

# FINAL PROJECT

**Design and Validation of the Company *Water for Everyone* following the Lean Startup Method**



**Water for  
Everyone**

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Camille Bon  
Fernando Crespo  
Álvaro Robles  
Alejandro Segura

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# Executive Summary

<p><b>Water for everyone</b> was born from the desire to give access to everyone to clean water through a sustainable process.</p> <p>We offer a transportable and auto-sufficient system to provide desalinated and purified water from any source -even seawater- in remote areas.</p> <p>We focus on providing a system that is easy to transport, assemble and maintain, powered by renewable energy.</p> <p>Join us and our dream: using the sun and the sea to get <i>Water for Everyone</i>.</p> <p style="text-align: center;"><b>Team</b></p> <hr/> <p>Davide Acquanita Camille Bon Fernando Crespo Pérez Álvaro Robles Rodríguez Alejandro Segura Monteagudo <b>Mentor:</b> Iván Robles</p>	<p style="text-align: center;"><b>Company data</b></p> <hr/> <p><b>Email:</b> w4everyone@gmail.com <b>Creation:</b> 2017 <b>Sector:</b> International Cooperation. Water and Sanitation.</p> <p style="text-align: center;"><b>Finance situation</b></p> <hr/> <p><b>Required investment:</b> 210,000 € <b>Covered by:</b> <b>Participative loans:</b> 60,000 € <b>Financial loans:</b> 60,000 € <b>Grants:</b> 50,000 € <b>Partners:</b> 25,000 € <b>Other loans:</b> 15,000 €</p> <p style="text-align: center;"><b>Investment share</b></p> <hr/> <p><b>Tangible fixed assets:</b> 75,500 € <b>Intangible assets:</b> 8,500 € <b>Other fixed assets:</b> 6,000 € <b>Setting up:</b> 3,000 € <b>Beginning balance:</b> 117,000 €</p>
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## The team:

Diversity, integrity and expertise: that's what define us!

A team of 5 engineers from Spain, Italy and France with one common passion to make the world a greener and fairer place.

We are experts on water treatment technologies, solar PV technology, sustainable development and lean startup methods.

## The issue:

When we look at the world, we notice that two dramatic events are getting worse and can only be addressed together: the water crisis and the refugee crisis.

According to the World Wild Fund (WWF), 1.1 billion people lack access to water; 2.7 billion experience water scarcity at least one month a year and 663 million people still drink water from unprotected sources. By 2025, two-thirds of the world's population may be facing water shortages, leading the coastal communities to turn to the sea to meet their drinking

water needs.

On another hand, human conflicts, civil war and environmental change force millions of people to leave their home. According to the UN Refugee Agency (UNHCR), 2.6 millions refugees live in camps built and run by the government, the United Nations or international organizations (NGOs). Millions more live in urban areas and informal dwellings. According to *Action Against Hunger*, the first concern for NGOs is to provide water to the population in case of emergencies.

### Our solution:

The product we came up with in response to this reality is a portable desalination system. It takes advantage of the great development that reverse osmosis treatment and solar PV technologies have experienced during the last five years and combine them to produce clean water from saltwater sources.

The main characteristics of the product are:

- It can work both with seawater and salty aquifers or lakes.
- It is easy to transport.
- It can be assembled and disassembled in a few hours.
- It is resilient (it requires low and easy maintenance).
- It does not need an external energy supply.
- It works unmanned.
- It is cost competitive.



### The market:

We estimated that the Organizations which can be interested in our product have an annual budget fluctuating between 1.500 and 2.000 M€. They invest 30% of their budget in humanitarian operations. According to our estimations, we can assert that our gross market niche fluctuates between 67.5 and 90 M€ per year.

### Our advantage:

None of our competitors gathers all our main features: resiliency, transportability, energy autonomy and water source flexibility. Water for Everyone will be the first company to combine effectively desalination technologies, renewable energy and a portable, easy-to-assemble equipment.

### The business model:

Water for Everyone is highly client-focused. Our product and services were designed with one thing on mind: relieving the pain and enhancing the gain of NGOs working in water, sanitation and hygiene projects on field. International Organizations want to improve human conditions but they struggle to find the most suitable and sustainable solution at a reasonable cost.

The main aspects of our business model are the following:

- **Value proposition.** We offer what our clients need: an easy to transport, resilient and scalable equipment supplied promptly where they require.
- **Customer relationships.** Face to face relationships will be the most important ones, supported by specialized fairs and newsletters. The connection with our clients does not end when they purchase our equipment, but it starts.
- **Channels.** Our product is adaptable to all conventional transport methods.
- **Revenue streams.** Our clients can buy or rent each equipment. Maintenance services will also be charged, while transport and commissioning are included in the price.
- **Key partners.** We will cooperate with suppliers of equipment and transport companies, along with organizations such as the Humanitarian Innovation Fund.
- **Key activities and resources.** Manufacturing and assembling in an industrial site.
- **Cost structure.** The variable production costs account for the 60% of the equipment price. Fixed costs include salaries and factory rent.

### Lean design process:

Our product is the result of a thorough lean design process. To validate our hypothesis we used feedback from the real market, obtained by means of two main tools: interviews and market testing.

During the interviews, we had the chance to work closely with experienced professionals from acknowledged NGOs with international impact. We learnt about the problems they face when providing water in remote areas and how the solution must be. We also worked with them to find the way to be competitive.

In order to test the market we designed an experiment in which we sent our commercial brochure to 20 NGOs specialised on water and sanitation. We evaluated and analysed their response according to the interest shown in our product. We obtained several positive responses in a few days, proving that we are on good track. Our first clients can be signed during the following weeks.

### Marketing strategy:

Creating a strong connection with our clients is the cornerstone of our business model. Water for Everyone starts in a favorable background in terms of political, social and economic conditions. These are the main steps of our marketing plan:

- **Objectives:** Building a solid client portfolio of 36 new clients during the first year and 60 new clients during the second year. In addition, an 80% of these clients shall be loyal clients.
- **Strategies:** Our system will be seen as a high quality and reliable product at a reasonable cost. We will reach our clients through specialized channels and provide volume discounts.
- **Action plan:** The main actions in the short term will be attending to water technology fairs and communicating face to face with potential clients.

### Operational plan:

The activities of Water for Everyone are those of a company in the secondary sector. We purchase the components and manufacture a finished product which is then transported according to the client's requirements. The key aspects of our operational plan are the following:

- **Product and services:** Direct sales, renting and maintenance services.
- **Partners and employees:** The company is founded by 4 partners. 10 employees will be part of the project at the end of the 2nd year.
- **Plant and equipment:** We will rent a manufacturing plant in a Spanish coastal city, allowing us to ship our equipment in a few hours.
- **Logistics:** We will deal with transport services worldwide.
- **Quality standards:** Our product will be CE certified.
- **Guarantee:** The legal two year guarantee assures the client that all issues will be solved. After that, we will offer maintenance services.

### Financial plan:

Both realistic and optimistic scenarios were projected, considering three different revenue lines: direct sales, renting and maintenance services. The financial needs to start our project are 210,000 €, and a minimum of 60,000 € will be raised by participative loans.

The investor is given the chance to get on board of an exciting project that will improve the lives of thousands while obtaining a return on investment above 40%. A unique opportunity of doing well by doing good.

# 1. Introduction

## a. Project Presentation

The project consists in the development and the commercialization of a desalination and potabilization plant. The system is portable, modular, scalable and energy autonomous. It is powered by photovoltaic panels and batteries to store energy during high production hours. The production of clean water is estimated to 5.000 litres per day, with the possibility of increasing the daily production through inflatable external tank.

The system has been developed with the aim of supplying clean water to the population facing natural disasters, water scarcity, through Non Governmental Organisation (NGOs) working on the field.

## b. Team Presentation

The project has been developed by five students of the EOI School during the academic year 2017/2018, with a high level of technical background, interdisciplinarity, internationality and sustainable skills and motivation.

A team of 5 engineers from Spain, Italy and France with one common passion to make the world a greener place.

Water for everyone was born from the desire to give access to everyone to clean water through sustainable process.



### Alejandro Segura

Alejandro is the Idea holder. He is the one who imagined an adaptable system to bring water where needed. He is an Industrial Engineer with great motivation to contribute to the water and energy sectors. He has two highly prestigious master's degrees in both subjects. Alejandro has a great capacity for adaptation and versatility contrasted for more than three years of work experience.

### Fernando Crespo

Fernando is the Technical Adviser, the one who designed and enhanced our device. His practical aptitude allowed the Team to design a high quality product. He is an Industrial Engineer with 3 years of experience in the energy sector. He improved his knowledge attending a Master Degree in Renewable Energy and Energy Markets.



### Camille Bon



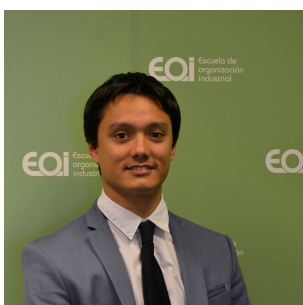
Camille is the Sustainability Expert and Team Leader. Moved by the willpower to make the world a better place, she followed her conviction to study Sustainable Development and Corporate Social Responsibility. This granted her with a 360° understanding of Sustainable Management. Camille is eager to help businesses create positive impacts. She has a strong international profile as

she is French and she has lived several years in Canada and Spain

### Álvaro Robles

Álvaro is the Business Developer. He is in charge of keeping the relationships with the NGOs and recollect useful information. He has worked as a consultant in the energy and electricity market fulfilling tasks in data analysis, machine learning, software testing, benchmarking and project of energy demand in smart cities.

