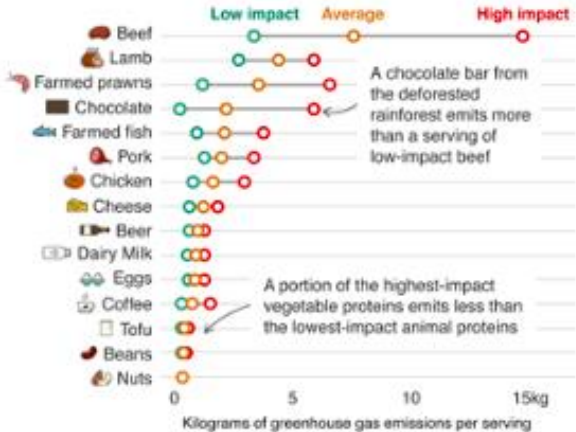
 **PlentiHealth**

Did you know that in Madrid, **animal-based foods generate 75%** of all food emissions? But not all foods are equal! Cutting your meat and dairy intake can reduce your carbon footprint from food by two-thirds. Imagine if this were **scaled globally**. At PlentiHealth, we want to see both future generations and the planet thrive. Join our food transformation movement where you will be **financially rewarded** for consuming responsibly! Find out more at [www.PlentiHealth.com](http://www.PlentiHealth.com).

#plenihealth #shiftingdiets #planetaryhealth #foodtransformation

### Beef has the biggest carbon footprint - but the same food can have a range of impacts


Kilograms of greenhouse gas emissions per serving



Food Item	Low Impact (kg)	Average (kg)	High Impact (kg)
Beef	~2.5	~7.5	~14.5
Lamb	~2.5	~5.5	~8.5
Farmed prawns	~2.5	~4.5	~6.5
Chocolate	~2.5	~4.5	~8.5
Farmed fish	~2.5	~4.5	~6.5
Pork	~2.5	~4.5	~6.5
Chicken	~2.5	~4.5	~6.5
Cheese	~2.5	~4.5	~6.5
Beer	~2.5	~4.5	~6.5
Dairy Milk	~2.5	~4.5	~6.5
Eggs	~2.5	~4.5	~6.5
Coffee	~2.5	~4.5	~6.5
Tofu	~2.5	~4.5	~6.5
Beans	~2.5	~4.5	~6.5
Nuts	~2.5	~4.5	~6.5

A chocolate bar from the deforested rainforest emits more than a serving of low-impact beef

A portion of the highest-impact vegetable proteins emits less than the lowest-impact animal proteins

Source: Poore & Namecek (2018), Science 

649 5 Comments 192 Shares

Like Comment Share

Most Relevant

Comment as The George Washington Universit...

Victor Hugo Me interesa  
Like · Reply · Message · 27w

View 4 more comments

### Sample post boost:

#### Create Audience

Select the location, age, gender and interests of people you want to reach with your ad.

