A Work Project, presented as part of the requirements for the Award of a Masters Degree in Management from the Faculdade de Economia da Universidade Nova de Lisboa.

Emove Innovative Technologies, Lda

Emove Waves

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Number 591

Booklet 1

A Project carried out on the entrepreneurship course, under the supervision of:

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Executive Summary

This work project will focus on the design and implementation business plan of Emove Innovative Technologies Lda SGPS, with its subsidiary Emove Waves in the two first test markets, Portugal and USA. Emove Innovative Technologies Lda SGPS is a startup that developed an innovative concept of electrical production, the ESG. The ESG (Electrical Spherical Generator) is capable of absorbing all of its external movements from any possible direction Cn and convert them into electricity. This generator has also the uniqueness of being scalable into any size, making it suitable for a various number of applications in very different markets and sectors. To target the most attractive markets, based on market size, growth rate and added value of the technology, the company has divided itself in 2 core business areas: Emove Gadgets and Emove Waves.

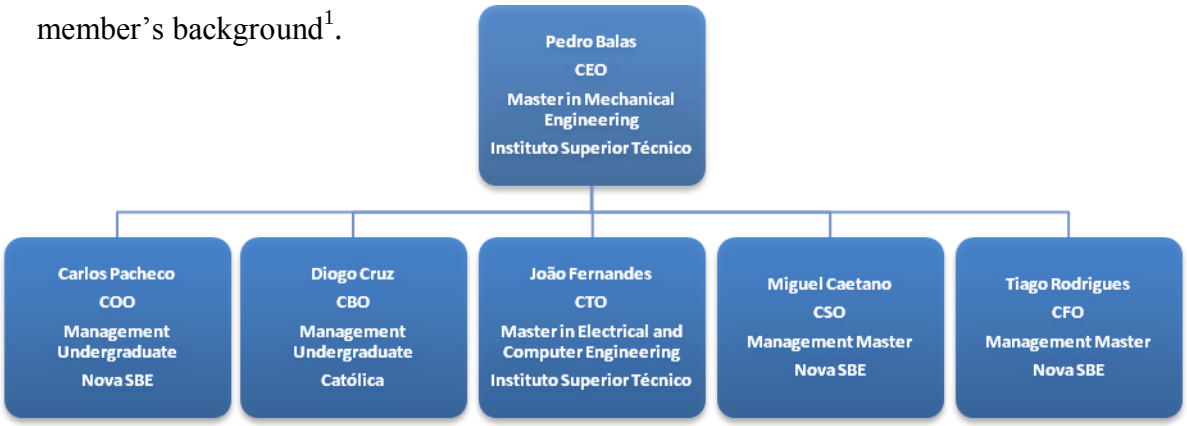
As the name indicates Emove Waves is targeting the wave energy market, a greenfield market where no one was able to fully achieve commercially viable solutions and with one of the highest potentials in the renewable energy sector with a market size evaluated in 550 billion Euros. With oil scarcity, climate change and environmental concerns on the top of the mind of governments, institutions and companies, the search for new opportunities to diversify the energetic portfolio intensifies. The wave energy market has been one of the alternatives explored but unsuccessfully until now.

The firm will tackle this market with Blusphere, a large scale application of the ESG in a buoyant structure. The spherical and solid configuration will be key characteristics for Blusphere to overcome the main risk to wave energy solutions until now, the harsh environment. To compete with other technologies Blusphere will have a price/energy ratio well below the competitors in the wave sector. Emove waves will sell Bluspheres and the entire solution for application, in a B2B model, to energy utility companies

which will then produce and deliver electricity to the final consumer. With this model the firm avoids risks of fluctuations on demand and focuses on its core competency, creating the adequate technological solutions. Another primary activity of the firm will be the after sales technical support. This service will include constant monitoring and maintenance of the Bluspheres and will be ensured by fully specialized teams, meaning not only another source of revenue but a way to control customer relationship and have constant feedback of the product.

To chose which countries to target, at least on the first stage of prototype testing and the initial stage of commercialization, Emove Waves decided by Portugal and/or USA since these present best combination of natural resources, past investment in the market, environmental concerns and knowledge and networking conditions.

Developing this project is a young team of senior students in management and engineering backed up by a strong strategic advisory board constituted by several professors in prestigious universities. The following illustration identifies the team member's background[1].



Emove Waves will now (July 2011) integrate the "Plug and Play Tech" center, one of the most prestigious technological incubators. This will be a incredible opportunity to

[1] See Appendix 4

raise Venture Capital funding and to reinforce the engineering capabilities of the company, by integrating human capital or associate with partners.

Historic

In 2008 Pedro Balas, the current CEO of Emove, was traveling by train around Europe when he was confronted with a problem. He had no battery left on his cell phone and no way to recharge it; from there he started imagining a device capable of recharging the batteries of his phone using his own movement. He came up with the ESG (Electrical Spherical Generator). This solution not only transformed movement into energy as in theory it did it better than current solutions. The first draft of this device was then kept "in the drawer", only brought back when Miguel Caetano (me) and Tiago Rodrigues (other 2 co-founders) heard about it and took it to the first business contest. From that day on, the potential of the idea was proven and the work done by this first team made the project win the first edition of EDP Richard Branson Innovation Award (2009)[2], and before achieving second place at Nova Idea competition (2009)[3] and third place at E-day at NOVA University.

In this phase of the project the idea matured and it became clear which high potential markets the ESG could target[4]. Emove decide to divide the company in two main groups: Emove Waves (targeting the wave energy market) and Emove Gadgets (targeting the battery market)[5]. At the same time the team grew into a multidisciplinary way including a set of young students and a solid and experienced strategic advisory board both in management and engineering (see appendix 4). Also the theoretical calculations were developed and are currently 80% complete with forecasts to achieve

[2] http://aeiou.visao.pt/premio-inovacao-edprichard-branson-entregue-aos-vencedores=f528661
[3] http://www.unl.pt/empreendedorismo/2a-edicao-do-nova-idea-competition
[4] Appendix 1
[5] Appendix 2

completion in 2 months time. Also the team was able to build a prototype that proved the concept.

Emove was invited by an international consulting firm, Leadership Business Consulting, to integrate for a period of 3-6 months the "Plug and Play" tech center, in Silicon Valley, one of the most prestigious technology incubators in the world. This will be an incredible opportunity to accelerate the technological research and the path of the firm until market launch. The firm has objectives of closing the theoretical R&D process and raise funding from a Venture Capital firm, to do so the accelerating business environment of the Plug and Play will have a critical part on promoting partnerships, meetings and other types of synergies.

Objectives for the Emove Field Lab

This field lab will focuses on the Emove Waves subsidiary, in other words in the development of the firm's plan towards the wave energy market. The work project will explore and discuss the best strategies to target the market, evaluating the conditions of the industry and the internal capabilities of the firm. To do so several analytical tools will be developed such as the SWOT, TOWS, Porter's Five Forces, Value chain and others. This study will be a foundation for what Emove Waves will present at Silicon Valley to partners and possible investors and also as a planning tool. Objectives, tactics and milestones will be set to enhance the firm's results during the 3-6 months stay in Silicon Valley.

Value proposition

Emove has developed a technology, the ESG, capable of turning kinetic energy into electricity. Due to its spherical configuration this technology is capable of absorbing

movement from any direction (3D) producing more energy (up to 37 times more) than current solutions in the market (only absorb kinetic energy from one direction: 2D). Due to the scalability element of this technology it is possible to build it in any size, suiting several high potential markets[6]. Emove has prioritized the renewable energy market, more concretely the wave energy market with a large scale device due to the market size, maturity and the advantages of the technology to this application.

This device will be called Blusphere and will be a reliable product with high resistance to the ocean's harsh environment especially because of its spherical and solid design. It will produce cheaper energy than the current solutions studied in the market and the scalability characteristic of the ESG makes the Blusphere adaptable to any wave characteristics and therefore suitable for any geographical location (different locations = different waves = different device sizes).

Emove Waves will adopt a B2B (Business to Business) model, selling Bluspheres to major utility companies. These companies will then have the opportunity to produce and deliver electricity to the final consumer. For clients the consistent and economically viable solution offered will represent a zero carbon emission source of energy and a way to diversify the renewable energy portfolio avoiding the costs brought by the instability of resources in this market. Furthermore Emove waves will offer specialized teams to monitor and maintain the machines guaranteeing their reliability and efficiency.

The firm has a strong intellectual property strategy based on a assembling trade secret and the international patent already requested and waiting for approval. This fact ensures that Emove Waves will be the only entity capable of producing this product.

[6] Appendix 1

Emove Waves plans to build its business on a consortium basis to ensure that capabilities not yet retain by the company are delivered. The consortium will be composed of an industrial manufacturing firm, a Venture capital firm and a possible client.

Emove's Mission is "Conceiving and delivering products that contribute to a cleaner and self sustainable world".

Emove Waves' Vision is to "Become the worldwide leader when it comes to reliable solutions for the wave power sector, reaching a 50% to 80% market share in the next 8 to 9 years".

Strategic Objectives

The following strategic goals were set by Emove Waves to ensure that the firm pushes forward in the path to reach commercial deployment and later on market leadership. These objectives were built using the SMART criteria (Specific, Measurable, Appropriate, Realistic and Timely).