Furthermore, he has a solid knowledge in finances.



### Davide Acquanita

Davide is the person in charge of the Investor Relationships. He has lived and studied in Italy, Turkey and Spain. Thanks to his knowledge of four languages, he can reach Investors worldwide. He is a Mechanical Engineer and attended a Master Degree in Renewable Energy and Energy Markets.



## 2. Context & Product Design

### a. The issue & opportunities

Water covers 70% of our planet, and it is easy to think that it will always be plentiful ; only 2,5% of it is freshwater. Clean water is a rare resource, essential to human health. As human population continue to grow and release more CO<sub>2</sub> and other greenhouse gases into the atmosphere, patterns of weather and water will change around the world. Droughts will become more common in some places, floods in others. This will affect the freshwater supplies to those downstream communities. When waters run dry, people can't get enough to drink, wash, irrigate field and health problems and economic decline may occur. Access to clean water can reduce risk of disease contamination by two.

According to the World Wild Fund (WWF), 1.1 billion people lack access to water; 2.7 billion experience water scarcity at least one month<sup>1</sup> a year and 663 million<sup>2</sup> people still drink water from unprotected sources. By 2025, two-thirds of the world's population may be facing water shortages.. leading the coastal communities to turn to the sea to meet their drinking water needs.

It also happens that the groundwater is too salty for proper consumption. In India, 65% of the groundwater is unfit for drinking and agriculture and therefore requires desalination.<sup>3</sup> Salty water is not directly toxic, but can have long-term effects on health (kidney functions can be affected). Salty water has an unpleasant taste and may cause people to turn to other, dirtier water sources.

On another hand, human conflicts, civil war and environmental change force millions of people to leave their home. According to the UN Refugee Agency (UNHCR), 2.6 millions refugees live in camps built and run by the government, the United Nations or international organizations (NGOs). Millions more live in urban areas and informal

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<sup>1</sup> World Wild Fund, Water Scarcity, <https://www.worldwildlife.org/threats/water-scarcity> (Retrieved: 30/05/2018)

<sup>2</sup> The Guardian (March 2017), <https://www.theguardian.com/global-development-professionals-network/2017/mar/17/access-to-drinking-water-world-six-infographics> (Retrieved: 15/06/2018)

<sup>3</sup> Massachusetts Institute of Technology <http://news.mit.edu/2014/solar-desalination-india-0908> (Retrieved: 15/06/2018)

dwellings. In the top 5 hosting countries of refugees, we find Turkey, Pakistan, Lebanon and Iran. All those countries have access to the sea. According to Action Against Hunger, the first concern for NGOs is to provide water to the population in case of emergencies.

## b. The product

The product developed is technically called Reverse Osmosis Photovoltaic System (RO PV System). It takes advantage of the great development that reverse osmosis treatment and solar PV technologies have experienced during the last five years and combine them to produce clean water from saltwater sources. The reverse osmosis technology can be applied both to seawater with high salinity and brackish water in aquifers, wells or lakes, with lower salinity. This fact makes reverse osmosis not only the most cost-effective, but the most versatile water treatment technology for our application.

Our system will be able to produce 5000 litres of water suitable for human consumption per day. It will only use two inputs: water with a salinity up to 40000 TDS (brackish water or seawater) and solar radiation.

The following table summarizes the basic characteristics of the ROPV System:

Daily production of drinking water	5 m <sup>3</sup> per day
Type of water to be treated	0 – 40000 ppm TDS
Power Generation	4kW PV Array
Volume of equipment (m3)	2,83 x 2,32 x 2,4 (10ft container)

The ROPV System is composed of the following subsystems (see figures below):

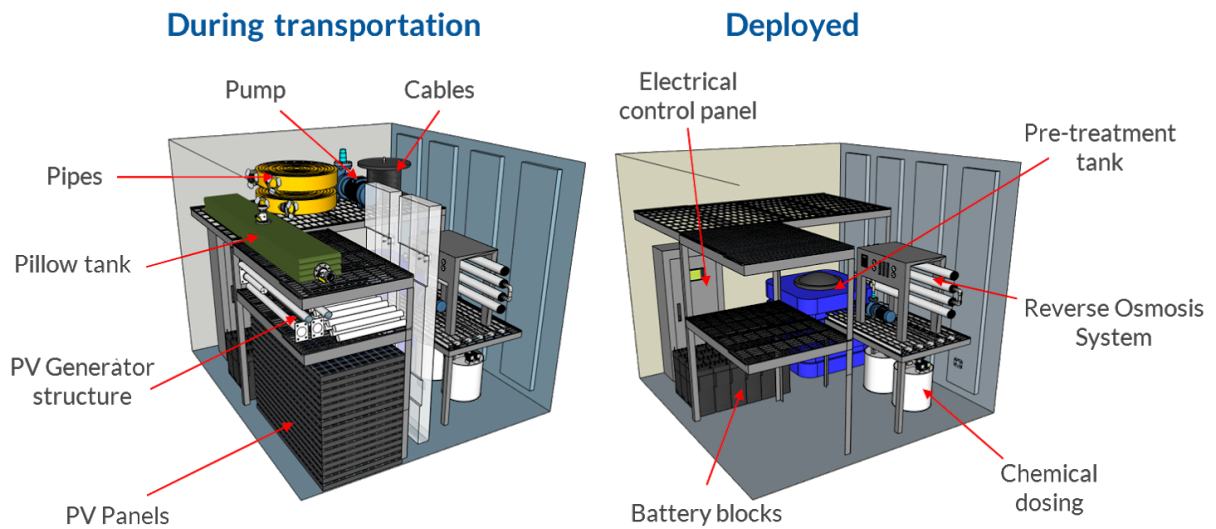
- Water intake: A low pressure pump carries water from the sea or other source to the container.
- Pre-treatment tank: The water is filtered and stored on a pre-treatment tank, where chemicals are dosed to prevent the reverse osmosis membranes to be deteriorated over time.

- **Reverse Osmosis Equipment:** The high pressure pump makes water flow through the membranes. Freshwater is produced at the end of the membranes, producing also sewage (very high salinity water) as a by-product.
- **Chemical dosing:** It contains and doses all the chemicals required in the process, such as chlorine and antiscalant.
- **Pillow tank:** The freshwater produced is stored in a pillow tank with 5m<sup>3</sup> capacity.
- **PV Generator:** It is formed by 16 multicrystalline panels, which make up a capacity of 4kW. This is enough to power the whole system without an external source.
- **Battery:** The surplus of energy is stored in the battery, thus assuring the security of supply even in cloudy days.
- **Electrical control panel:** It contains the battery regulator and the programmable logic controller responsible for the control of the system.



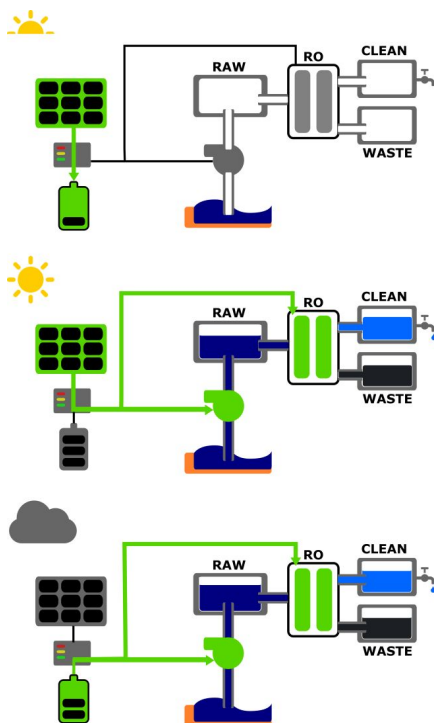
**Figure:** ROPV System deployed, overall view.

During transportation, all the equipment fit into the 10 feet container (see figure below). The pillow tank can be folded easily and the PV Generator can be built and disassembled in a few hours. In the same way, all pipes and cables are easily plugged and unplugged. Corrective maintenance is very unlikely due to the high quality of the components, and when it happens, technically trained staff is not required. Thus, logistics on field are as easy as they can be.



**Figure:** ROPV System during transportation and deployed, internal view.

Once deployed, the system is completely autonomous, works unmanned and only requires a scheduled supervision. The basic control philosophy is shown on the following table.



**Morning**

Using the first sunshine, the batteries are recharged.

**Day**

With the solar radiation on its peak, the main pump stores sea water into the raw water tank and the RO system produces clean water. Waste water is obtained as a by-product.

**Cloudy days**

When there is lack of radiation, the system uses the energy stored in the batteries.

## c. Market

In 2016, the global water desalination market was valued at \$USD 13 billion and was estimated to reach \$USD 26 billion in 2025 (Hexa Research Report<sup>4</sup>). Middle East and North African countries are the biggest market with regular water scarcity issues. New projects in these regions are expecting to grow over the next years. Rising demand for clean water will increase the market share of Reverse Osmosis (RO) on account of its cost-effectiveness. This technology consumes less energy and provide superior purification.

Water for Everyone was born to be a company that drives social innovation and transformation in a critical field: water supply. We are a social start-up and work very closely with those Non-Governmental Organisations (NGOs) that operate in the health field and fight against starvation and thirst. Experts predict that in the next fifteen years, 2 out of 3 people will live in conditions where demand for water will be greater than supply<sup>5</sup>. Our aim is to enhance water supply where fresh water sources ran out.