**Name**

**Gender**

All  Men  Women

**Age**


22 - 40

**Locations**

Spain

Madrid, Comunidad de Madrid + 25mi

Add locations



**Detailed Targeting**


Include people who match

Interests > Additional Interests

- Environmental protection
- Semi-vegetarianism
- Vegetarian cuisine

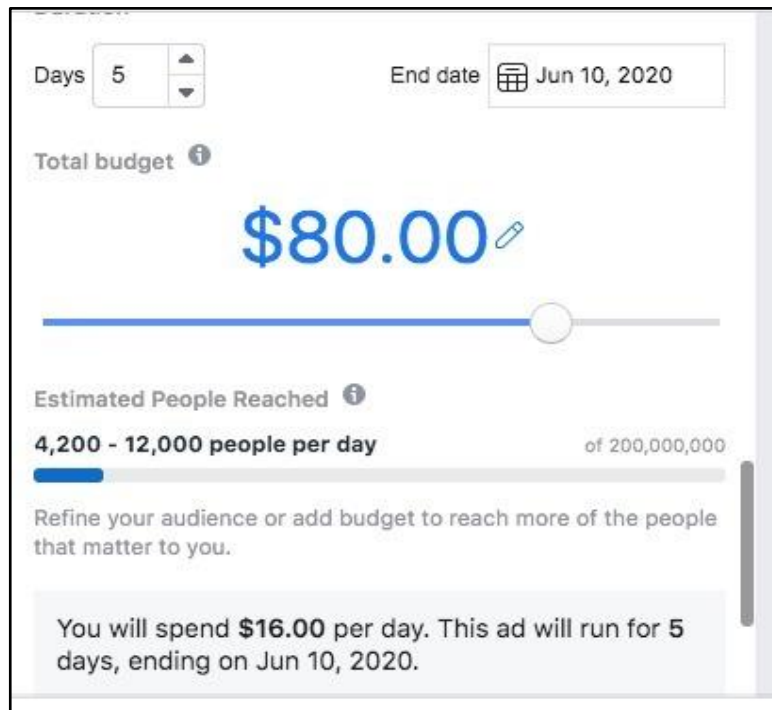
Add demographics, interests or behaviors | [Suggestions](#) | [Browse](#)

Exclude People or Narrow Audience

 Your audience size is **defined**. Good job!

Potential Audience Size: 350,000 people

[Cancel](#) [Save](#)



We also plan on reaching out to influencers on Instagram that our early adopters follow, such as @KnowTheOrigin (84.7k followers), @everydayclimatechange (144k followers) and @midietavegana (165k followers). These three would target a combination of individuals who care about sustainability, climate change and/or vegan recipes.

Additionally, we will reach out to the EAT Foundation to promote our app through their social media, which is at the center of the planetary diet movement. Considering that the principal idea of our App stems from their 2019 report, we hope for the EAT Foundation to become a major partner of PlentiHealth. Furthermore, we will reach out to potential early restaurant and grocery store partners in Madrid in planning for the Version 2.0.

We plan to design an elevator pitch tailored to each target audience, building off of the following script:

**Who are:** PlentiHealth is a mobile App company that gives users the ability to see the impact that their food has on land, water and CO<sub>2</sub> emissions, while financially rewarding them for purchasing foods that are healthy for the planet. Launched in Madrid's growing community of conscientious consumers, PlentiHealth has the potential to go global. We envision a world where plant-based diet is the norm in order to safely and sustainably feed a growing population of 10 billion by 2050.

**What we offer:** We provide a unique combination of: 1) Comprehensive informative function on sustainability of food products which addresses water use, land use and CO<sub>2</sub> emissions; 2) Directly translated into a point system enabling cashbacks; and 3) Broadening of the plant-based horizon, by better access to plant-based shops, restaurants and recipes.

**Collaborate with PlentiHealth:** A collaboration means promoting this App in your social network to drastically expand the network of conscientious



consumers in Madrid and in the world. While the power of individuals is immense, imagine what we can achieve *together*. A transformation in our diet is urgently needed and you can be a part of this incredible movement.

Finally, we will determine an optimal launch date and blast it widely to our networks to generate high anticipation by our followers.