Table 1: Emove's Strategic Objectives

	Strategic goal	Measure	Deadlines
Strategic objectives	Achieve an economical competitive product within the renewable energy sector	Achieve an energy production cost of 7cent/KWh	2018
	Be the most economical attractive solution in the wave power market	Achieve an energy production cost of 10cent/KWh	2013
Commercial	Be perceived has the first viable solution for wave	Be the first firm to commercially launch a	2016

objectives	energy	viable (achieve profitability) wave energy park	
	Be perceived by customers as efficient and reliable when it comes after sales support	Customer satisfaction above 90%	2014
	Reach the international market	Have at least 2 energy parks in 2 different geographical locations (countries)	2014
	Be a reference on technological innovation on the sector	Positive reviews by customers, journals and entities (e.g. World Energy Council)	2013
Operational objectives	Have a strong, experienced and prestigious R&D team	Reinforce the R&D team with at least two world class engineers	2012
	Reach satisfactory production capacity	Be able to produce 3 parks (15 Bluspheres) per year	2014
Financial Objectives	Raise Venture Capital Funding	-	2011
	Raise governmental grant	-	2012
	Reach breakeven	-	2014

Blusphere

BluSphere represents a shift in the paradigm of wave energy production, presenting three strong competitive advantages: high resistance and durability, size/energy output ratio and price/energy ratio. It has a spherical, compact and highly resistant one-piece hull with no joints (meaning no corrosion and no structural weak points), inside of

which resides the ESG that due to its spherical shape, can absorb movement and oscillations from any wave direction, increasing the potential of energy production up to 37 times than the common uniaxial generators, used worldwide.

The hydrodynamic flotation structure of the Blusphere is designed in order to harvest the quantity of energy absorbed taking into account the resistant capacity of the product to the ocean environment. This structure is currently being developed by Emove Waves in partnership with WAVEC[7] (Wave Energy Center – Lisbon) and CENTEC[8] (Naval engineering Center at Instituto Superior Técnico) two hydrodynamics specialized research centers. The size of the device will vary between 3 and 5 meters and is dependent of the target market since different waves demand for different sizes. Studies predict that a 3m diameter Blusphere will generate 500KW.

Value chain

The value chain analysis is crucial for Emove Waves to plan which will be the primary activities and the supportive activities to the company and which will concentrate most of the cost structure. In parallel it is also crucial to understand which activities should be internally ensured and which should be outsourced according to the capabilities of the firm. Nowadays the wave energy market is still searching for a commercial viable and resistant solution, which means high expenditures in R&D especially due to the high costs of large scale prototypes. Since the market demands for it and Emove Waves team

[7] http://www.wavec.org/

[8] http://www.mar.ist.utl.pt/

capabilities are specialized on this matter the main focus of the company's efforts and costs will be the R&D process.

Since the Blusphere is a product that involves high manufacture skills and procurement capacity this process should be ensured by an external entity. Nonetheless these two areas is a process that is also highly significant when it comes to costs and the more the company controls the production phase the more it will control the profit margins involved. For this reason a consortium model could be the more appropriate to ensure wider control of the value chain and therefore of the margins, since one of the entities would ensure the manufacture and procurement.

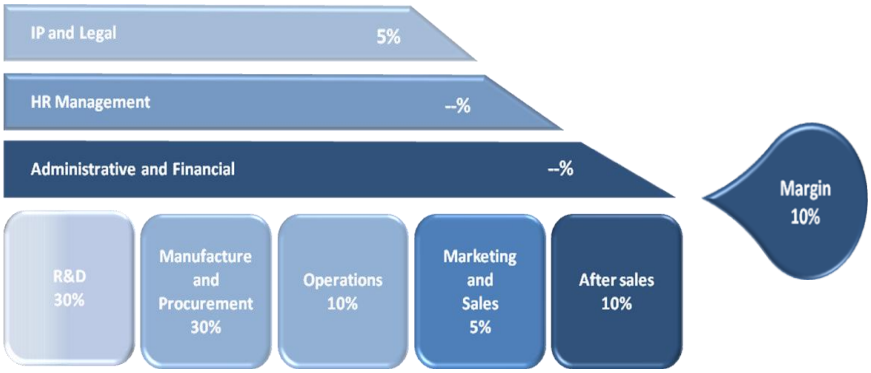
The logistics involved in the production, assembly and transportation activities are part of the operational aspects that the team needs to cover. In this sense operations are a significant part of Emove Waves primary activities requiring a lot of man hours and some outsourced services.

The wave energy market is characterized by high capital intensity both in technological development and production. The high investments demanded for a client makes the networking capability and brand image crucial for device selling companies. Since Emove Waves has limited brand equity the efforts to enhance it have to be stressed out. It is important to participate in conferences, meetings and other wave energy market events and to have a strong sales team ultimately building a strong network. Marketing and sales will account for 5% of the cost structure mainly because of these costs.

The after sales service is the key for Emove Waves to ensure client's satisfaction, reliability and maintenance of the devices and consequently the sustainability of the project. For this reason the company will create two types of teams: A worldwide

specialized team of 5 engineers responsible for the maintenance of the Bluspheres worldwide and several on-location teams of 2-3 engineers that will monitor and check-up the devices and ensure a close customer relationship.

As for the supportive activities it is important to highlight the Legal and IP. There are two options for this activity: Outsource as it is common in this type of companies or to incorporate it as part of the consortium. Both ways ensuring a world class IP strategist and the security of the technological property of Emove Waves will represent 5% of the costs. The other supportive activities are not relevant to the cost structure of the company.



Business Environment

The continuous rise of fossil fuels consumption and the lack of reserves have driven its increasing prices. Countries with no reserves have felt more and more dependent and factors like the internal instability in countries like Libya[9] and Saudi Arabia and the war in Iraq have stressed these concerns. Also the rise in pollution and climate changes pressured institutions and governments to set some ambitious goals for the renewable

[9] http://www.pbs.org/newshour/bb/world/jan-june11/oil_02-24.html

energy market and CO^2 emissions, being the most important the Kyoto protocol[10] and the EU targets[11].

To accentuate even more the world necessity to invest in the renewable energies, the nuclear catastrophe in Japan (2011)[12] questions the ability to control the security risks of the nuclear source of energy (considered the other non CO2 alternative to green energies) and will certainly make the oil demand rise to unseen prices.

Also in 2008 "Green Stimulus" funding program packages were launched all over the world to stimulate the research and production of renewable energy. These funding program packages were estimated in $188 billion and only 9% was spent until the end of 2009, meaning that the rest of these packages are expected to be used in the next few years[13].

Although green energies are being developed, promoted and used there are still some drawbacks for this kind of energetic solutions. Firstly they are not yet economically competitive when compared with fossil fuels and are dependent of the support of governments namely of feed-in tariffs[14]. Also since there is no solution to store energy at large scale, the unpredictability and unstable climate make these sources of energy unreliable. In other words if the wind stops blowing the wind mills will stop producing energy, if a country is too dependent on this kind of energy then there will be more demand than supply. The adjustment is nowadays ensured by fossil fuels what turns out to be quite expensive due to the high costs related with the increase of production on

[10] http://unfccc.int/kyoto_protocol/items/2830.php
[11] http://www.energy.eu/
[12] http://www.theatlantic.com/business/archive/2011/03/japans-nuclear-mess-will-have-lasting-impact-on-oil-prices/72804/
[13] REN - "Renewables 2010, Global Status Report"
[14] http://www.energy.eu/

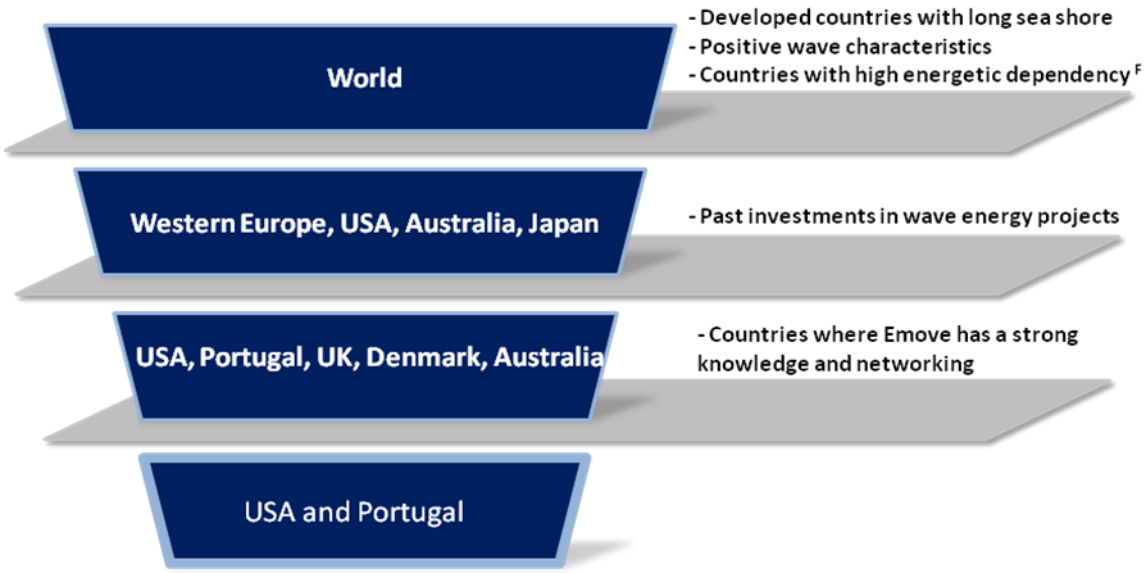
thermal power plants. It is then clear that the use of renewable energies asks for a high degree of diversification in order to always respond to the demand of energy. We can say that renewables are competitors but at the same time allies when competing with fossil fuels.

The wave power sector is one of the less developed sources of energy until now, mainly because of the difficulties to prevail in such a harsh environment and one with greatest potential. Nonetheless this is a market with an estimated potential global electricity production between a range of 8000 TWh to 80000TWh. This potential translates in a present economically viable capacity of 140-750 TWh/yr and after developments in current devices this capacity could raise to 2000 TWh/yr. Having in account an electrical global consumption of 19 855TWh we can extrapolate that this market could provide for 10% of the current worldwide electrical consumption, meaning a $550 billion market.[15]

Market analysis

From the product description it is clear that the Blusphere presents the opportunity to target all ocean geographical locations. Nonetheless it is important that Emove Waves chooses the first targeted markets before thinking in an international perspective. In order to select these markets Emove used the following segmentation and targeting "funnel":

[15] World Energy Council – "2010 Survey of Energy Resources"



This funnel was built having in consideration key aspects to the success of the company. Firstly the economical capacity of the country having in mind the high capital intensity of the wave power market. Secondly the natural resources, in detail the length of the sea shore and characteristics of the waves since these influence the energetic capability of the Bluspheres. Thirdly the energetic dependency of the country since it is positive related to the effort putted to find alternative energetic sources. Afterwards it was important to understand which countries have already invested in wave energy projects and therefore have the infrastructures required for the installment of Bluspheres. Finally Emove Waves needs to target a market where the knowledge and networking capability are already developed or are easily developed, ensuring not only the sustainability of project but the first mover advantage. Trough this exercise Portugal and the USA stood up to be the best first markets to target.