Under a financial point of view our clients will be the NGOs themselves even though the final users will be the communities in remote areas with regular stress crisis, refugee camps, population facing emergencies and natural disasters. During our Lean Design process, we gathered information about NGOs' annual budget and analyzed the portion invested into water sanitation systems.

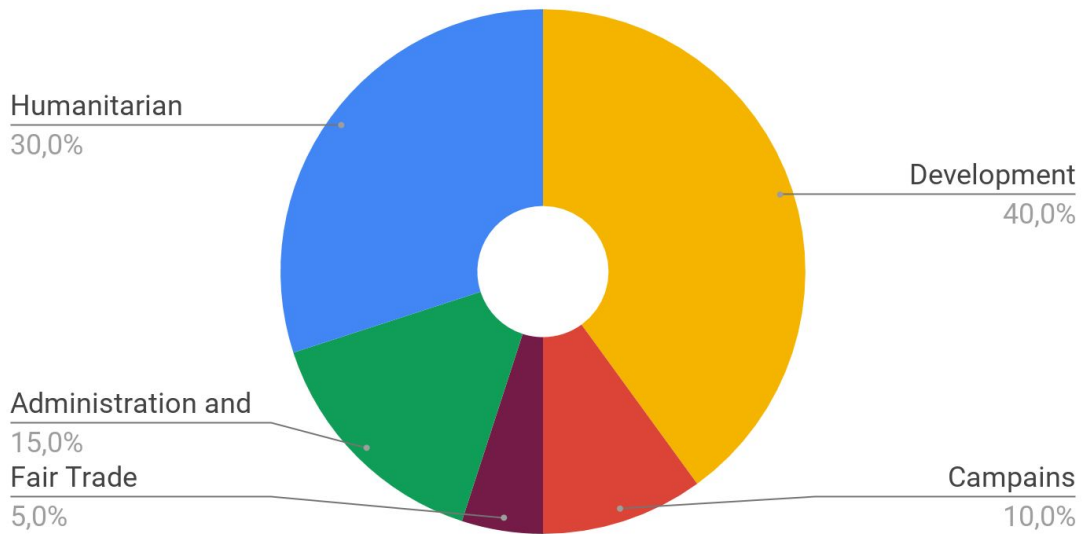
We noticed that the Organizations that can be interested in our product for the first year has an annual budget fluctuating between 1.500 and 2.000 M€. As shown in the figure below, a 30% is invested in humanitarian operations. The investment include: water sanitation, nutrition, food safety, risks & disasters prevention, health, social inclusion. The amount dedicated to this area is around 450 and 600 M€. After several interviews and researches we estimated that around 15% of this amount is annually used in water treatment systems. We can assert that our gross market niche fluctuates between 67.5 and

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<sup>4</sup> Hexa Research, August 2017, <https://www.prnewswire.com/news-releases/water-desalination-market-size-worth-usd-2681-billion-by-2025-hexa-research-642089153.html> (Retrieved : 01/07/2018)

<sup>5</sup> Thirst for water, <http://www.thirstforwater.org/water-crisis.html> (Retrieved : 20/05/2018)






90 M€. As Water for Everyone is a neonate start-up, we count on a 30% of this niche. Our final estimation is that the net market niche that we can leverage sums a total of 25 M€.



### d. Competitors

Even though our desalination is a niche product with specific targeted customers, we found some competitors in the market of portable water treatment units. Nevertheless, none of them gathers together our main features (resiliency, transportability, energy autonomy and water source flexibility).

The following chart presents our main competitors and their characteristics compared to our product. The table highlights our competitive advantages.

Competitors summary					
Company					
	Grupo SETA	Dinotec	Instituto Tecnológico de Canarias	A-aqua	Water for Everyone
Model	3E/3000	PP4x4 DUAL SWR	-	EmWat 4000 kit	ROPV System
Suitable for saltwater	Yes	Yes	Yes	No	Yes
Energy source	Diesel	Diesel	Solar PV	Diesel	Solar PV
Size	Trailer mounted	Trailer mounted	Permanent plants, civil works required	3 Pallets	10ft container
Production	72 m <sup>3</sup> /d	13 m <sup>3</sup> /d	7 - 10 m <sup>3</sup> /d	20 m <sup>3</sup> /d	5 m <sup>3</sup> /d
Transport solution included	Yes	Yes	No	No	Yes

As a conclusion, SETA group and Dinotec are the ones most likely to be direct competitors, since they have a product with similar characteristics in terms of size, ease to transport and capabilities. However, their product rely on fuel supply, whereas ours only needs solar radiation to operate. We need to take advantage of that difference to compete effectively with these companies.

### 3. Business Model

#### a. Clients

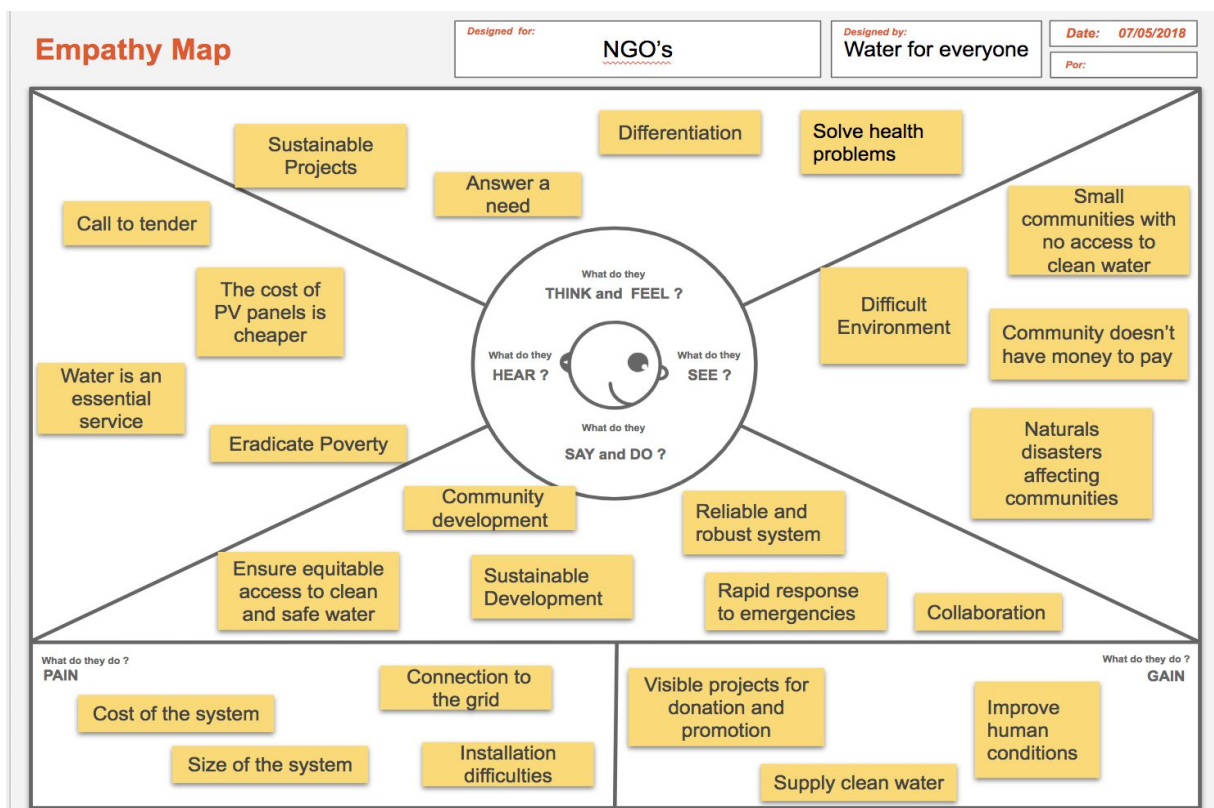
##### i. Description

The clients of the desalination plant are NGOs working on the humanitarian field. They provide emergency responses to humanitarian crisis caused by natural disasters or conflicts and help the local population to recover during the post-disaster period. The potential client is a large NGO, such as OXFAM and Red Cross. They operate all over the world. They have enough funds to buy several units and store them. They want to be ready to take action as soon as a crisis appears.

Smaller NGOs will buy one unit at a time, according to the project they participate in.

With the desalination plant, the NGOs will supply water to communities living in remote area with no access to clean water. They will also supply water to refugee camps.

##### ii. Empathy map





The empathy map help us to better understand our clients needs. NGOs provide humanitarian help to communities that does not have access to basic needs such as clean water. It is part of their mission to provide assistance to human beings when Natural disasters occur. They want to improve human conditions with the most suitable and sustainable solution.

## b. A social business

Our desalination system aims to move from an emergency response to a long term and sustainable solution. The Water for Everyone's mission do not only provide water but improve people's quality of life. We are giving access to water without creating dependency of humanitarian aid. By giving access to clean water proper for human consumption, we will reduce the risk of diseases transmission or indirect effect on health.

In many countries, women are responsible for collecting water for the family and their communities. The installation of the desalination system will have an influence on the workload of the women and the time they spend on other tasks. They will have time to work, to study or to dedicate to their family.

In the medium term, this will result in a better access to opportunities for the local communities and foster economic development (household income increase, creation of new, small and/or informal businesses). Water for Everyone will provide capacity building and training to the community towards water conservation, system daily maintenance.