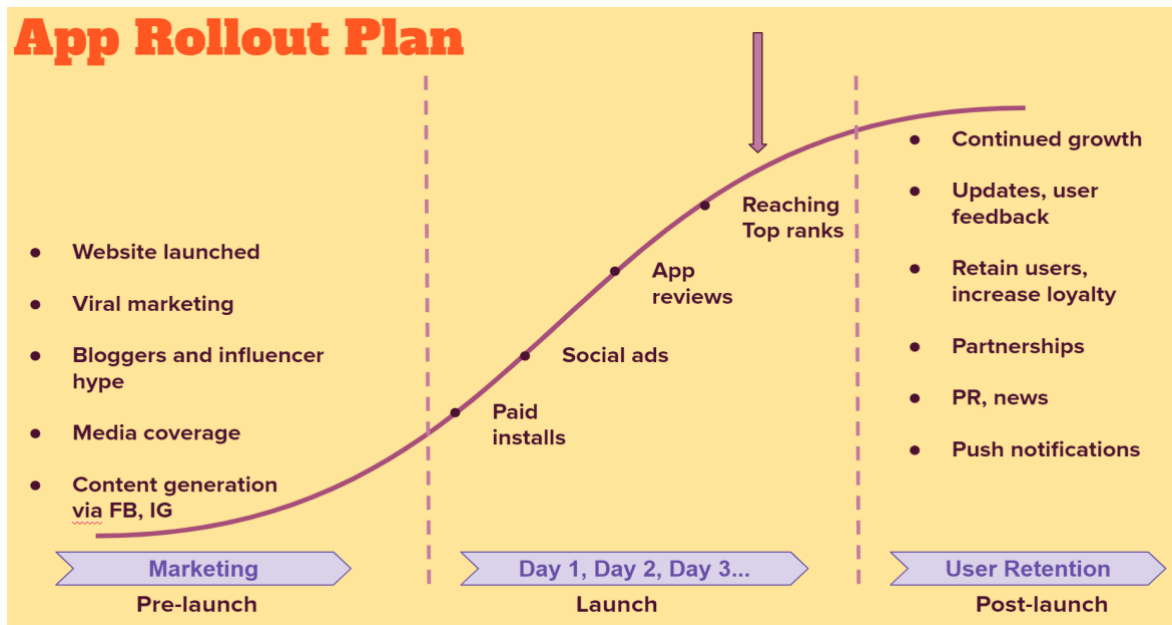
#### 5.4.2. Launch: Major push

After the launch of the product (Version 1.0), we plan to use App Store Optimization (ASO) best practices to increase visibility of our App in both iOS and Android App stores. We intend to place in-app ads in other popular lifestyle apps as well as paid installs of our own App. And based on Google Analytics testing results in the pre-launch phase, we will target the most successful platforms with continued marketing outreach via social media, influencers and now, customer reviews. The length of this phase will depend on the number of downloads until we reach top ranks.

#### 5.4.3. Post-launch: User Retention

In conjunction, another focus after the launch is on building trust with users through reliable, data-driven content and making updates to the App based on user-feedback. Our overall goal is to become a trusted brand in the food transformation movement community. Our detailed marketing goals include a 20% monthly growth rate in App downloads in year 1 (and 30% in year 2); a 30% goal of active users out of total downloads; and a churn rate of less than 5%. We will continuously check our metrics, fix bugs in the App, and create new content to retain users.

Six months after the launch of Version 1.0, we will roll out further features for wider adoption in Version 2.0 when restaurants and grocery stores will be featured in the App for financial rewards. Similarly, to the pre-launch marketing plan, we will conduct activities to build momentum and anticipation for the new version. Another six months after, we will roll out Version 3.0 to feature partner NGOs for users to have even more choices in using their reward points.



App rollout plan for Version 1.0. Similar online campaign strategies will be used for Versions 2.0 and 3.0.

## 6. FINANCE

### 6.1. Revenue Streams

Our sources of income are first divided into four. Each of these is detailed below:

- 1) **In-App Advertisement:** The application will have advertising banners that work through the number of interactions that users have with them. There are several companies in the market that provide this service.

The calculation of the profitability of each user was made using means offered by these companies for an approximate income from the time a user uses the application daily.

We have made the estimation of demand based on the potential market found in Madrid, which we have previously mentioned, along with the strong marketing campaign during the pre-launch and launch periods. These users represent active users, that is, they use the application on a daily basis. With a growth rate of 20% the first period and then, in the second, 30% due to a greater presence of the brand. These same estimations are used in the following points (2) and (3).