Portugal

Portugal has been investing and producing energy trough renewable sources for several years. Even with some economical difficulties the country's dependency on fossil fuels,

the rise in oil prices and the proliferation of "green" natural resources in the national territory have been pushing the investment in these new sources of energy.

In 2008 Portugal produced 23.2% of its energy using renewables and has the goal of 31% by 2020 (EU target). For the wave energy market the country has the goal of 0.25GW by 2020, the lowest target for any energy source.[16]

Portugal was the first country to have a wave energy park and the first to define feed-in tariffs for this energy[17]. This park used Pelamis the first technology to be commercialized in this market. Nonetheless the Pelamis did not obtain the expected results in terms of energy produced and broke after a few months in the Portuguese shore[18]. The low targeted quota for the wave energy source might be associated with the low expectations driven by the low maturity of technologies and the previous failure.

Nonetheless Portugal continues to have a high potential to explore from this kind of energy with an approximately 2000 km of coastline with powerful and constant waves. For this reason an investment was made to provide with all the infrastructures to test commercial prototypes in real life environment. These infrastructures consist of an area of 50 km2 in São Pedro do Moel with all the technical requirements for technological developers to test their prototypes (anchorage cables, electric transportation cables and onshore facilities (substation)). Managing the area is the REN, the company responsible for the electrical distribution in Portugal.

Emove has its headquarters in Portugal and has been leveraging its networking capability to achieve important partnerships in this country. The most important is EDP

[16] REN - "Renewables 2010, Global Status Report"

[17] http://aeiou.expresso.pt/imprensa-inglesa-indignada-com-parque-das-ondas-em-portugal=f411493

[18] http://business.timesonline.co.uk/tol/business/industry_sectors/technology/article5949978.ece

the number 1 utility company in Portugal who has been supporting the project with knowledge, contacts and also financially. EDP also made available for Emove an alternative space to the one in S. Pedro do Moel to test its technology in real life environment. This area is located in Aguçadoura where Pelamis used to be installed. Emove has also established contact with REN in order to have one more alternative for the testing location.

United States of America

Until a recent past there have been some obstacles for supportive renewable energy policies to enter in the USA. Despite this fact with the Obama administration there have been positive improvements. A good example of it was the Green Stimulus packages launched in 2009 with the "American Recovery and Reinvestment Act of 2009". In this act the United States' government allocated $104 billion to environmental issues, $2.5 billion to energy efficiency and renewable energy research.[19]

Looking in more detail to the wave energy market, the United States have been, as Portugal, first movers in this area supporting research and testing. An example is the $13 billion conceived by the U.S. Department of Energy to projects in wave and tidal energy[20]. Also some trials for commercial deployments have already occurred in this country. One of these deployments was of the Oregon technology from Ocean Power technologies also funded by the U.S. Department of Energy (DOE). From these numbers we can conclude that there are incentives and conditions set up to develop wave energy in the USA. The United States have also strong Venture Capital funds many of them in Silicon Valley. The Valley area represents 1/3 of total VC funding

[19] http://www.treehugger.com/files/2009/02/green-stimulus-bill-60-billion.php
[20] http://www.energy.gov/recovery/renewablefunding.htm#WAVE

attributed in the whole country and VC firms have shown more and more interest on investing in the Industrial/Energy industry with $1034 billion invested in the first quarter of 2011[21], $449 billion of which attributed in Silicon Valley. For Emove Waves this clearly shows a unique opportunity to establish partnerships, contracts and fund raising (private and governmental) to develop the technology and reach the commercialization phase. Concluding, if Emove Waves is capable of raising Venture Capital funding in the U.S. then the headquarters will probably shift to this country and therefore the firm will become eligible for the DOE funds (one of the most attractive programs is the "Small Business Innovation Research"). Nonetheless it is important for Emove to continue to leverage the partnerships in Europe and Portugal in order to take advantage of the resources available.

Porter Five Forces

The Porter Five Forces analysis is a critical tool to understand the business context and the forces of the industry with which Emove Waves will interact. This analysis is fully described in Appendix 2. As a conclusion of this study the Threat of substitutes, buyer bargaining power and especially the Rivalry were considered critical factors for Emove Waves. To overcome these forces Emove Waves will need to focus on the time to market, the cost of energy produced by Bluspheres and resistance of the devices. Since Rivalry is considered as the most important force a more detailed competition analysis can be found below.

[21] https://www.pwcmoneytree.com/MTPublic/ns/nav.jsp?page=industry

Competition analysis

In a market where the first mover advantage is somewhat important it is clear that Emove waves will need to have a clear and continuous evaluation of its competitors and its breakthroughs. Also even if Emove does not achieve the first mover advantage it is crucial to compete with a cheaper, more efficient and durable product. To do so Emove must monitor the competitor's products and what are the responses and needs of clients.

There are approximately 100 (known) different projects aiming to produce a solution for the wave energy market (considered the ones identified in the 2010 report of the World Energy Council). There are also a large number of different technologies aiming the market but since the length of this report does not allow the study of each one in detail we will need to narrow down the analysis to the ones that are more directly competing with Emove. Firstly only the competitors in the last phases of technology development will be considered. Secondly the onshore and near shore technologies present some limitations that make them less competent to compete with Emove Waves, for this reason the focus should be more on the offshore tough having into account the most developed and attractive near and onshore projects.

The following table is a summary of the competition analysis that evaluates the scores of each competitor on each of the critical success factor found for the market.

Table 2: Competitor's Analysis

CSF / Competitor	Development Status	Technology Type	Energy/Price Ratio	Onshore/ Nearshore/ Offshore	Environmental impact	Maintenance
Pelamis	5	4	5-15cent/KWh	Offshore	Low	Low
Oyster	4	3	7-9cent/KWh	Nearshore	Medium	Low/Medium
Limpet	4	1	7-8cent/KWh	Onshore	High	Low
Wavestar	4	4	8cent/KWh	Offshore	Low	Low
Aquabuoy	4	2	13cent/KWh	Offshore	Low	Low
Powerbuoy	4	2	5-10cent/KWh	Offshore	Low	Low
CETO III	4	2	n/a	Offshore	Medium/Low	Medium
AWS	4	2	7cent/KWh	Offshore	Medium	Medium
BIOWave	4	3	n/a	Offshore	Low	Medium
Blusphere	1	2	10cent/KWh	Offshore	Low	Low
Fossil fuels	5	0	3cent/KWh	Onshore	High	High
Eolic	5	0	7cent/KWh	On/Offshore	Low	Low

Types: 1 -OWC; 2 - point absorber; 3 - surge/flap; 4 - attenuator/contouring; 5 overtopping; 6 other; * multiple units on one platform

Status: 1 - theoretical; 2 - wave tank tests on model; 3 - small scale tests in sea; 4 -demonstration prototype; 5 - commercial deployment

In this table the energy/price ratio were given by the expected results of each of the firms. The Blusphere value is not only a prediction but rather a target. The eolic and fossil fuels energy/price ratio values are also present because they are relevant for the analysis since these are substitutes that will influence client's decisions.

As said before there are some competitors that present more as a threat than others. The Pelamis project continues to be the reference worldwide and one of the projects that Emove waves needs to highlight as a competitor.

Pelamis is the only wave energy project that has reached the commercial stage. This deployment happened in Portugal in Aguçadoura, Portuguese northern shore. The project cost approximately €9 million and consisted of 3 products with a capacity of 750 MW each. The park would be able to produce energy for 1000-1500 households. The project stopped when the three devices faced some technical difficulties in its articulations and the Pelamis devices were brought to shore. Although Pelamis wave power was able to reach more than $40 million in investment the president of APREN (Portuguese Association of Renewable Energies) argues that the problems were not technical but otherwise related to the financing difficulties of the group[22]. Pelamis is now developing a second device, the Pelamis 2 that has the same capacity as the first one (750MW) but features some resistance upgrades. With this product Pelamis Wave Power has already secured two contracts with E.on UK and Scottish Power.[23]

The competition force can be considered the most relevant for Emove Waves. The race to reach the market first is one of the aspects of concern since reaching the utility company's trust would mean an open door for new wave parks and market leadership. The other aspect is the economical results of the devices. It is essential to maintain the most attractive energy/price ratio since much of the purchasing decision will rely in this feature.

Pricing Strategy

Emove Waves pricing strategy had into account several pricing drivers as competitors, costs and customers. The full methodology to set the price is in detail in Appendix 3.Summarizing, Emove Waves decided to charge approximately €1M per Blusphere.

[22] http://ecosfera.publico.pt/noticia.aspx?id=1369725
[23] http://www.pelamiswave.com/

This price is equivalent to €2M/MW meaning a relevant price below the best direct competitor but above the renewable market leader, the wind energy.

SWOT and TOWS

The SWOT analysis will allow Emove Waves to identify the internal Strengths and Weaknesses of the company as well as the external Opportunities and Threats. This analysis is complemented by the TOWS which will result in a combination of the four features mentioned above in clear on-field activities that the company must implement to achieve success. These activities will result in goals and milestones and therefore this analysis will have a close relationship with the Implementation Plan.