In the long term, we hope that water access will arise peaceful community and help to maintain security in the region.

We have designed a Environmentally friendly system working with renewable resources in order to ensure the sustainability of our project.

### c. Value proposition

By studying and interviewing our clients we were able to understand their needs on the field and their minimum requirements for the equipment that they would use. The final prototype of the ROPV System takes all of this into account and builds the base of our value proposition.

Value proposition		
Pain relievers	Gain creators	Competitive advantages
<ul style="list-style-type: none"> <li>● Fast response to emergencies.</li> <li>● Both seawater and water from salty aquifers or lakes are purified.</li> <li>● The system is easy to transport.</li> <li>● The system can be assembled and disassembled in a few hours.</li> <li>● Resiliency: low &amp; easy maintenance.</li> <li>● Energy autonomy.</li> <li>● Cost competitive solution.</li> </ul>	<ul style="list-style-type: none"> <li>● CE marked product.</li> <li>● Reduced dependency on fossil fuels.</li> <li>● Permanent staff is not required.</li> <li>● Technically trained staff is not required.</li> <li>● Scalable solution, easy adaptation to the water demand.</li> <li>● Suitable as an emergency response and a long term solution.</li> </ul>	<ul style="list-style-type: none"> <li>● First company to combine effectively desalination technologies, renewable energy and a portable, easy-to-assemble equipment.</li> <li>● Consultory services and logistics services offered as an optional.</li> <li>● Long term solution for water stress remote region</li> </ul>

### d. Business Model Canvas

Water for Everyone is highly client-focused. Our product and services were designed with one thought in mind: relieving the pain and enhancing the gain of NGOs working in water, sanitation and hygiene projects. Our investigation lead us to the following extent: ***International Organizations want to improve human conditions but they struggle to find the most suitable and sustainable solution at a reasonable cost.***

Our business model has been built around this main statement:

- **Value proposition:** We offer what our clients need: an easy to transport, resilient and scalable equipment supplied promptly where they require. Our desalination system is both a long term solution and a fast emergency response. We provide an access to water and therefore do not make the users dependent on the humanitarian help.
- **Customer relationships:** Face to face relationships will be the most important ones, supported by specialized fairs and newsletters. We want to develop strong relationships with the clients. We give a great importance to the client's experience on our system.
- **Channels:** Our product is adaptable to all conventional transport methods. We designed a modifiable equipment that fit in 10 feet container. The container can be moved and brought to any places by plane, truck or ships.
- **Revenue streams:** Water for Everyone will get revenues from two sources of incomes: equipment sales and renting.

- Sales of the desalination equipment (*transport and installation included, 2 years warranty*) :

**Selling price of one unit : 31 526 €**

- Monthly Rent of the desalination equipment (*transport and installation included, 2 years warranty*)

**Renting price of one month: 2 000 €**

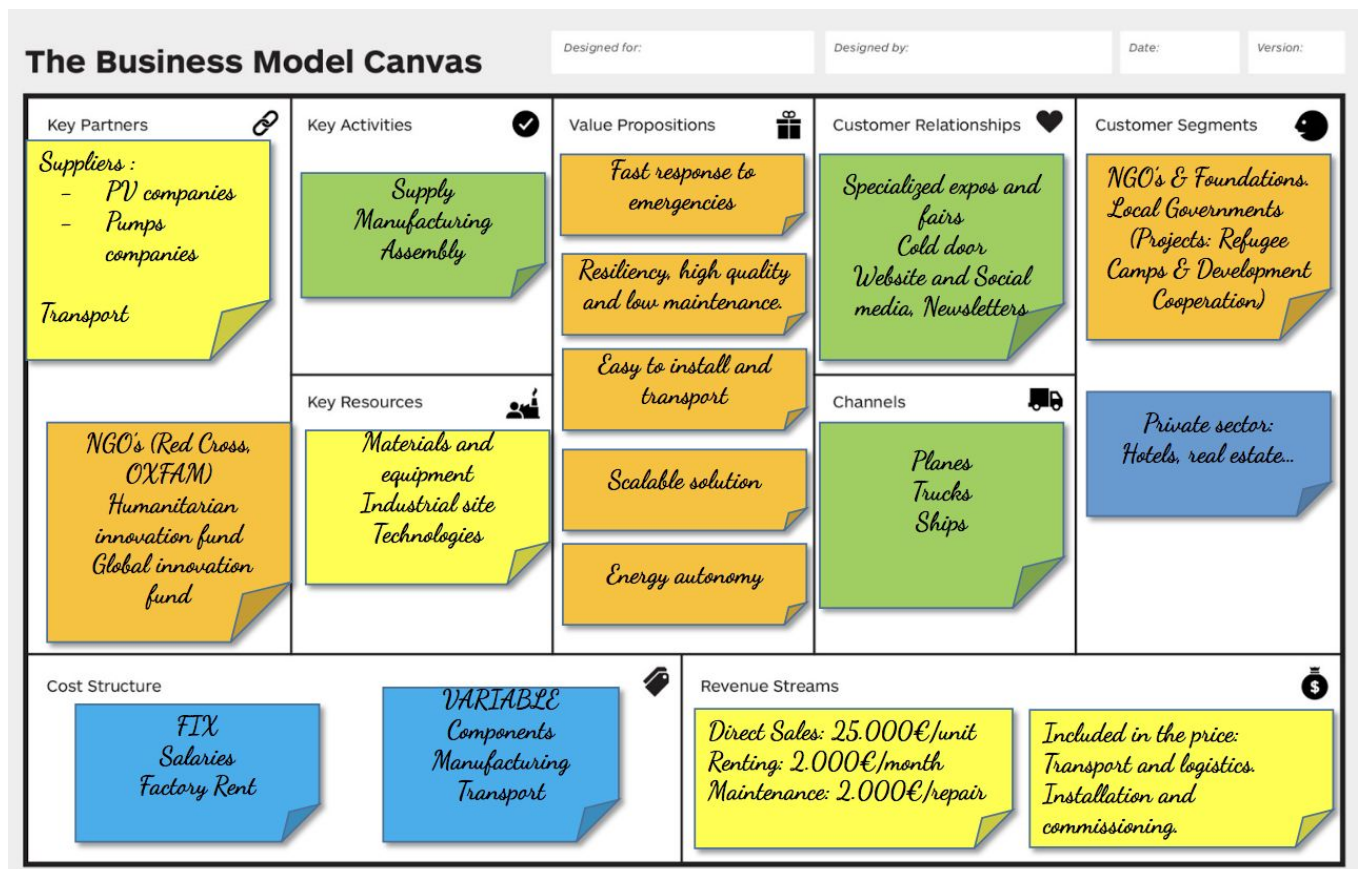
When the warranty expires, Water for Everyone will offer maintenance services. If a component has to be changed or replaced outside the warranty, the company will charge 2000 € for repairs.

- **Key partners:** Collaboration is fundamental in the Humanitarian sector. We will form a partnership with the Humanitarian Innovation Fund to be capable to innovate and adapt our system to the needs of tomorrow. We are working closely with our clients and suppliers in order to improve and come up with the most effective solution.

Bimensual meetings will be planned in order to meet and maintain a relationship with our key stakeholders. We acknowledge the potential of partnership with NGOs : they will help us to access new markets and gain the trust of the local communities.

- Key activities and resources:** The main activities are the manufacturing and assembling process. We will assemble the system in a spanish factory. Components and pieces of the desalination have a strong influence on the cost structure of the product. As the technology is recently mature, there is a potential for innovation. The variable production costs account for the 60% of the equipment price. Fixed costs include salaries and factory rent.

The following canvas summarizes our business model :



## 4. Lean Design Process & Business Validation

Our business model is the result of a thorough lean design process. Such process consisted of the following steps:

1. Conceptual design: Development of the first drawings and product features.

**Prioritized question: “Do NGOs have a problem when supplying water in remote areas that we can solve with our system?”**

2. Validation: To answer it, we conducted several interviews in which we found out that water supply is one of the main concerns of NGOs working in emergencies, refugee camps and development aid. We also learnt that the solution shall be small, portable and resilient.

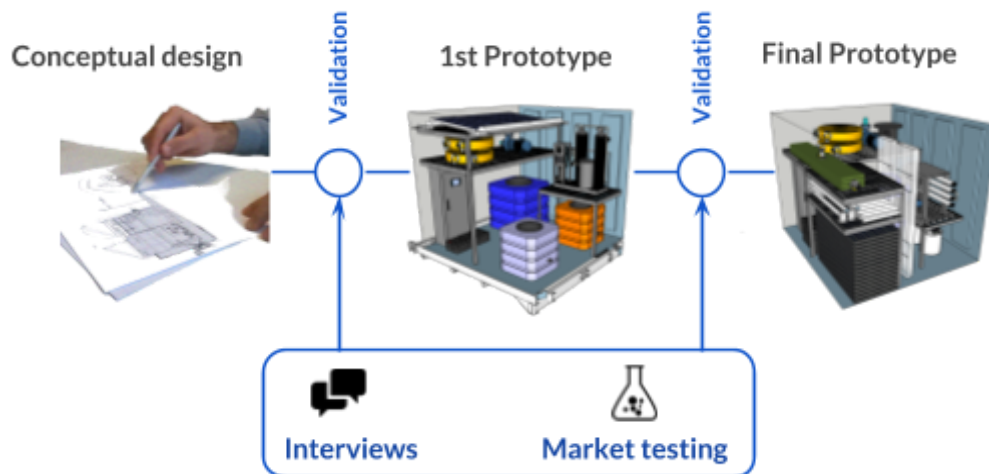
**Prioritized question: “Are NGOs interested in a small portable desalination system?”**

3. First prototype: Development of a 3D model and product brochure. Establishment of the main value propositions.
4. Validation: To answer the prioritized question, we did a market testing in which we sent the brochure to 20 NGOs working in emergencies situations and water stress environment. Then, we evaluated their response, judging whether they were interested. We obtained several positive responses in a few days, proving that we were on good track.