- 2) **Subscribers of the Premium Function:** Corresponds to the users who, once the App with premium functions has been launched, will use this service at a cost of 1,99€ per month. We have chosen this price as it is competitive in the Apps market.

We have estimated that 10% of users will have gone from using the free mode to this paid mode after it is launched.

- 3) **Restaurants Subscription:** Once the premium function has been launched and a user base attractive enough for shops and restaurants has been obtained, we will initiate the visibility of the latter in our App through a monthly charge of 20€.

It is estimated due to the size and quantity of supply in Madrid that in the first instance we will reach 50 restaurants and shops.

- 4) **Franchise:** Once the App has been established in Madrid, we will open the possibility of franchising in other cities, due to the easy replicability of our project in other markets with similar characteristics. In the first instance, during the two-year evaluation period of this financial analysis, we have set the price as 10% of the annual income for the second period.

We have left the sale of data as proposed for further study, because a more exhaustive analysis must be carried out that considers the existing legal regulations in Spain on privacy, the income it would produce, and a possible negative impact on brand image from our users.

## 6.2. Costs

- 1) **Variable Direct Costs:** The only variable direct cost found is that of the premium subscriptions that are made through the iOS and Android operating systems that correspond to 30% of the value paid by the user for this service.
- 2) **Marketing Costs:** Initially, during the pre-launch and launch period 13,000€ is required. Then, once the application is launched, there is a fixed monthly cost of 500€.
- 3) **Human Resources Costs:** For the period of the first year, each partner will obtain a gross annual salary of 10.000€, in order to reduce costs during the period of launching and obtaining users, when margins are negative. From the second year it will increase to 20.000€ for the same purpose of reducing costs, the company does not have employees. The creation and maintenance of the App will be outsourced to external companies.
- 4) **Other Operating Expenses:** In this section we have the following expenses: subscription to iOS and Android, repairs and maintenance, work done by other companies, insurance premiums, office supplies - cleaning and others, and management - consultancies and others.

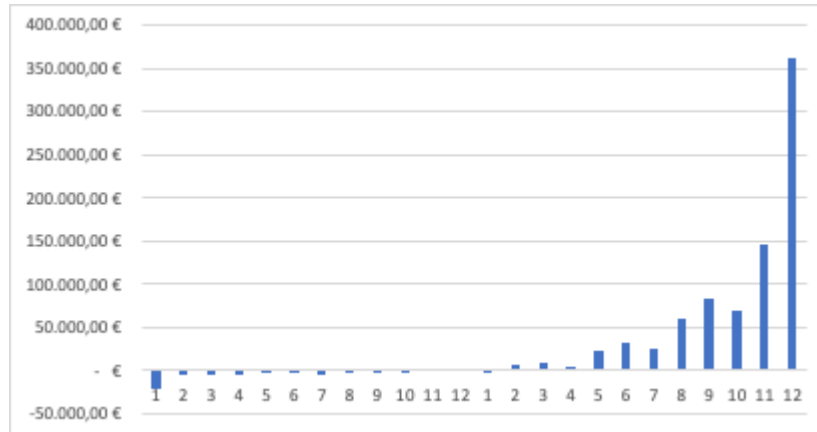
## 6.3. Investment

As a digital product, we do not have many expenses. We consider an average market price for the creation of a mobile App to be 30.000€, investment for intellectual and industrial property to be 300€, and, finally, 300€ for start-up and constitution expenses. Including taxes, an initial investment of 37.026€ is required.