Opportunities

- Blue ocean market, one of the most concentrated sources of energy, and still with no commercially viable solution.
- Available resources provided by partnerships (e.g. Zona piloto – to test prototypes in real life conditions)
- Lack of fossil fuels reserves; Rise in fuel prices; Instability in reserve countries like Libia; Crisis in the nuclear market due to the security issues in Japan
- Kyoto and European objectives (CO_2 and renewable)
- Emove is going to silicon valley to stay in the "Plug and Play" tech center for 3 months – Great opportunity to acquire specialized human capital and funding

Threats

- Possible aversion of the investors to the high risk of the wave energy market
- Ocean's unpredictable environment
- Competitors positive results
- Macro economical Factors – The economical crisis lived in Portugal today and the entrance of the IMF can lead to a change by the government and utility companies (EDP) regarding energetic policies
- Different location may mean different Blusphere characteristics and therefore no economies of scale
- High costs related with anchorage and transportation costs

Strengths

-International patented technology pending
- Strategic advisory board consistent and experienced in wave energy problems and entrepreneurial venture
- Established partnerships with several institutions and companies, including the fourth biggest investor in renewable energy worldwide, EDP
- Young Entrepreneurial and multidisciplinary team, knowledge both in several engineering sectors but also in management.
- Superior technology (Price, Resistance, space/energy, etc.)

S-O

- Close the patent request
- Create a 1:10 industrial prototype leveraging the current partnerships
- Close the mathematical modulations
- Get funding from VCs and European and US funds
- Use strategic advisory board to ensure economies of scale choosing targeted locations

S-T

- Create a close relationship with Utility companies and Governments in Portugal and US (ensure contracts from both)
- Ensure a warrantee of the product for at least 2 years and provide a specialized after sales service (including maintenance)
- Outsource the IP strategy to a worldwide prestigious company
- Use the other applications of the ESG to as a bootstrap for the launch of the Blusphere

Weaknesses

- Lack of experience of the team
- High capital intense market
- Initial phase of R&D may mean lack of bargaining power with suppliers
- Brand equity
- No bargaining power with suppliers at first

W-O

- Enhance the team's capabilities trough training sessions and workshops at the "Plug and Play" Tech center
- Enhance financial and strategic partnerships at USA
- Integrate specialists in Financing and Engineering to reinforce Emove's capabilities
- Establish short and medium term contracts with several strategic entities and companies to get product validation and market awareness

W-T

- Continue to enhance the capabilities of the company, hiring a A team in engineering and fostering innovation
- Outsource the production of the main parts of the Blusphere to a industrial prototyping company
- Have a contingency plan that ensures that a switch of the Portuguese energetic policies will affect the least as possible Emove's plan. Other geographical markets must be assessed and scanned and experienced procurement department and partnerships

Funding strategy

Emove's funding strategy is divided in three main phases.

- FFFs (family, friends and fools), own capital and business plan contests
- Business Angels
- Venture Capitalist firms (VC) and Funds (European and US)

The first phase was already closed. The first "garage" prototype was built using FFFs and own capital investment. Afterwards Emove won several business contests that made up for a total of 55 000€. From this value €25 000 were already used with patent submission, second prototype and other operational costs.

The company is now negotiating to achieve a Business Angel contract (APBA) in order to strengthen the company's capabilities to build an industrial prototype, reinforce the team and search for strategic partnerships and VC funding.

Emove is going to Silicon Valley for three months where the search for VC funding will represent a great focal point. Since the resources of the firm are limited and allocated to the R&D, going to Silicon Valley means that the company will need to raise a sponsor for operational expenses. The development of the value proposition for sponsors can be found in Appendix 6.

To achieve successfully VC funding Emove has been developing with Leadership Business Consultancy a preparation plan that includes team training and workshops. In these workshops Emove's team was able to understand what to expect and what is expected by VC companies in the Bay area. The team was already in contact with an Intel's Venture Capital partner Aldo Franciscolo. The strategy to approach VC firms was then developed in three steps:

- Study the best thirty “best” Venture Capital firms in the US focusing more on the Silicon Valley area. Rank the Venture Capital firms in order of most attractive to least attractive firms to enter as partners in the business (this rank is based on Emove’s analysis of which gaps must a VC firm fill). Divide the VCs in 3 groups
- Send a summarized brochure to each of the VC firms with some company information and announce that Emove will be present in the Silicon Valley’s Plug and Play tech center between July 2011 and September 2011.
- Make appointments in the following order: 2/3 appointments with VCs from the third group. Afterwards start scheduling with the top ranked VCs and go down until find a match.

This method allows Emove to improve the approach and have a feedback on what are the key issues and “pain points” of VCs. Only when everything is covered the approach is done to the most desired VCs. The assessment of the VCs methods and characteristics is crucial since the entrance of partner will shape the whole future of the venture.

Emove waves is also planning to apply for governmental funds to help with technological development. The applied funds will mainly depend on Emove Waves previous funding strategy since if the initial funding by a Venture Capital firm is done in the United States it is possible that the headquarters of the company need to change to that location and therefore Emove waves will be only eligible for funds for that geographical area.

Implementation plan

The implementation plan is an extension of the TOWS analysis since after identifying the key activities for the company to maximize the company's internal and external potential, it is important to set milestones to these activities having into account the three main resources Minute (time), Money (financial resources) and Man (human resources). The following chart is a summary of the overall main milestones of the company before achieving commercial deployment. It is important to notice that the achievement of these milestones is also closely related to the achievement of the strategic objectives.

Table 3: Emove Waves' Implementation Plan

	2011	2012	2013
Secure Financing (VC)			
Reinforce engineering team			
Hire a CEO			
Close technical studies			
Close partnerships			
Produce 1:5 prototype			
Test Prototype			
Close deal with client (test product)			
Produce Test Product			
Commercial deployment			

Table 4: Emove Waves' Contingency Plan

Risk	Risk assessment	Consequences	Plan of action
Denied patent	**Low** – Emove Wave´s team already made a pre-assessment of the technologies in the market.	Loss of Intellectual Property rights, meaning that other companies are allowed to produce applications of the technology.	Emove Waves has been designing an IP plan that allows the company to protect the technology not only with the patent but with a assembly trade secret.
Fail to raise VC funding in Silicon Valley	**Medium** – The firm needs to measure in great detail the investment possibilities capital is not the only issue.	Delay entrance in the market since the raising capital is essential for the company to internalize the capacities and have working capital.	The firm has already a backup plan with several interested investors in Portugal. Licensing the technology in other markets is also in the medium term plans of the firm
Blusphere resistance tests below forecasts	**Low** – The spherical design of the Blusphere has been proving in theoretical tests very resistant	Sunk R&D costs; Restructure of the Blusphere external structure; Non-applicability of the ESG to the wave energy market.	Emove Waves is very aware of these costs and therefore the technological development of the external structure as been a concern of several partner entities. Emove SGPS is also diversifying this risk with a parallel development of the ESG application in other markets.
Blusphere cost of energy above expectations	**Medium** – Although the theoretical studies point out for good results this happened also with other products that in reality did not succeed.	Low market attractiveness for clients to purchase the Blusphere.	The R&D team will be focused in developing several upgrades to the ESG technology as well as on the geographical evaluation of possible wave park sites in order to enhance the energy efficiency of the devices.

Financial Analysis

Firstly in the financial model it is clear that the company will need to raise funding in two different points in time. The first tranche will happen by the beginning of year 1 (2012) since the company will need resources to reinforce the R&D team and to build a full scale prototype during that same year. The second one will be needed in year 4 when the risk is a lot lower and when the firm will need to face a huge increase in production since sales will jump to 15 Bluspheres sold by year 5.

In the rest of the financial model we can see that the payback period is of 4 years and 7 months, the return of sales reaches the 42,4% by year 4 and the financial autonomy is positive since the first year. The net profit is also positive since year 3 reaching the attractive value of almost €27M by year 5. Although the first 2 years present a negative EBIT this value increases rapidly in the year 4 and year 5, reaching in this last year almost €37M.

It is recommended that this financial analysis is projected to a wider future period more concretely until 2020. This way the financial assessment will allow defining in more detail the investment (buy-outs etc.).

Conclusion and Recommendations

Evaluating the product offer of Emove Waves, the capabilities of the company and the market juncture, the firm's priority should be to follow the Implementation Plan by reinforcing the R&D team and closing the funding (VC and governmental) to ensure that the operational activities are supported. The company should also look for a way to broad up the control of the value chain. A good way to do so seems to be a consortium model where one of the key entities would be an industrial producer responsible for the Procurement and Manufacture activities, some of the most costly for Emove Waves. The company should concentrate the first years of activity in Portugal and/or the US since these locations not only offer great natural resources (waves) but also other incentives to wave projects like facilities, knowledge, grants and others. Another issue is the differentiation of the Bluspheres with other solutions in the market. Emove needs to continuously follow the competition paths and to focus on time to market and cost of energy produced by the Bluspheres.

As for Silicon Valley the team needs to take the opportunity with full commitment especially since it is a unique opportunity to reach several Venture Capital firms and to partner with many different technological entities such as universities, research centers and other firms. The evaluation of the VCs and the terms of the contract need to be scrutinized in detail in order to achieve a comfortable deal to both sides.

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Booklet 1

A Work Project, presented as part of the requirements for the Award of a Masters Degree in Management from the Faculdade de Economia da Universidade Nova de Lisboa.