**Prioritized question: “Is our desalination system competitive?”**

5. Validation: We continued to work directly with our potential clients. They were interested in our prototype but the problem of cost was raised. The price/water liter was more expensive than the systems they already use. Therefore, we needed to improve our system in order to produce water for a cost similar to what they already pay.
6. Final prototype: Development of the final 3D model and product characteristics. Optimization of the costs/production ratio according to our client’s requirements.

As we can see, to validate our hypothesis during the lean design process we used feedback from the real market, obtained by means of two main tools: interviews and market testing. The process is summarized in the figure below.











**Figure:** Lean Design Process diagram.


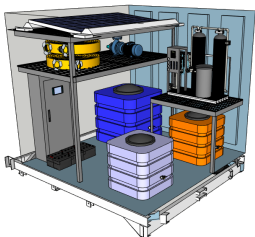
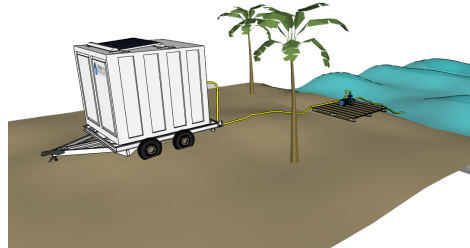



## a. Interviews

We had the chance to conduct interviews with experts from NGOs that have an international impact and a wide experience in water and sanitation:

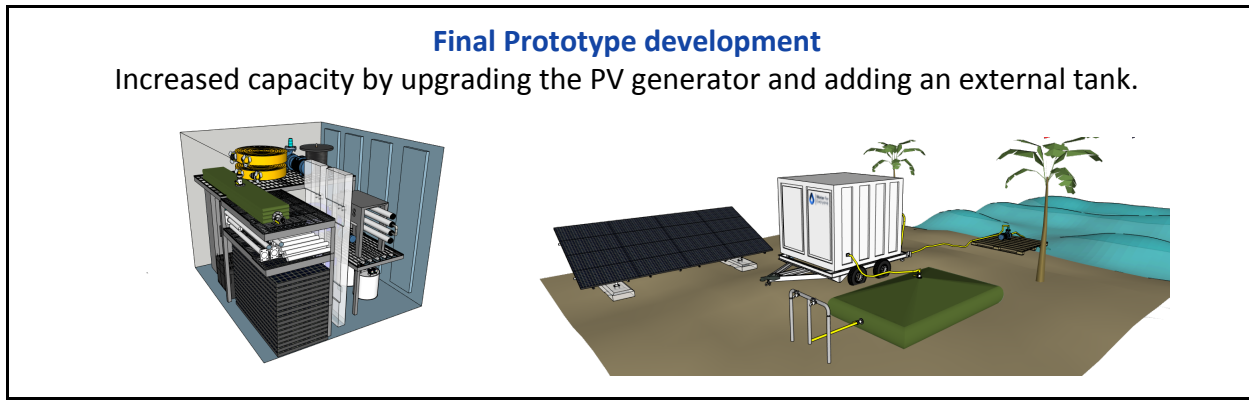
- José Ignacio Carbajo, Technical Department Lead at *Ingeniería sin Fronteras*.
- Raquel García, Water and Sanitation Coordinator at *Cruz Roja*.
- Angelo Pirola, Security and Logistics Manager at *Médicos del Mundo*.
- Enrique Raso, Flying WASH Coordinator at *Acción contra el Hambre*.

The following chart compiles the hypothesis validation and the main learnings we acquired after these conversations.

Interviews summary			
			
Type	Hypothesis	Validation	Learnings
Problem validation	We think our client has need/problem in <b>availability of freshwater</b> during field works.		In case of an emergency, the <b>first concern</b> is providing water to the affected population, along with an appropriate sanitation solution.
	We think that erecting <b>big water treatment infrastructures</b> in remote areas is <b>not feasible</b> .		The <b>smaller, the better</b> . Transportation and maintenance of big equipment would be impossible to accomplish.
	We think that our clients <b>depend too much</b> on buying big tanks of fresh water carried by trucks ( <b>emergency water trucking</b> or EWT)		EWT depends on local companies and the local market, it does not assure the security of supply and it is <b>not sustainable in the long term</b> .
Value proposition validation	We believe that the ROPV System will be <b>technically useful</b> to NGOs.		They <b>already used similar systems</b> on field (ERU WATSAN from <i>Cruz Roja</i> ) as an alternative to water trucking.
	We think that the equipment shall be <b>easy to transport and deploy</b> . We need to focus on a compact solution with low volume and low weight.		Sometimes they use helicopters to transport the equipment, setting a limit on the volume and weight. <b>Logistics shall be made as easy as possible</b> .
	We think that the equipment shall be <b>high quality certified</b> and with <b>low, easy maintenance</b> .		One of the most important requirements for the equipment deployed on field is resiliency: ability to <b>bear harsh environments</b> and <b>easiness to be repaired</b> (no technical knowledge and special components required).
	We think that the <b>energy autonomy</b> of the machine is a great value.		These systems have to be operative in remote places <b>without access to the electrical grid</b> .

	We think that the most valuable solution is <b>desalinating seawater</b> .		In many cases the underground water is too salty, so <b>water from wells have to be desalinated</b> . It would be useful also with <b>high salinity lakes</b> .
<p><b>1st Prototype development</b> Based on the validated hypothesis.</p> <div style="display: flex; justify-content: space-around;">   </div>			
Type	Hypothesis	Validation	Learnings
Value proposition validation	We think that customers would rather use <b>lower capacity</b> systems but that are more compact and <b>without the need of external tanks</b> (increasing modularity).		The systems shall maximize water production at the minimum cost. <b>External tanks are commonly used</b> in the sector due to their advantages.
Business model validation	We think that our system would be competitive with the following characteristics <b>1st Prototype:</b> <b>Price: 17.500 €</b> <b>Production: 500 litres/day</b>		It would <b>not be competitive</b> . In emergencies that investment should be able to supply freshwater to 300 people ( <b>at least 4.000 litres/day</b> ).
	We think that our system would be competitive with the following characteristics <b>Final Prototype:</b> <b>Price: 25.000 €</b> <b>Production: 5.000 litres/day</b>		The ratio cost/production after 3 years of operation is 4€/m <sup>3</sup> , <b>competitive with emergency water trucking reference price (7€/m<sup>3</sup>)</b> .





## b. Market testing

The second tool we used to validate our business was market testing. In order to do that, we designed an experiment in which we sent our commercial brochure to 20 NGOs specialised on water and sanitation. We evaluated and analysed their response according to the interest shown in our product.

The following chart summarizes the experiment design and its outcomes.

<b>Market testing summary</b>	
<b>Name of the test</b>	Brochure
<b>Hypothesis</b>	Our potential clients will be interested in our product.
<b>Test</b>	Send our commercial brochure to 20 NGOs.
<b>Metric</b>	Number of potential clients that answer the email showing interest.
<b>Criteria</b>	We detect a critical mass of interested organizations.
<b>Outcomes</b>	<p>The following organizations showed interest:</p> <ul style="list-style-type: none"> <li>● <i>AUARA</i>, social company that finances NGOs' projects.</li> <li>● <i>Construye Mundo</i>, NGO working in Senegal.</li> <li>● <i>Bomberos en Acción</i>, foundation that works in emergencies.</li> <li>● <i>Acción contra el Hambre</i>, NGO with international action, for a project in a refugee camp in Siria.</li> </ul>
<b>Conclusion</b>	There is interest in the market for a product like ours.

## 5. Planning

### a. Marketing Plan

#### i. Analysis and Diagnosis

In order to design the marketing plan, we need to analyze and understand the company's environment. Two types of analysis are carried out, one internal focused on the aspects of our own business, and another external analysis focused on the competitors and environment in general.

#### **Internal Analysis**

We have designed an innovative product, which offers an integral solution for water purification and desalination. This product is a portable water treatment/desalination machine, 10 feet in size; possessing a capacity of 5000 Liters/day. It is powered by solar energy through photovoltaic panels. The product is adjustable; we can increase the clean water by increasing the number of equipments (horizontally by adding more machines and membranes).

Our group is in a phase of launching the team to the international market. A market in which there are different solutions and in which it will not be easy to open a gap between the competition. That is why, we seek to place ourselves at a point that tries to combine quality and good price with respect to the competition.

We do not only offer a product but a broader solution that encompasses consulting services with the product. We accompany the clients throughout the whole life cycle of the project. In each installation, we will try to reach the maximum performance of the equipment.

## External Analysis

This analysis sets the company context. Among the available tools, PESTEL and SWOT analysis will be used.