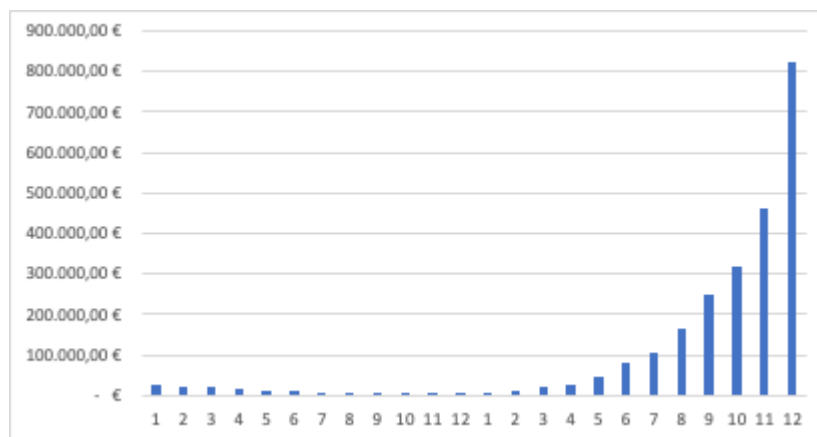
Each partner has committed to contribute an initial amount of 5.000€ for the initial investment. In addition, through crowdfunding we expect 30.000€ and from investors an equally amount of 30.000€ is needed. This covers and exceeds the initial investment costs.

## 6.4. Results

The following chart shows the monthly burn rate during the two periods under evaluation. The first year and the first month of the second have negative results, but from the following months it begins to increase considerably. The last month sees a greater growth due to the fact that we considered two franchises being sold.



On the other hand, if we focus on the final balance, which considers the same monthly burn rate but adding the balance of the previous period and the initial investment at the beginning we get positive results for each month, as can be seen in the graph below.



The following table shows a summary of the financial results for the two periods. Clearly, the second year has better results than the first, where negative income is observed, while the following is positive and increasing significantly. With a difference between both of 548.260€.

	First Period		Second Period	
	Euros	%	Euros	%
<b>REVENUE (Sales)</b>	<b>35.904</b>	<b>100%</b>	<b>871.286</b>	<b>100%</b>
Direct Variable Costs	885	2,5%	21.430	2%
Other Variable Costs	0	0%	-	0%
Revenue Costs	885	2,5%	21.430	2%
<b>(1) GROSS MARGIN</b>	<b>35.019</b>	<b>98%</b>	<b>849.856</b>	<b>98%</b>
Personnel Expenses	53.600	149,3%	103.600	12%
Other Structural Costs (Including Mk)	27.124	76%	13.799	2%
Total STRUCTURAL COSTS (Fixed Costs)	80.724	225%	117.399	14%
<b>(2) EBITDA</b>	<b>- 45.705</b>	<b>-127%</b>	<b>753.177</b>	<b>86%</b>
Amortization	7.575	21%	7.575	1%
<b>(3) EBIT</b>	<b>- 53.280</b>	<b>-148%</b>	<b>724.881</b>	<b>83%</b>
Financial Costs	1.086	3%	26.356	3%
<b>FINANCIAL RESULTS</b>	<b>- 1.086</b>	<b>-3%</b>	<b>- 26.356</b>	<b>-3%</b>
+ REVENUES / - Exceptional Expenditures	30.000	83,6%	-	0%
<b>(4) EBT</b>	<b>- 24.366</b>	<b>-68%</b>	<b>698.525</b>	<b>80%</b>
Provision for Tax on Benefits	0	0%	174.631	20%
<b>(5) Net Result</b>	<b>- 24.366</b>	<b>-68%</b>	<b>523.894</b>	<b>60%</b>

The return on equity (ROE) obtained 89,6% the second year, which is positive, indicating that the return on equity is important. The return on investment (ROI) for the second period is 86,3%, again a positive number since it returns on the investment at that rate. Finally, the pay-back term for the recovery of the initial investment is 1,15 years.

## 7. IMPLEMENTATION / NEXT STEPS

**1. Operational structure:** The elaboration of this MVP has already allowed us to identify the qualifications, skills, strengths and weaknesses of each partner, but before we register our company, we will clearly define the roles, tasks and responsibilities of each partner within PlentiHealth.