Emove Innovative Technologies, Lda

Emove Waves

Miguel Melo Gomes Machado Caetano

Number 591

Booklet 2 - Appendixes

A Project carried out on the entrepreneurship course, under the supervision of:

Prof. Filipe Pamplona de Castro Soeiro

Junho 2011

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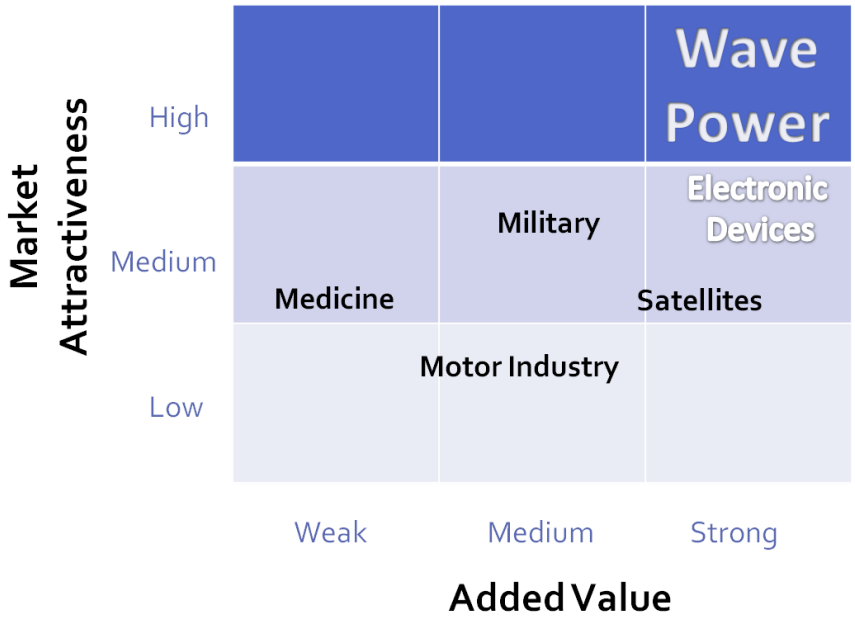
Booklet 2

Appendix 1: Emove's Markets – Market attractiveness and Added Value



Appendix 2 - Porter Five Forces

Threats of new entrants (Low)

The wave energy market is still a blue ocean and therefore we can say that all the firms are still entrants. However to simplify the analysis it is fair to consider that firms on advance stages of research are incumbents and new entrants are classified as early stage technologies.

The business environment and market analysis shows that the wave power market is a very attractive one. With high potential value and growth and no current fully commercial solution the market seems extremely attractive for new ventures and projects. Also governmental support with funds, subsidies and high feed in tariffs also attract new entrants. Nonetheless there are some strong barriers to enter the market.

Firstly the R&D process has proven to be a long and expensive phase for projects in this area. R&D requires building several prototypes that are usually huge platforms with high precision and based in specialized studies. Secondly this market involves high risks. The past performance of Pelamis with the first wave energy park proves the uncontrollability and unpredictability of the ocean. Thirdly it is difficult to find technologies that suite the several requirements of the market specially ones that are not yet patent protected. It is consequently fair to consider this force as weak.

Threats of substitutes (Medium)

There are two types of substitutes to the Blusphere. The first one is the fossil source of energy (especially coal and gas). This source presents a strong threat, first because it is quite inexpensive when compared with the renewable sources of energy. Secondly because it is "market leader source" providing for most of the energy consumed nowadays. And thirdly because it is a controllable source, in other words the production of energy is not dependent of the environmental conditions as the renewable ones and for this reason energy is produced as it is needed. Despite all of these pros, the fossil fuel reserves are scarce and the CO2 and other gas emissions resultant from its usage leads to environmental pollution and climate change, one of the biggest problems facing humanity today.

The other substitutes are the other renewable energy sources. These are seen has one of the most important solutions to substitute fossil fuels due to their low environmental impact. In this category it is important to underline the technological and commercial leadership of the wind and solar power resources especially due to the maturity of the technologies. But, as explained previously, all renewable sources have one problem: they are dependent on the environmental conditions. For this reason it is important for

countries to have a wide spectrum of green energies so that if one fails the other can back up to meet demand. In this sense fossil fuels will not be substituted completely for many years since it represents the ultimate backup for energy production.

In the end we might consider this the substitute force as medium as economical sustainability one of the most important issues of energy production but as renewable sources gain market share the need for alternatives to balance the investment portfolios increases and opportunities for new sources like waves become more and more appealing.

Supplier bargaining power (Low)

This force cannot be clearly assessed for now due to the uncertainty on the specifications of the components of the final Blusphere. It is however possible to identify two topics worth of analysis. The first is the fact that the general concept of the Blusphere does not predict the use of very expensive or rare materials and consequently they can be provided by different suppliers lowering their bargaining power. The second is that the consortium strategy will allow Emove waves to partner with companies already present in industrial production and therefore the bargaining power with suppliers will be already established. Furthermore the massive quantities of materials needed to build a Blusphere as well as the achievement of more and more sales will enhance Emove Waves capability to demand discounts and low prices from suppliers. In the end with low cost materials, supplier relationships already established and the high quantities demanded the supplier bargaining power can be considered as a weak force.

Buyers bargaining power (Medium)

The buyer bargaining power can be separated in two temporal stages. In the first one the past experience in this sector, the Pelamis case, may be a reason for Utility companies to distrust the new products in wave power energy. At this stage the testing phase results, level of durability insurance and economical attractiveness will be crucial. If this does not happen, utility companies will be much more interested in investing in other renewable substitute solutions in a more mature stage when it comes to technology (e.g. Wind energy). It is important to refer that utility companies are eager for alternatives and an investment planed based only on two sources of renewable energy is short to avoid the costs of the renewable shortages.

The second stage will be when the first company is able to offer a viable solution. In this utility companies around the world will be very interested in "cracking" this market and taking advantage of it. To overcome the first mover firms will need to present to the market a technology that proves to be cheaper and that is able to sustain itself in the ocean environment. The great difference from the first stage is that utility companies have a higher bargaining power since they can invest in an already established product in the market.

Due to the facts mentioned above it is important that Emove Waves creates a great solution with intense testing and prestigious studies to back Blusphere in the best time schedule possible. Also what is greatly imperative is to have the best solution even if it is not the first to enter the market.

Rivalry (High)

Emove Waves is Startup Company with a technology not yet completely developed. Although the competition is also trying to prove that their products are resistant to the

ocean environment and economical viable, it is clear that many of them are closer to commercialization phase than Emove. Some of these competitors have already production facilities, contracts with clients, closed patents and even large scale prototypes. With a market eager to find a product capable of succeeding in this market the first mover will have a clear advantage. Despite this incredible advantage of competitors over the firm, the technological breakthrough that Blupshere represents is, for the team, the major differentiation that will make the device more profitable for clients and therefore more attractive. In order to beat competition Emove Waves needs to balance two variables: The first one is the cost of energy produced by a commercial prototype (testing product). The other is the timelines to launch it. If the firm is able to manage these two issues efficiently than it will maximize the probability of surpassing the competitors. To do so it is important to achieve the milestones present in the Implementation Plan.

Appendix 3 - Emove Wave's Pricing Strategy

Emove Waves pricing strategy will base itself on the different pricing orientations (costs, competition and customers) and the firm's global growth strategy.

To reach a sensible market pricing strategy it is important to set a pricing window having into account the value created by the product Blusphere and the pricing of competitors and substitutes. The price per Megawatt/hour will be used as reference.

As seen previously in the competitor's assessment the Pelamis is considered as the best competitor in the market as it continues to be the reference globally for wave energy production. For this reason the price per Megawatt/hour of the Pelamis will be taken as the higher boundary of the pricing window. If the Blusphere price is below this number

then clients will most probably choose to buy it instead of the other competitors. Based on the data available from the Aguçadoura park it is possible to calculate a price of €3.64M/MW. As Emove Waves is also targeting the economical attractiveness within the renewable energy market it is important to consider the best substitute in this market which is the eolic source of energy. This type of energy has an average price of €1M/MW and as a result this will be the lower boundary of Emove Wave's pricing window. Although clients have a better alternative with a substitute, governmental support with feed in tariffs will make the investment on Bluspheres more attractive (governments want to diversify (see Business Environment)). The whole method is represented below:

	Size	Visual impact	Onshore/ Offshore	Feed in tariffs	Cost of energy	Unit Cost	Capacity (KW)	Unit Price	Price of reference
	70m	High	Onshore	0,074 /KWh	0,07€	N.A.	200 KW	2.000.000€	€3,64M /MW
	3m	Low	Offshore	0,20€ - 0,23€ /KWh	0,09€ - 0,10€	500.000€ - 600.000€	500 KW		
	180m	Medium	Offshore	0,20€ - 0,23€ /KWh	0,05€ - 0,15€	N.A.	750 KW	2.730.000€	€1M /MW

Now in order to set a price it is important to notice that although clients are companies with high capital capacity they are price sensitive, at the same time these are companies with low expectations of success in the wave energy market (past failures). For this

reason it is important to set a neutral price within the window. This way the Blusphere would not lose the value image of the product by charging a lower price and at the same time being attractive to a client traumatized or at least sensible to the risks involved in this market.

At the end a price of 1M per Blusphere seems appropriate as it means a €2M/MW (neutral and within the [1; 3,64]). The price is also aligned with the long term profitability plan of Emove Waves having in account the profit margin.

Appendix 4 - Emove's Team

EMOVE – Innovative Technologies Ltd. is composed by six members with different backgrounds. Although there are attributed roles to each member of the team, the structure of the company is quite flat and organic due to the early stage phase of the firm.

Miguel Machado Caetano
Other obligations: Finishing the Master in Business Management at Universidade Nova de Lisboa (Portugal).
Founder of EMOVE – CSO - Chief Strategy Officer.
Role: Monitor evaluator.
Time per week: 10 hours.

Pedro Balas

Other obligations: Finishing the Master in Mechanical Engineering at Instituto Superior Técnico (Portugal).
Founder of EMOVE – CEO – Chief Executive Officer. Inventor of the technology.
Role: Coordinator.
Time per week: 10 hours.

Tiago Rodrigues

Other Occupation: Finishing the Master in Business Management at Universidade Nova de Lisboa (Portugal).
Founder of EMOVE – CFO - Chief Financial Officer.
Role: Resource investigator.
Time per week: 10 hours.

João Fernandes

Other Occupation: Finishing the Master in Electrical and Computer Engineering at Instituto Superior Técnico (Portugal).
CTO – Chief Technical Officer.
Role: Specialist.
Time per week: 10 hours.