<b>Pestel Analysis</b>		
<p><b>Politics</b></p> <ul style="list-style-type: none"> <li>- Politic instability in some countries can affect security.</li> <li>- Increased commitment with the United Nations Sustainable Development Goals.</li> <li>- Political tensions in Europe due to the refugee crisis. Urgent need to address the issue.</li> </ul>	<p><b>Economy</b></p> <ul style="list-style-type: none"> <li>- Increasing incomes in some developing countries with water access issues.</li> <li>- Renewed interest in finding new ways of technology leadership in Europe leads to more R&amp;D funds.</li> </ul>	<p><b>Social</b></p> <ul style="list-style-type: none"> <li>- Awareness of the global water crisis.</li> <li>- In natural catastrophes a large part of society, if not all, is affected</li> </ul>
<p><b>Technology</b></p> <ul style="list-style-type: none"> <li>- Invented, tested and available.</li> <li>- Great development of reverse osmosis and solar PV technology, leading to a dramatic decrease in costs.</li> </ul>	<p><b>Environment</b></p> <ul style="list-style-type: none"> <li>- Multiple zones without access to drinking water.</li> <li>- Cyclical natural catastrophes and increasingly frequent.</li> <li>- Infinite solar energy at zero cost.</li> </ul>	<p><b>Legal</b></p> <ul style="list-style-type: none"> <li>- Possible patents.</li> <li>- Manufacturing standards.</li> <li>- Coastal protection regulation.</li> <li>- Declaration of clean water access as a human right.</li> </ul>

<b>SWOT Analysis</b>		
	<b>Internal</b>	<b>External</b>
	<b>Weaknesses</b>	<b>Threats</b>
<b>Negatives</b>	<ul style="list-style-type: none"> <li>- New to the industry.</li> <li>- Lack of infrastructure.</li> <li>- Need for initial investment and assumption of risks.</li> </ul>	<ul style="list-style-type: none"> <li>- Established competitors.</li> <li>- Possible patents in the market.</li> <li>- Segment of small and highly specialized target customers.</li> <li>- The creation of a solid client portfolio is challenging.</li> <li>- Theft or vandalism on the unit.</li> </ul>
<b>Positives</b>	<b>Strengths</b>	<b>Opportunities</b>
	<ul style="list-style-type: none"> <li>-We use mature technologies, with multiple providers.</li> <li>-Innovative product, adapted to the client's needs.</li> <li>-Knowledge of the sector and contacts.</li> <li>- Multidisciplinary team, with broad technical knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>- Water shortage and crisis are growing in the world.</li> <li>-Natural disasters are repeated cyclically and increasingly frequent, leaving large areas without access to drinking water.</li> <li>- Lack of adapted solutions (majority of expensive and non-modular equipments).</li> </ul>

## ii. Marketing Objectives

Our main objective is to promote our product and achieve a solid client portfolio. The achievement of this objective is fundamental, because it implies building the foundations of the financial plans and ensure future benefits.

Creating a strong connection with our clients is the cornerstone of our business model. We have set a strategic objectives of having 36 new clients the first year and 60 new clients during the second year.

The second objective set is the loyalty of 80% of the customer portfolio. It can be obtained through customer satisfaction. We will focus our efforts on the service quality of our customer department.

### iii. Strategies and Action Plans

We will have several plans for the development and promotion of the product, such as the customer loyalty strategy, the price strategy and the social networks strategy. Each plan will be a path that will lead us to achieve both our primary and secondary objectives.

Our promotion will be carried out through the following channels:

- **Technology and development/environmental fairs**

We will attend specialized fairs in the environment, water, humanitarian aid sectors. They gather potential customers and represent good opportunity to meet new suppliers and relevant partners (press; experienced consultants..). During those events, we will encourage our potential customers to try our product and drink the purified water obtained. We believe that demonstration is a great marketing tool.

In addition, these fairs can be used to make first-hand comparison of our product with the competition and get to know it better. We have chosen to participate in three important international congress related to water that are happening soon

- ✓ International Congress on Water, Waste and Energy Management in Rome (July 2018).
- ✓ The water Expo 2018, Miami, Florida (EEUU) (29 August 2018).
- ✓ Aquatech, Mexico (4 Sept. 2018).

- **Calls to potential customers**

These calls will be made to customers who show real interest by responding to our emails. We will describe our desalination process with a personal approach. The final objective is to book an making with the client to make a demonstration.

- **Advertisement in strategic web pages & magazines**

We will try to reach specialized online and/or paper magazines such as Global South Development Magazine, EverythingAboutWater in India...

We expect from them a section in which they describe our project, talk about our clients' success stories. The objective is to increase visibility and trust among the professionals and potential customers.

Through the use of cookies, personalized advertisements will be displayed on specific pages when potential potential customers are detected. We will therefore contact specialized advertising companies that apply advertising systems to the most specialized customer segments.

- **Price Strategy**

A single price is established for a single module of the equipment. If the client want several unit, a discount will be applied according on the number of units purchased.

This price includes: Modules ready to work, consulting services, transport.

The price does not include: Maintenance.

- **Customer loyalty strategy**

The customer loyalty strategy is focus clients that already belong to our portfolio. As stated before, the objective was raised at least 80% of them. Two actions proposed:

- ✓ **Customer service**

This strategy aims to provide the best service possible and ensure that the product will be updated with the latest technology. We want to keep the customer in our portfolio and avoid to lose him in favour of our competitors.

- ✓ **Wide guarantee period**

We offer a 2 years warranty against possible failures that may occur in the system.

- **Communication Social Networks strategy**

Social networks are excellent platforms to communicate our project to the general public and increase the product's visibility. A better visibility will increase our chance to receive grants. We will use mainly two networks : Youtube and LinkedIn.

- **LinkedIn:** Being a purely professional network, it is perfect for establishing contacts with people specialized in the water industry, humanitarian aid and disaster management
- **Youtube:** We are planning to make a promotional video to present the company, the product and our value proposition. The objective is to raise the general public's awareness on water scarcity issue. The more people are aware, the more attractive is our project and the likelihood to attract funds and investors.

#### iv. Measurement and Control

Key Performance Indicators (KPI) will be used to measure the achievement of our objectives. To use correctly KPI, our objectives needs to be measurable and well defined.

The main objective of our marketing strategy is the promotion our desalination system through the different channels mentioned above. The expected results are to achieve a solid customer portfolio.

We will use three KPI :

1. **KPI "Effectivity":** it measures the promotion effectiveness to attract new customers.

We will use the following numbers :

- Number of customers who have contacted us and shown interest by requesting an appointment.
- Number of customers who already use our equipments.

$$KPI_{Effectivity} = Kpi_{clients using the product} / Kpi_{potential clients informed}$$

2. **KPI "Loyalty":** Our objective of "80% customer loyalty portfolio" will be measure through surveys. Customers will be ask about their satisfaction in regards of the

product and services provided and whether or not they would trust or recommend Water for Everyone in the future.

$$Kpi_{Loyalty} = \text{Clients after 1 year} / \text{Clients at the beginning of the year}$$

**3. KPI “Social Media”:** Social networks are a powerful means to reach users, using multimedia content (videos, photos, etc ...). We will analyze and use the comments and posted about our product as a source of feedbacks and opportunity of improvement.

The KPI calculates the percentage of positive comments on the total of comments made on all the multimedia content uploaded to the network. Likewise, negative comments must be analyzed to solve problems or meet the needs that users may request.

## v. Projected Sales

We consider our product as a niche product. It has been conceived for a specialized market: NGOs providing potable water to the population in need. The desalination system is an innovative solution compared to what already exists in the market (water truck, diesel powered units). It is difficult to compare our product with other units and services used in the desalination market. Consequently, we can not base our predictions on the trends in an existing product.

Therefore we decided to use our business plan and market analysis as a guideline.

We also made the following assumptions:

- Water is a precious commodity and is becoming increasingly scarce.
- Number of people lacking access to safe drinking water will continue to increase as the world population continues to grow.
- We believe that the water market is profitable.

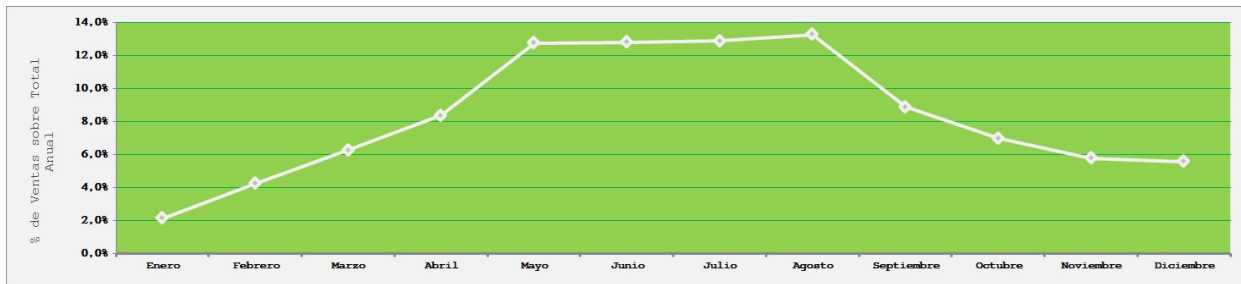
To begin with, we made assumptions about significant profitability. The estimated sales projections help us to estimate the best "sales volume/price" ratio. Our hypothesis will be



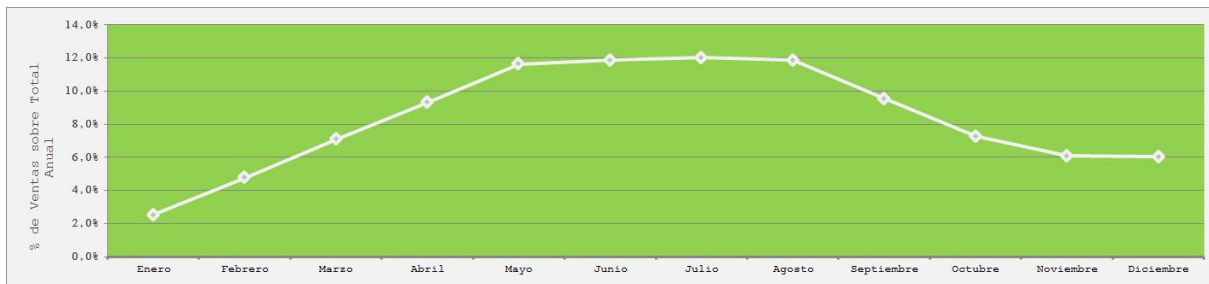
used as indicators. We will regularly review real sales and forecasts in order to update our “Sales volume/price” ratio and always offer a high rentability to our investors.