**2. Preparation for Version 1.0:** We will then map and shortlist of software companies, inside and outside of Madrid. We will proceed to meeting with them, expose them our functional requirements, be presented with a business and technical proposal (which will be evaluated internally), compare proposals, in order to select one which will be entrusted with the development of the App. The technical architecture of this App will have to be suited to integrate the features which are foreseen in Version 2.0 and our intention is to work with the same software company up until maintenance and support after the launch of the final version.

**3. Crowdfunding:** As the first version of the App will be completely free, our income will come mainly from advertising in the App itself. However, hiring IT services is quite expensive, so we will carry out a crowdfunding campaign. In order for the campaign to be as successful as possible, we will promote the App through social networks and build relationships with partners and key people. In this way, we will not only publicize the App, but our intention to finance it with a campaign. It is important to determine how much money is needed. One of the partners will be in charge of promoting the crowdfunding campaign. The goal of building an audience and building relationships is that once the campaign is launched, it will surely receive contributions on the spot.

We will also put in place a reward system, which dictates a reward that a contributor will receive for a certain amount of money contributed. For example, free premium account for a limited time or exclusive discounts in vegan restaurants. With the crowdfunding campaign we will not only raise money, but it will also be an opportunity to create a solid user base that is loyal.

**4. Preparation for Version 2.0:** For our barcode scan feature to be developed, our very first step shall be to gain access to the database of at least one major supermarket chain (e.g. Carrefour, Mercadona). For our points system, we shall require consent by EAT-lancet to capitalize on their study to quantify impact and allocate points to food products. This translation of impacts into points will be elaborated internally. Once again, we will submit our functional requirements to our software company and evaluate their proposal.

**5. Partnerships:** One of the partners will dedicate fulltime to this branch. The task will be to map all possible stakeholders and broaden this list, by searching for collaborators or co-creators. We would like to get as much involvement as possible from the health sector, with a focus on nutritionists, as in Spain, 97% of people trust doctors and nurses according to the Welcome Trust Global Monitor (see Figure 2 in Annex).

Another path we will pursue is the one of acceleration and incubation programs. We will map and identify the most suitable opportunities for our type of product. Additionally, we will also consider different bootcamps and tournaments which are held in the context of social innovation, as this is our mandate.

We will also engage with the world of influencers. We will seek the support, in the form of giving our product visibility, by Instagram influencers which promote healthy lifestyles and environmental activist youtubers.