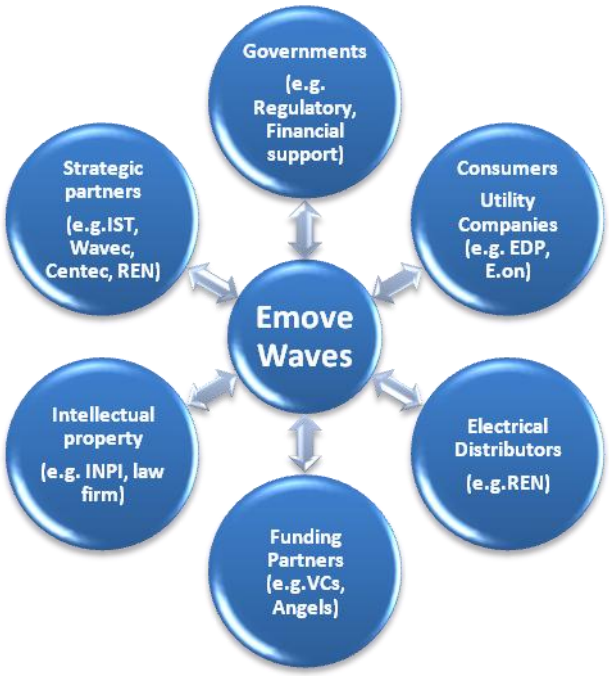
Carlos Pacheco

Other Occupation: None
Undergraduate in Business Management at Universidade Nova de Lisboa (Portugal). COO – Chief Operating Officer.
Role: Team worker.
Time per week: 10 hours.

Diogo Cruz

Other Ocupation: Finishing the Undergraduate in Business Management at Universidade Católica Portuguesa.
CBO – Chief Brand Officer.
Role: Shaper.
Time per week: 10 hours.

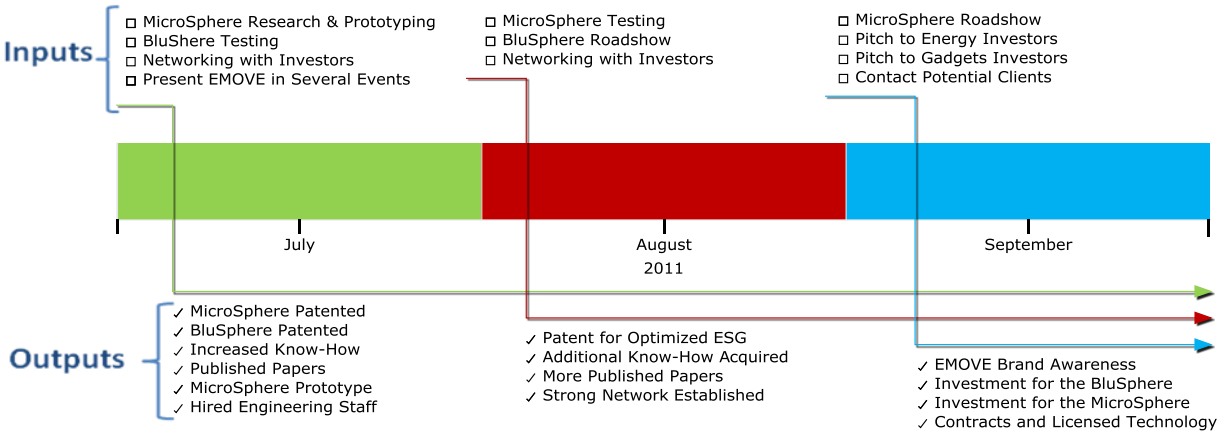
Appendix 5 – Industry map



Appendix 6 - Value Proposition for Sponsors (Silicon Valley)

This section will develop a value proposition for potential sponsors of Emove at Silicon Valley. It is included as a part of the funding strategy of the firm. This Value Proposition will be targeted for both companies and individuals and will be focused on what Emove can do for the sponsor's money.

Firstly it is important to dissect the costs that the firm will incur when in Silicon Valley. The following chart shows in detail those costs and the Milestones with them associated.



Euros

Living Costs	6.000	6.000	6.000
Transportation	7.600	1.000	1.000
Communications	250	250	250
Health Insurance	1.200	1.200	1.200
Car Insurance	150	150	150
Apartment	3.000	3.000	3.000
Internet	50	50	50
Prototypes	14.000	4.000	0
Law taxes	3.500	2.000	0
Car	6.000		
P&P Tech Center	6.500		
Totals	**48.250**	**17.650**	**11.650**
Total			**77.550**

The next step was to identify what could Emove give back to the sponsors. The following items were identified

Brand awareness, exclusive information and networking in Silicon Valley – Emove will offer a report every two weeks with information about potential interesting startups for the sponsor. Emove will promote the sponsors brand image in Silicon Valley and will arrange meetings between sponsors and Valley startups.

Image 2.0, Television and opinion articles – Emove is closing deals with journals to have a regular opinion article where sponsors brand will appear. Emove will have constant updates on Facebook, website and blog where the sponsors will have privileged publicity. The company is also negotiating a television program helping the sponsors reach an even bigger and wider target.

Emove's team will offer an annual Entrepreneurship Conference to the Senior Executives of Sponsor firms.

Finally Emove might offer a success fee – Meaning that if Emove is able to raise capital in the US the sponsors are refunded in the total amount invested plus an extra fee of 10-15%.

To finalize Emove organized the benefits in packages to guarantee that each sponsor could chose the amount attributed. The packages are represented below.

	PACK 1	PACK 2	PACK 3	PACK 4
Ammount	1.000 – 5.000 €	6.000 – 10.000 €	10.000 – 50.000 €	50.000 – **80.000 €***
Features	1. Silicon Valley Brand Awareness 2. Image - Web 2.0 3. Book Sponsor 4. Exclusive Information 5. Networking	1. Silicon Valley Brand Awareness 2. Image – Television & Merchandising 3. Image – Web 2.0 4. Book Sponsor 5. Exclusive Information 6. Networking	1. Silicon Valley Brand Awareness 2. Image – Television & Merchandising 3. Image – Web 2.0 4. Book Sponsor 5. Entrepreneurship Conferences 6. Exclusive Information 7. Networking	1. Silicon Valley Brand Awareness **(*exclusive)** 2. Image – Television & Merchandising **(*exclusive)** 3. Image – Web 2.0 **(*exclusive)** 4. Image – Opinion Article **(*exclusive)** 5. Book Sponsor **(*exclusive)** 6. Entrepreneurship Conferences **(*exclusive)** 7. Exclusive Information **(*exclusive)** 8. Networking **(*exclusive)**
Success Fee	No	No	No	**Yes**

Appendix 7 – Financials

Outsourced Supplies and Services

Go to Original web version	Year 1												Tota
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	
Energy	0	0	0	0	0	0	0	0	0	0	0	0	
Water	0	0	0	0	0	0	0	0	0	0	0	0	
Rentals	0	0	0	0	0	0	0	0	0	0	0	0	
Cars		0	0	0	0	0	0	0	0	0	0	0	
Headquarters	0	0	0	0	0	0	0	0	0	0	0	0	
Insurance (liability)	0	0	0	0	0	0	0	0	0	0	0	0	
Fuel	0	0	0	0	0	0	0	0	0	0	0	0	
Communications	0	0	0	0	0	0	0	0	0	0	0	0	
Representation costs	0	0	0	0	0	0	0	0	0	0	0	0	
Travelling, board and lodging													
International partnership	0	0	0	0	0	0	0	0	0	0	0	0	
Commercials	0	0	0	0	0	0	0	0	0	0	0	0	
Fees	0	0	0	0	0	0	0	0	0	0	0	0	
Royalties	0	0	0	0	0	0	0	0	0	0	0	0	
Tools and Consumables	0	0	0	0	0	0	0	0	0	0	0	0	
Technical publications	0	0	0	0	0	0	0	0	0	0	0	0	
Office material	0	0	0	0	0	0	0	0	0	0	0	0	
Legal expenses	0	0	0	0	0	0	0	0	0	0	0	0	
Cleaning	0	0	0	0	0	0	0	0	0	0	0	0	
Security Costs	0	0	0	0	0	0	0	0	0	0	0	0	
Maintenance and Repair of Equipment	0	0	0	0	0	0	0	0	0	0	0	0	
Equipment transportation costs	0	0	0	0	0	0	0	0	0	0	0	0	
Specialised Works	0	0	0	0	0	0	0	0	0	0	0	0	
Chartered Accountant Costs	0	0	0	0	0	0	0	0	0	0	0	0	
Other Outsourced Services - salespeople	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Comissions Paid	0	0	0	0	0	0	0	0	0	0	0	0	
Sub-contracts	0	0	0	0	0	0	0	0	0	0	0	0	
Advertising costs	0	0	0	0	0	0	0	0	0	0	0	0	
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Gross salaries

Go to Original web version	Month 1			Month 2			Month 3			Month 4			Month 5			Month 6	
	Hc.	MGS	Total	Hc.	MGS	Total	Hc.	MGS	Total	Hc.	MGS	Total	Hc.	MGS	Total	Hc.	MGS
Management	4	0	0	4	0	0	4	0	0	4	0	0	4	0	0	4	0
Technical	2	0	0	2	0	0	2	0	0	2	0	0	2	0	0	2	0
Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**6**	**0**	**0**	**6**	**0**	**0**	**6**	**0**	**0**	**6**	**0**	**0**	**6**	**0**	**0**	**6**	**0**

	Month 9			Month 10			Month 11			Month 12			Year 2			Year 3	
	Hc.	MGS	Total	Hc.	MGS	Total	Hc.	MGS	Total	Hc.	MGS	Total	Hc.	RB	Total	Hc.	RB
Management	4	0	0	4	0	0	4	0	0	4	0	0	4	16 800	67 200	4	16 800
Technical	2	0	0	2	0	0	2	0	0	2	0	0	4	21 000	84 000	5	21 000
Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Site supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Others (CEO)	0	0	0	0	0	0	0	0	0	0	0	0	1	28 000	28 000	1	28 000
Total	**6**	**0**	**0**	**6**	**0**	**0**	**6**	**0**	**0**	**6**	**0**	**0**	**9**	**65 800**	**179 200**	**12**	**65 800**

Remarks : The column "HC." is filled in only when a new worker is employed

The gross salary is per head. From the second year onwards is per head and per year.