Water for Everyone aims to transform an environmental and water issues towards a business opportunity. We want to be the proof that sustainable and social impact business can create profitability.

Projected sales for the 1st year



Projected sales for the 2nd year



## b. Operational Plan

After months of research and investigation, the business idea has been defined and completely analysed. The Operational Plan presents the company's daily operational activities. It describes the use of the plant and equipments, the quality standards to follow, the logistic, the customer warranty, etc.

The basic needs to operate are the following

- Product and services.
- Customers.
- Partners and employees.
- Plant and equipment.
- Marketing grid.
- Logistic.
- Quality standards.
- Guarantee.

### **Product and services**

Water for Everyone commercializes a portable and modular desalination equipment that can produce 5.000 liters of clean water per day. We are offering the following products and services :

- Units of portable equipment for desalination and potabilization of water with 5.000 liters/day of freshwater production.
- Equipment monthly renting
- Maintenance services on the desalination system.

Prices of each product and service are detailed in the Financial Plan. Prices has been determined further to a market and competitor analysis

### **Customers**

The main customers are NGOs. Water for Everyone plans to open and grew its business to any potential customer interested in the products and services. Local government are

prospected. Private corporations operating in Saudi Arabia and Amazonia also demonstrate interest.

## **Partners and employees**

The company is run by the main five partners:

- Davide Acquanita
- Camille Bon
- Fernando Crespo
- Alvaro Robles
- Alejandro Segura

Each of them has an equal participation in the decision making. Each partner owns 20% of the company. The company is opened to participation loans, so the percentage of each partner could be modified in case of necessity. The partners have an executive position. Strategic and high level objectives (attract new customers, ensure the growth, open new markets) will be assigned to each of them.

The partners will be accompanied by experienced employees. Five employees will be hired the first year and we plan to hire five to ten new employees the second year depending on the growth. Positions will be different:

- Plant responsible / Marketing responsible / ...
- Production manager / Quality manager / ...

## **Plant and equipment**

Renting a plant has been taken into account in the initial investment. This plant will be located in a spanish city close to an important port (such as Valencia, Barcelona, Bilbao or Cartagena). The objective is to send easily and quickly the equipment by boat worldwide.

We will receive the component and assemble the equipment in the plant. The plant will also be used to conduct the quality tests before delivery. Activities such as formed parts or hot production will not be the activities undertaken by Water for Everyone.

The plant will be gifted by:

- Machinery.
- Tools and Household.

- Furniture and Equipment.
- Transportation elements.
- Computer and Communications Equipment.
- Safety elements.

## **Marketing Connections**

Huge marketing connections are necessary for the kind of business that Water for Everyone is developing. An important part of the budget is dedicated to this department (refer to the budget in the Financial Plan).

It is predicted to deploy one commercial representant in:

- South and Central America
- África
- South and Eastern Asia
- Middle East

Making new customers is vital for the welfare of the company. Davide Acquanita, one of the company partners, will be in charge of coordinating this department, through daily meetings and travels if necessary.

## **Logistic**

Water for Everyone need to have a maritime port close to the Plant. This way, the company will save money in national transports. An alliance with a freight broker is necessary. They will optimize and manage the transport of the equipment from the Plant to the port. After the arrival of the equipment in the destination country, the commercial employee of this continent will have prepared a national contact to take the equipment and transport it by road.

## **Quality standards**

Water for Everyone has very high quality process standards. The main reference will be the CE label. In order to be sold in the European Economic Area (EEA), formed by the EU members plus Iceland, Liechtenstein and Norway), many products must be CE certified. The certification shows that the product meets the EU requirements for safety, health and

environmental protection. The label is valid for products manufactured both inside and outside the EEA, whose commercialization is planned within it.



Being CE certified, we reduce the number of competitors. For an equal price or even cheaper price, we will offer a very high quality equipment. An alliance with a national company (such as Bureau Veritas or TUV SUD) is the planned with the aim to certify each components and pieces of the Water for Everyone's desalination unit.

## Warranty

Two years warranty is offered to our customers. In case of the customer does not follow the operation guidance or the basic and regular maintenance (guide book will be send with each equipment) they will lose the guarantee.

When warranty expires or is not valid, a maintenance service is offered (refer to prices of the service in the Financial Plan).

Warranty also applies to renting contract. Each month will be covered by a warranty unless the customer does not follow the basics of the guide book.

The maintenance service consists in sending one or two technicals to the field, analyse the problem and find a quick solution (modifying the equipment, replacing parts). Initially the price of the maintenance service is fixed in the Financial Plan, but it could be modified depending on the specific assistance.

If the problem is covered by the guarantee, the assistance will be free. If the unit has to be completely replaced, Water for Everyone will send a new equipment ready to operate.

## c. Financial plan

In order to build the financial plan, we started by defining the price of the product and services from the cost of producing the equipment and each service. Once the prices are defined, sales predictions are determined. Then, we took in account the operational and additional costs: salaries, marketing, taxes, materials, supplies, equipment, plant renting, transports, financial costs, etcetera), the investment plan has been developed (investment

and finance). Finally, treasury flows, economic balances and ratios shall be analysed in order to determine if the business model of Water for Everyone is attractive and sustainable.

Two different hypothesis has been developed, one realistic and one optimistic. We use the same selling prices of the products and services but different sales estimation:

The following table shows the product and services that water for Everyone offers to its customers, along with their selling prices, production costs and gross margin:

<b>Option 1</b>	<b>Desalination equipment (sending and installation included, 2 years guarantee)</b>	
	Selling price of one unit	31.526,3 €
	Production cost of one unit	18.015 €
	Gross margin	42,9 %
<b>Option 2</b>	<b>Desalination equipment renting (sending and installation included, full guarantee)</b>	
	Renting price of one month	2.000 €
	Direct cost	375,3 €
	Gross margin	81,2 %
<b>Option 3</b>	<b>Equipment maintenance on field out of guarantee (spare parts not included)</b>	
	Selling price of one unit	2.000 €
	Direct cost of produce one maintenance	1.500 €
	Gross margin	25%

### Realistic hypothesis

Realistic hypothesis						
1st year						
	Units/months sold	Incomes	Production costs	Breakeven	Marketing costs	Salaries
Equipment	92	2.900.415 €	1.753.771,6 €	1.327.634,7 €	155.420,8 €	205.000 €
Renting	53	106.000 €				
Maintenance	51	102.000 €				
Total	196	3.108.415 €				
2nd year						
	Units/months sold	Incomes	Production costs	Breakeven	Marketing costs	Salaries
Equipment	168	5.296.410 €	3.187.791,9 €	2.151.870,5 €	280.820,5 €	347.175 €
Renting	70	140.000 €				
Maintenance	90	180.000 €				
Total	328	5.616.410 €				

### Profit account:

Profit account		
	1st year	2nd year
Gross benefit	669.215 €	1.290.245,4 €
Taxes	167.303,8 €	322.561,3 €
Net profit	501.911,3 €	967.684 €

### Investment and financing:

- Initial investment and financing:

<b>Investment and Financing</b>	
<b>Initial Investment</b>	
Fixed	
Fixed assets	75.500 €
Intangible assets	8.500 €
Financial fixed assets	6.000 €
Setting up costs	3.000 €
<b>Total</b>	<b>93.000 €</b>
Active current	
<b>Total</b>	<b>117.000 €</b>
Current active total asset	
<b>Total</b>	<b>210.000 €</b>
<b>Initial Financing</b>	
Net worth	
Capital in money	25.000 €
Grants and donations	50.000 €
Participatory loans	60.000 €
<b>Total</b>	<b>135.000 €</b>
Debts (passive)	
Financial loans	60.000 €
FFF loans	15.000 €
<b>Total</b>	<b>75.000 €</b>
<b>Total</b>	<b>210.000 €</b>

- 1st and 2nd year financing:

<b>Financing</b>		
<b>For fixed assets</b>		
	1st year	2nd year
Fixed assets	9.500 €	71.500 €
Intangible assets	5.500 €	14.050 €
<b>Total</b>	<b>15.000 €</b>	<b>85.550 €</b>
<b>For treasury</b>		
	1st year	2nd year
Grants and donations	50.000 €	0 €
Financial loans	20.000 €	60.000 €
Capital increase by partner	0 €	10.000 €
Capital increase by external investors	0 €	25.000 €
<b>Total</b>	<b>70.000 €</b>	<b>95.000 €</b>
<b>TOTAL</b>	<b>85.000 €</b>	<b>180.550 €</b>