## 8. CONCLUSION

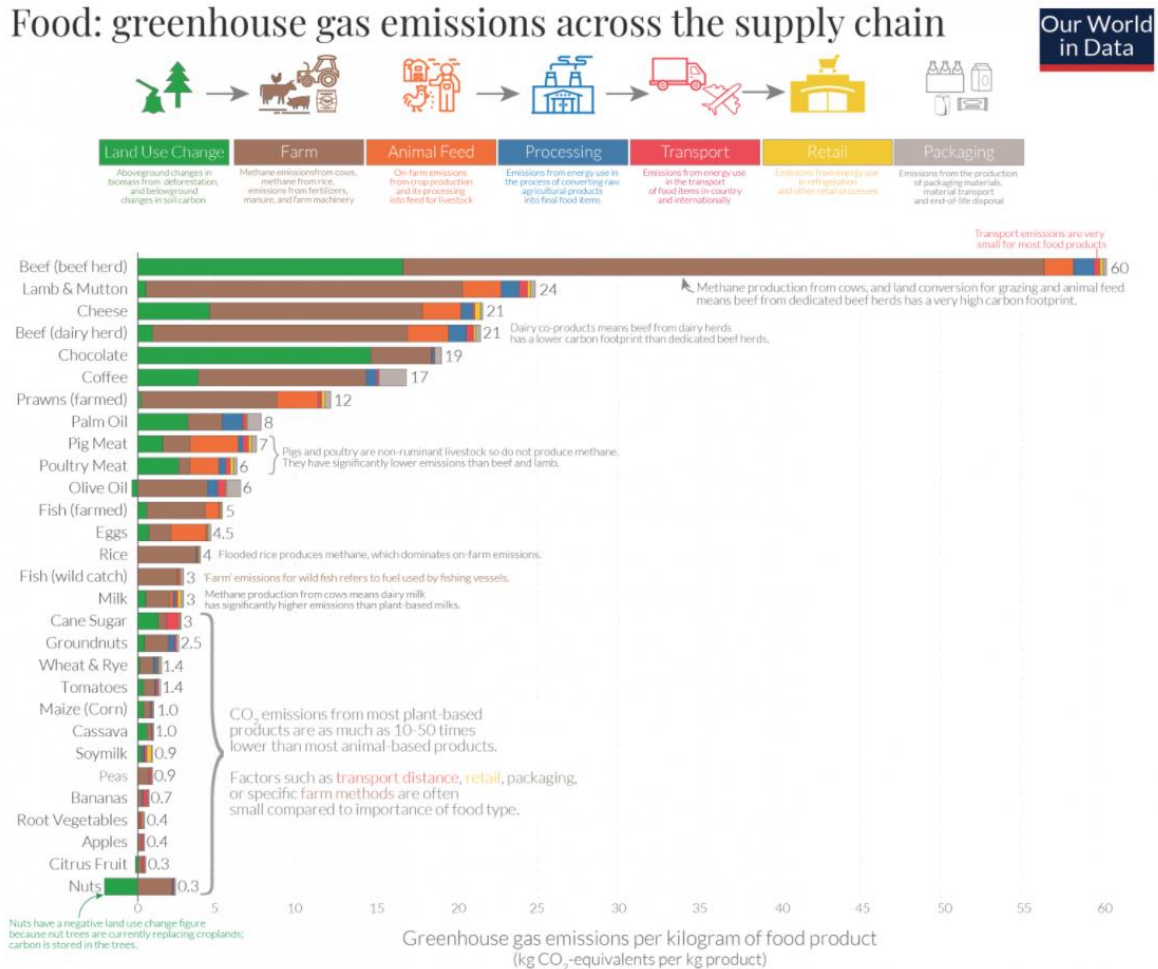
Inspired by the 2019 EAT-*Lancet* Commission's report and numerous other studies that show overwhelming scientific support for using food as the key to sustainable development, we came up with the idea of creating an App with financial incentives to spur a transformation in society's eating habits. We were highly pleased to find out during the interview stage that in fact, there is a gap in the market that needs to be filled, and that our App could do just that. After validating our product and incorporating additional features based on customer feedback, we proceeded to create a website, more sophisticated prototype, marketing plan and financial forecast.

While there are other similar Apps and a saturated mobile App market, we are confident based on our customer segmentation – primarily flexitarians – that we can bring a much-needed solution: educational information on a food's environmental footprint *plus* a cash-back rewards system. We believe that this will make our company stand out from the rest and create a community dedicated to transforming our food system in an informative and fun way. We have a strong marketing plan in place to ensure a successful roll-out of the App and strong financials forecasting a sustainable business model.

Funding a new company is always risky business. But PlentiHealth is an opportunity in a fast-emerging market that is not to be missed.