Legend : Hc. = Headcount; MGS = Monthly Gross Salary; AGS = Annual Gross Salary

Labour costs

Go to Original web version	Month 1			Month 2			Month 3			Month 4			Month 5			Month 6			
	MGS	SWC	Total	MGS	SWC	Total	MGS	SWC	Total	MGS	SWC	Total	MGS	SWC	Total	MGS	SWC	Total	MGS
Management	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Technical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Site supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

	Month 9			Month 10			Month 11			Month 12			Total Year 1			Year 2			
	MGS	SWC	Total	MGS	SWC	Total	MGS	SWC	Total	MGS	SWC	Total	RB	SWC	Total	RB	SWC	Total	RB
Management	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4 800	1 236	6 036	4 8
Technical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6 000	1 545	7 545	6 0
Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Site supervision	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 0
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10 800**	**2 781**	**13 581**	**12 8**

Month	1	2	3	4	5	6	7	8	9	10	11	12	
Number of studies	0	0	0	0	0	0	0	0	0	0	0	0	
Number of month.sites	0	0	0	0	0	0	0	0	0	0	0	0	
Management	0	0	0	0	0	0	0	0	0	0	0	0	
Technical	0	0	0	0	0	0	0	0	0	0	0	0	
Site supervision	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#
Outsourced salesmen	0	0	0	0	0	0	0	0	0	0	0	0	inc

Auxiliary Calculations

Go to Original web version	Year 1											
	1	2	3	4	5	6	7	8	9	10	11	12
Inventories (excl. VAT)												
Raw materials												
At the beginning of period	0	0	0	0	0	0	0	0	0	0	0	0
Purchases	0	0	0	0	0	0	0	0	0	0	0	0
Consumption	0	0	0	0	0	0	0	0	0	0	0	0
At the end of the period	0	0	0	0	0	0	0	0	0	0	0	0
Goods												
At the beginning of period	0	0	0	0	0	0	0	0	0	0	0	0
Purchases	0	0	0	0	0	0	0	0	0	0	0	0
Consumption	0	0	0	0	0	0	0	0	0	0	0	0
At the end of the period	0	0	0	0	0	0	0	0	0	0	0	0
Suppliers (of Inventories)												
Inventory at the end of the period (raw materials)	0	0	0	0	0	0	0	0	0	0	0	0
Inventory at the end of the period (goods)	0	0	0	0	0	0	0	0	0	0	0	0
Payments of purchases during the period	0	0	0	0	0	0	0	0	0	0	0	0
Suppliers account at beginning of period	0	0	0	0	0	0	0	0	0	0	0	0
Suppliers account at end of period	0	0	0	0	0	0	0	0	0	0	0	0
Suppliers (of Outsorced Services)												
Suppliers account at beginning of period	0	0	0	0	0	0	0	0	0	0	0	0
Purchases of outsourced services	0	0	0	0	0	0	0	0	0	0	0	0
Suppliers account at end of period	0	0	0	0	0	0	0	0	0	0	0	0
Payment of outsourced services during the period	0	0	0	0	0	0	0	0	0	0	0	0
Receivables												
Receivables at the beginning of the period	0	0	0	0	0	0	0	0	0	0	0	0
Sales of products, goods and services	0	0	0	0	0	0	0	0	0	0	0	0
Receivables at the end of the period	0	0	0	0	0	0	0	0	0	0	0	0
Collection during the period	0	0	0	0	0	0	0	0	0	0	0	0
State (VAT)												
Deductible VAT	0	0	0	0	0	0	0	0	0	0	0	0
Collected VAT	0	0	0	0	0	0	0	0	0	0	0	0
VAT to be paid/recovered	0	0	0	0	0	0	0	0	0	0	0	0
VAT final balance	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VAT paid/recovered in the period	-----	-----	0	0	0	0	0	0	0	0	0	0
Salaries												
Salaries paid during the period	0	0	0	0	0	0	0	0	0	0	0	0
Income tax												
Net earnings before tax	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Income tax on current year earnings	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Payment of income tax in the year	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Investment Plan

Go to Original web version	Year 1 Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
Tangible Fixed Assets													
1) Land and Preparatory Works	0	0	0	0	0	0	0	0	0	0	0	0	
2) Buildings and Other Constructions	0	0	0	0	0	0	0	0	0	0	0	0	
3) Equipment	0	0	0	0	0	0	0	0	0	0	0	0	
. Production Equipment	0	0	0	0	0	0	0	0	0	0	0	0	
- Hardware	0	0	0	0	0	0	0	0	0	0	0	0	
System A	0	0	0	0	0	0	0	0	0	0	0	0	
System B	0	0	0	0	0	0	0	0	0	0	0	0	
- Others	0	0	0	0	0	0	0	0	0	0	0	0	
. Non Productive Equipment	0	0	0	0	0	0	0	0	0	0	0	0	
- Ambient/Quality/Training	0	0	0	0	0	0	0	0	0	0	0	0	
- Hardware (protective tools)	0	0	0	0	0	0	0	0	0	0	0	0	
- Others	0	0	0	0	0	0	0	0	0	0	0	0	
. Social	0	0	0	0	0	0	0	0	0	0	0	0	
. Furniture and Administrative eq.	0	0	0	0	0	0	0	0	0	0	0	0	
4) Tools	0	0	0	0	0	0	0	0	0	0	0	0	
5) Transport and Handling eq.	0	0	0	0	0	0	0	0	0	0	0	0	
6) Others	0	0	0	0	0	0	0	0	0	0	0	0	
Total Tangible Fixed Assets	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Intangible Assets													
1) Incorporation Expenses	0	0	0	0	0	0	0	0	0	0	0	0	
2) Studies and Analysis	250	0	0	0	0	0	250	0	0	0	0	0	5
3) Intellectual Property Rights	0	0	0	0	0	0	0	0	0	0	0	0	
4) Technical Assistance	0	0	0	0	0	0	0	0	0	0	0	0	
5) Software	0	0	0	0	0	0	0	0	0	0	0	0	
6) Training	100	100	100	100	100	100	100	100	100	100	100	100	1 2
7) Research and Development	0	0	0	0	0	0	0	0	0	0	0	0	
8) Others	0	0	0	0	0	0	0	0	0	0	0	0	
Total Intangible Assets	**350**	**100**	**100**	**100**	**100**	**100**	**350**	**100**	**100**	**100**	**100**	**100**	**1 7**
Tangible Fixed Assets													
Accumulated Tangible Fixed Assets													
Intangible Assets													**1 7**
Accumulated Intangible Assets													**1 7**

Depreciation and Provisions — POC Rules

Un: Eur

Go to Original web version	%	Year 1	Year 2	Year 3	Year 4	Year 5
Tangible Fixed Assets						
1) Land and preparatory works	0,00%	0	0	0	0	0
2) Buildings and other constructions	0,00%	0	0	0	0	0
3) Production Equipment	12,50%	0	1 250	2 500	5 000	7 500
4) Tools	50,00%	0	0	0	0	0
5) Transport and handling equipment	0,00%	0	0	0	0	0
6) Others	0,00%	0	0	0	0	0
Sub-total		**0**	**1 250**	**2 500**	**5 000**	**7 500**
Intangible Assets						
1) Incorporation expenses	100,00%	0	0	0	0	0
2) Studies and analysis	100,00%	500	500	500	500	500
3) Intellectual property rights	100,00%	0	50 000	100 000	150 000	150 000
4) Technical assistance	100,00%	0	0	0	0	0
5) Software	33,33%	0	0	0	0	0
6) Training	100,00%	1 200	1 200	1 200	1 200	1 200
7) Research and Development	100,00%	0	0	0	0	0
8) Others	100,00%	0	0	0	0	0
Sub-total		**1 700**	**51 700**	**101 700**	**151 700**	**151 700**
Total Depreciation		**1 700**	**52 950**	**104 200**	**156 700**	**159 200**
Anual Depreciation		**1 700**	**52 950**	**104 200**	**156 700**	**159 200**
Accumulated Depreciation		**1 700**	**54 650**	**158 850**	**315 550**	**474 750**
Provisions						
Provisions for bad debts		0	0	121 000	919 842	2 759 526
Accumulated provisions for bad debts		0	0	121 000	1 040 842	3 800 368

Financing Plan

Go to Original web version	Year 1											
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Mont
Own Capital												
Share Capital	50 000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---
Capital Increases	0	0	0	0	0	0	0	0	0	0	0	
Sub-total	**50 000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Medium/Long term Payables												
Bank Loans	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---
Shareholders Loans	0	0	0	0	0	0	0	0	0	0	0	
Others	0	0	0	0	0	0	0	0	0	0	0	
Sub-total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Short term payables												
Bank Loans	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	---
Shareholders Loans	0	0	0	0	0	0	0	0	0	0	0	
Others	0	0	0	0	0	0	0	0	0	0	0	
Sub-total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Total Financing	**50 000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Balance Sheet

Go to Original web version	Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2
ASSETS						**EQUITY**		
1. GROSS NET ASSETS						9. Share capital	50 000	2 050 00
Financial assets	0	0	0	0	0	10. Reserves	0	
Tangible assets	0	10 000	20 000	40 000	60 000	11. Retained profits	0	-1 70
Intangible assets	1 700	53 400	105 100	156 800	208 500	12. Net profit	-1 700	-442 56
Fixed assets in progress	0	0	0	0	0	**13. Total Equity**	**48 300**	**1 605 73**
2. PROVISIONS & DEPRECIATIONS	-1 700	-54 650	-158 850	-315 550	-474 750	(13=9+10+11+12)		
NET FIXED ASSETS	**0**	**8 750**	**-33 750**	**-118 750**	**-206 250**			
3. CURRENT ASSETS						**LIABILITIES**		
Fin. & Semi-Fin Goods	0	0	0	0	0	14.MED.& LONG TERM LIABILITIES		
Raw materials	0	5 820	29 098	98 934	98 934	Bank loans	0	
Products & work in progress	0	0	0	0	0	Shareholders loans	0	
	0	**5 820**	**29 098**	**98 934**	**98 934**	Other loans	0	
							0	
4. ACC. RECEIVABLES M/L TERM	**0**	**0**	**0**	**0**	**0**			
5. ACC. RECEIV. SHORT TERM						15. CURRENT LIABILITIES		
Clients	0	0	2 016 667	15 330 700	45 992 100	Bank loans	0	
Taxes	0	20 047	0	0	0	Suppliers	0	61 53
Other receivables	0	0	0	0	0	Taxes	0	
Bad debts provisions	0	0	-121 000	-1 040 842	-3 800 368	Shareholders loans	0	
	0	**20 047**	**1 895 667**	**14 289 858**	**42 191 732**	Other creditors	0	15 47
							0	**77 00**
6. CASH AND BANKS								
Cash	48 300	1 648 123	243 295	1 988 911	10 282 912			
Bank deposits	0	0	0	0	0	16. ACCRUALS & Deferments		
	48 300	**1 648 123**	**243 295**	**1 988 911**	**10 282 912**	Accruals in costs	0	
						Antecipated income	0	
7. ACCRUALS & DEFERMENTS							**0**	
Accruals in income	0	0	0	0	0			
Deferred Costs	0	0	0	0	0	**17. Total Liabilities**	**0**	**77 00**
	0	**0**	**0**	**0**	**0**	(17=14+15+16)		
8. Total Assets	**48 300**	**1 682 741**	**2 134 310**	**16 258 953**	**52 367 328**	**18. Total Liabilities + Equity**	**48 300**	**1 682 74**
(8=1+2+3+4+5+6+7)						(18=13+17)		