**Treasury plan:**

<b>Treasury plan</b>	
<b>1st year</b>	
<b>Beginning balance (january)</b>	<b>50.805 €</b>
Total income	3.752.644,6 €
Total outcome	2.707.336,4 €
<b>Final balance (december)</b>	<b>1.000.184 €</b>
<b>2nd year</b>	
<b>Beginning balance (january)</b>	<b>1.060.184 €</b>
Total income	6.800.083,1 €
Total outcome	5.180.998,5 €
<b>Final balance (december)</b>	<b>2.314.409,7 €</b>

**Indicators:**

**- Investment/Financing:**

	1st year opening	1st year closing	2nd year closing
<b>Investment in Fixed assets</b> (active non-current)	44.3%	7.3%	5.3%
<b>Investment in current assets</b> (active current)	55.7%	92.7%	94.7%
<b>TOTAL INVESTMENT</b>	100%	100%	100%
<b>II</b> total euros	210,000	1,169,047	2,616,950
<b>TOTAL FINANCING</b> (own and others)	100.0%	100.0%	100.0%
<b>Own resources</b> (Net worth)	64.3%	58.1%	65.4%
<b>Foreign resources</b> (non-current liabilities + current liabilities)	35.7%	41.9%	34.6%
<b>Working capital</b> (permanent resources - active non-current)	117,000.0 56%	653,199.4 56%	1,581,493.7 63%



- **Sellings/Profit/Cash Flow:**

	1st year closing		2nd year closing	
<b>Sales (incomes)</b>	3,108,415.0 €	100%	5,616,410.0 €	100%
Sales increase			80.7%	
Gross sales margin	1,168,138.5 €	38%	2,091,633.5 €	37%
<b>EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization)</b>	694,017.8 €	22%	1,318,162.0 €	23%
<b>EBIT (Earnings Before Interest and Taxes)</b>	673,842.8 €	22%	1,286,124.0 €	23%
<b>Net profit</b>	500,580.0 €	16%	958,786.8 €	17%
<b>Economic Cash-Flow</b>	520,755.0 €	17%	990,824.8 €	18%

- **Cost effectiveness/Liquidity/Indebtedness/Security**

	1st year closing	2nd year closing
<b>ROE (Return On Equity) Rentabilidad Financiera</b>	87.1%	61.6%
<b>ROI (Return On Investment) Financial profit</b>	57.6%	49.1%
<b>Indebtedness</b>	41.9%	34.6%
<b>Ability to repay debt</b>	100.0%	100.0%
<b>Break Event Point</b>	1,332,358.0 €	2,183,724.8 €
<b>Security coefficient (Sales/Brake event point)</b>	2.33	2.57
<b>Pay-Back (Time to recover 1st year investment)</b>	0.56 years	

## Optimistic hypothesis

Optimistic hypothesis						
1st year						
	Units/months sold	Incomes	Production costs	Breakeven	Marketing costs	Salaries
Equipment	106	3.341.782,5 €	2.034.113,8	1.400.802,2 €	181.089,1 €	205.000 €
Renting	76	152.000 €				
Maintenance	64	128.000 €				
<b>Total</b>	<b>246</b>	<b>3.621.782,5</b>				
2nd year						
	Units/months sold	Incomes	Production costs	Breakeven	Marketing costs	Salaries
Equipment	194	6.116.092,5 €	3.698.937,5	3.007.888,9 €	456.406,5 €	452.175 €
Renting	88	176.000 €				
Maintenance	114	228.000 €				
<b>Total</b>	<b>396</b>	<b>6.520.092,5</b>				

### Profit account:

Profit account		
	1st year	2nd year
Gross benefit	840.344,9 €	1.308.950,3 €
Taxes	210.086,2 €	327.237,6 €
Net profit	630.258,7 €	981.712,7 €

### Investment and financing:

- Initial investment and financing:

Investment and Financing	
<b>Initial Investment</b>	
Fixed	
Fixed assets	93.700 €
Intangible assets	16.500 €
Financial fixed assets	6.000 €
Setting up costs	3.000 €
<b>Total</b>	<b>119.200 €</b>
Active current	
<b>Total</b>	<b>105.800 €</b>
Current active total asset	
<b>Total</b>	<b>225.000 €</b>
<b>Initial Financing</b>	
Net worth	
Capital in money	40.000 €
Grants and donations	50.000 €
Participatory loans	60.000 €
<b>Total</b>	<b>150.000 €</b>
Debts (passive)	
Financial loans	60.000 €
FFF loans	15.000 €
<b>Total</b>	<b>75.000 €</b>
<b>Total</b>	<b>225.000 €</b>

- 1st and 2nd year financing:

Financing		
For fixed assets		
	1st year	2nd year
Fixed assets	9.500 €	71.500 €
Intangible assets	5.500 €	14.050 €
<b>Total</b>	<b>15.000 €</b>	<b>85.550 €</b>
For treasury		
	1st year	2nd year
Grants and donations	50.000 €	50.000 €
Financial loans	20.000 €	20.000 €
<b>Total</b>	<b>70.000 €</b>	<b>70.000 €</b>
<b>TOTAL</b>	<b>85.000 €</b>	<b>155.550 €</b>

**Treasury plan:**

Treasury plan	
1st year	
<b>Beginning balance (january)</b>	<b>102.028 €</b>
Total income	4.381.932,7 €
Total outcome	3.062.866,5 €
<b>Final balance (december)</b>	<b>1.235.163,2 €</b>
2nd year	
<b>Beginning balance (january)</b>	<b>1.295.163,2 €</b>
Total income	7.946.057,7 €
Total outcome	6.184.032 €
<b>Final balance (december)</b>	<b>2.652.899,9 €</b>

**Indicators:**

- Investment/Financing:

	1st year opening	1st year closing	2nd year closing
<b>Investment in Fixed assets</b> (active non-current)	53.0%	7.5%	5.3%
<b>Investment in current assets</b> (active current)	47.0%	92.5%	94.7%
<b>TOTAL INVESTMENT</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>II</b> total euros	<b>225,000</b>	<b>1,416,687</b>	<b>2,920,658</b>
<b>TOTAL FINANCING</b> (own and others)	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Own resources</b> (Net worth)	66.7%	58.0%	63.9%
<b>Foreign resources</b> (non-current liabilities + current liabilities)	33.3%	42.0%	36.1%
<b>Working capital</b> (permanent resources - active non-current)	105,800.0 47%	775,771.8 55%	1,723,519.9 61%

- **Sellings/Profit/Cash Flow:**

	1st year closing		2nd year closing	
Sales (incomes)	3,621,782.5	100%	6,520,092.5	100%
Sales increase			80.0%	
Gross sales margin	1,370,361.8	38%	2,429,949.5	37%
EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization)	870,572.7	24%	1,342,292.0	21%
EBIT (Earnings Before Interest and Taxes)	844,972.7	23%	1,304,828.9	20%
Net profit	628,927.4	17%	972,815.5	15%
Economic Cash-Flow	654,527.4	18%	1,010,278.5	15%

- **Cost effectiveness/Liquidity/Indebtedness/Security**

	1st year closing	2nd year closing
ROE (Return On Equity) Rentabilidad Financiera	87.6%	56.7%
ROI (Return On Investment) Financial profit	59.6%	44.7%
Indebtedness	42.0%	36.1%
Ability to repay debt	100.0%	100.0%
Break Event Point	1,405,493.4	3,039,720.0
Security coefficient (Sales/Brake event point)	2.58	2.14
Pay-Back (Time to recover 1st year investment)	0.40 años	

## Conclusion

Once explained the context of the development, opportunities, product design, market and sizing, competitors and positioning, the business model to follow, the lean design process and business validation and finally the marketing, operational and fina

ncial plan, **Water for Everyone partners are determined to continue with the Start-Up, remodeling some issues if is necessary and trying to find financing to launch the business.**

The profitability of the business has been demonstrated, that is why we believe that arriving at the door of potential investors and being welcome will not be difficult, because the project is solid, the basis are defined, and the team is determined and engaged. **This is our next hypothesis to validate.**

The product is innovative, the competitors have been surpassed, the market is bounded, and economic figures are done. So now, we need to invest initially (**Initial investment**, realistic financial prediction) 93.000 € in fixed assets, intangible assets, financial fixed assets and Start-up costs. But we have estimated, to operate safety, that the beginning balance (1st year, january) should be 117.000 € (**Beginning balance**).

To get it, 25.000 € will be contributed by the partners, 50.000 € by grants (like H2020 instrument or other national or european instruments for small and medium enterprises), 60.000 € by participative loans, 60.000 € by financial loans and 15.000 € by family and/or friends. In total we have to get using those instruments 210.000 € (**Total initial financing**).

**Total initial financing - Initial investment = Beginning balance**

$$210.000 \text{ €} - 93.000 \text{ €} = 117.000 \text{ €}$$

We are offering to potential investors (business angels and venture capitals) a maximum of 24% of the company participations if they invest 120.000 €, and a minimum of 12% of the company participations if they invest 60.000 €. After the close of the second year, investors will be able to sell the participations to the partners.

The price of the participations has been obtained as follow (realistic financial prediction):

**1st year company Net profit: 500.000 €**

**60.000 € over 500.000 € = 12% (aprox.)**

**120.000 € over 500.000 € = 24% (aprox.)**

..... **Are you really going to miss this opportunity?**