# 9. ANNEX

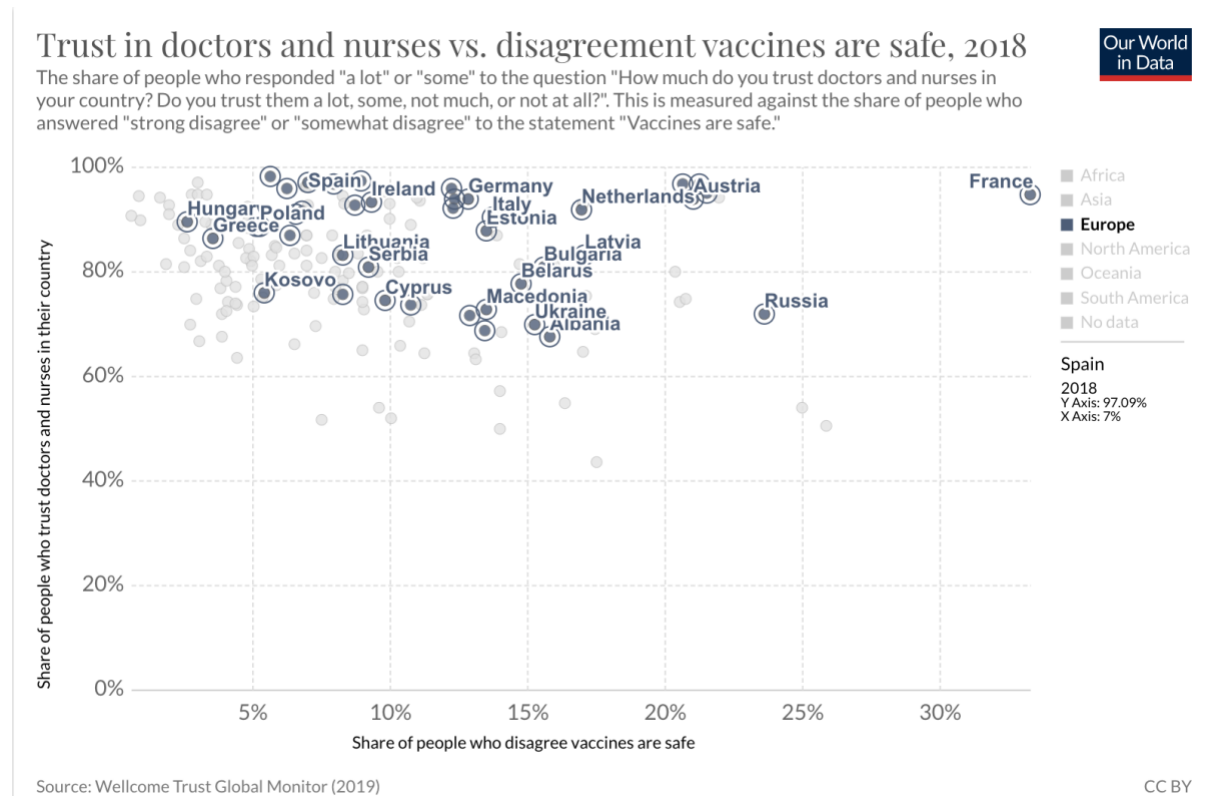
## 9.1. Figure 1.



Note: Greenhouse gas emissions are given as global average values based on data across 38,700 commercially viable farms in 119 countries. Data source: Poore and Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Science. Images sourced from the Noun Project. OurWorldinData.org - Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.



**9.2. Figure 2.**



**9.3. Entire MVP can be accessed here:**

[https://docs.google.com/presentation/d/1ogsgrT\\_a3HFfETcwnUvGw7SCZo4ZsKFzNX\\_XG2lZ6sA/edit?usp=sharing](https://docs.google.com/presentation/d/1ogsgrT_a3HFfETcwnUvGw7SCZo4ZsKFzNX_XG2lZ6sA/edit?usp=sharing)

**9.4. Entire prototype can be accessed here:**

<https://www.figma.com/proto/t2iiRi02hcZug2ZXEhdGwH/Christine-Project?node-id=268%3A336&scaling=scale-down>

**9.5. The PlentiHealth website can be accessed here:**

<http://plentihealth.mystrikingly.com/>

**9.6. The finance plan can be accessed here:**

[https://drive.google.com/file/d/1qPxB2p\\_dMG8tKgcUuaq1u2XqIcsQlh1v/view?usp=sharing](https://drive.google.com/file/d/1qPxB2p_dMG8tKgcUuaq1u2XqIcsQlh1v/view?usp=sharing)

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