Vendas =	0	0	2 000 000	15 204 000	45 612 000
EBIT =	-1 700	-442 567	185 424	8 939 740	36 980 801
Margem bruta em % =			14,8%	59,9%	82,0%
Margem Bruta =	0	-383 581	295 660	9 105 494	37 411 621
EBAB (-) =	0	-376 036	426 720	10 039 168	40 447 168
EBAB (+) =	0	-376 036	426 720	10 039 168	40 447 168
Custos fixos =	1 700	58 986	110 236	165 754	430 820
Custos variáveis =	0	383 581	1 704 340	6 098 507	8 200 379
Ponto crítico =			745 694	276 770	525 253
Meios líquidos libertos =		-389 617	359 632	7 557 853	29 729 807
Margem de segurança económica =	0	#DIV/0!	168,2%	5393,4%	8583,8%
EBIT/POper. =	#DIV/0!	#DIV/0!	9,3%	58,8%	81,1%

Income Statement

Go to Original web version	Year 1	Year 2	Year 3	Year 4
COSTS				
COGS	0	299 296	1 496 480	5 088 032
Outsourced services	0	76 740	76 800	76 800
Labor costs	0	13 581	16 096	22 887
Depreciation	1 700	52 950	104 200	156 700
Provisions	0	0	121 000	919 842
Sundry taxes	0	0	0	0
Other operational costs	0	0	0	0
(A)	**1 700**	**442 567**	**1 814 576**	**6 264 261**
Depre. & Prov. of Financial Investment & Apli.	0	0	0	0
Cash discounts conceded	0	0	0	0
Financial and interest charges	0	0	0	0
(C)	**1 700**	**442 567**	**1 814 576**	**6 264 261**
Costs and extraordinary losses	0	0	0	0
Costs of previous years	0	0	0	0
(E)	**1 700**	**442 567**	**1 814 576**	**6 264 261**
Income tax	0	0	50 992	2 458 428
(G)	**1 700**	**442 567**	**1 865 568**	**8 722 689**
REVENUES				
Sales of goods and products	0	0	2 000 000	15 000 000
Services	0	0	0	204 000
In-house Corporate Works	0	0	0	0
Subsidies	0	0	0	0
Other revenues	0	0	0	0
Production variation	0	0	0	0
(B)	**0**	**0**	**2 000 000**	**15 204 000**
Profit/loss from exchange differences	0	0	0	0
Cash discount obtained	0	0	0	0
Other interest & Fin. Earnings	0	0	0	0
(D)	**0**	**0**	**2 000 000**	**15 204 000**
Extraordinary Gains & Earnings	0	0	0	0
Earnings from previous years	0	0	0	0
(F)	**0**	**0**	**2 000 000**	**15 204 000**
OPERATIONAL EARNINGS (B-A)	**-1 700**	**-442 567**	**185 424**	**8 939 740**
FINANCIAL EARNINGS (D-B)-(C-A)	**0**	**0**	**0**	**0**
CURRENT EARNINGS	**-1 700**	**-442 567**	**185 424**	**8 939 740**
EARNINGS BEFORE TAXES	**-1 700**	**-442 567**	**185 424**	**8 939 740**
NET PROFIT	**-1 700**	**-442 567**	**134 432**	**6 481 311**

Treasury budget

Go to Original web version	Year 1											
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Mont
Operations income												
Sales of goods and services	0	0	0	0	0	0	0	0	0	0	0	
VAT	0	0	0	0	0	0	0	0	0	0	0	
Other income												
Share capital	50 000	----	----	----	----	----	----	----	----	----	----	
Capital increases	0	0	0	0	0	0	0	0	0	0	0	
Shareholders loans	0	0	0	0	0	0	0	0	0	0	0	
Short term bank loans	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
Medium/Long term loans	0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
Other income	0	0	0	0	0	0	0	0	0	0	0	
Total income	**50 000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Operations disbursements												
Suppliers	0	0	0	0	0	0	0	0	0	0	0	
Personnel	0	0	0	0	0	0	0	0	0	0	0	
Other creditors (incl. outsourcing)	0	0	0	0	0	0	0	0	0	0	0	
Income Tax	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
VAT	-----	-----	0	0	0	0	0	0	0	0	0	
Other disbursements												
Investment in fixed assets	350	100	100	100	100	100	350	100	100	100	100	
Payment of short term bank loans	----	----	----	----	----	----	----	----	----	----	----	
Payment of medium/long term bank loans	----	----	----	----	----	----	----	----	----	----	----	
Payment of medium/long term shareholders loans	0	0	0	0	0	0	0	0	0	0	0	
Payment of short term shareholders loans	0	0	0	0	0	0	0	0	0	0	0	
Payment of other Medium/Long term payables	0	0	0	0	0	0	0	0	0	0	0	
Payment of other short term payables	0	0	0	0	0	0	0	0	0	0	0	
Total disbyrsements	**350**	**100**	**100**	**100**	**100**	**100**	**350**	**100**	**100**	**100**	**100**	
Cashflow	**49 650**	**-100**	**-100**	**-100**	**-100**	**-100**	**-350**	**-100**	**-100**	**-100**	**-100**	
Cash at beginning of period	**0**	**49 650**	**49 550**	**49 450**	**49 350**	**49 250**	**49 150**	**48 800**	**48 700**	**48 600**	**48 500**	
Cash at end of period	**49 650**	**49 550**	**49 450**	**49 350**	**49 250**	**49 150**	**48 800**	**48 700**	**48 600**	**48 500**	**48 400**	

Working capital

Go to Original web version	Year 1	Year 2	Year 3	Year 4
Operations needs				
Inventories	0	5 820	29 098	98 934
Receivables	0	0	2 016 667	15 330 700
Others	0	20 047	0	0
Total	**0**	**25 867**	**2 045 765**	**15 429 634**
Operations resources				
Payables	0	61 532	306 485	1 040 170
Public Administration	0	0	72 172	2 981 818
Others (including outsourcing)	0	15 476	15 488	15 488
Total	**0**	**77 008**	**394 145**	**4 037 476**
Working Capital	**0**	**-51 140**	**1 651 620**	**11 392 158**
Working capital variation		-51 140	1 702 760	9 740 538

Free cash-flow

Go to Original web version	Year 1	Year 2	Year 3	Year 4
EBIT (Earnings Before Interest and Taxes)	**-1 700**	**-442 567**	**185 424**	**8 939 740**
Depreciation	1 700	52 950	104 200	156 700
Provisions	0	0	121 000	919 842
Potencial cash flow from operations before interest and taxes	**0**	**-389 617**	**410 624**	**10 016 282**
Financial earnings from operation	0	0	0	0
Financial costs	0	0	0	0
Income tax (IRC)	0	0	50 992	2 458 428
Net earnings	**-1 700**	**-442 567**	**134 432**	**6 481 311**
Potential Cash-Flow from operations	**0**	**389 617**	**359 632**	**7 557 853**
Investment/divestment in Working Capital	0	-51 140	1 702 760	9 740 538
Operational Cash-Flow	**0**	**338 477**	**1 343 128**	**2 182 685**
Investment/Divestment in fixed Capital	1 700	61 700	61 700	71 700
Free Cash-Flow	**-1 700**	**-400 177**	**-1 404 828**	**-2 254 385**

Net present value

Go to Original web version	Year 1	Year 2	Year 3	Year 4
Capital opportunity cost (rate)	10%	10%	10%	10%
Discount factor	0,9091	0,8264	0,7513	0,6830
Present value of free cash flow	-1 545	-330 724	-1 055 468	-1 539 775
Net present value	**2 222 409**			

Internal Profitability (Rate)

Go to Original web version
Internal Rentability (Rate) 54%

Payback Period

Go to Original web version	Year 1	Year 2	Year 3	Year 4
Present Cash-Flow	-1 545	-330 724	-1 055 468	-1 539 775
Accumulated Present Cash-Flow	-1 545	-332 270	-1 387 738	-2 927 513
Payback Period			**Nº Years:** 4	**Nº Months:**

Project Profitability Analysis

Go to Original web version	
Capital opportunity cost (rate)	10%
Net present value	2 222 409

Ratio

Go to Original web version	Year 1	Year 2	Year 3	Year 4	Year 5
Return on equity	-3,5%	-27,6%	7,7%	53,0%	68,7%
Return on sales			6,7%	42,6%	58,8%
Return on assets	-3,5%	-26,3%	6,3%	39,9%	51,2%
Financial autonomy	100,0%	95,4%	81,5%	75,2%	74,5%
Indebtness capacity	0,0%	4,6%	18,5%	24,8%	25,5%
Solvability		2085,2%	441,5%	302,7%	292,7%
General liquidity		2173,8%	550,1%	405,6%	394,3%
Gross margin			14,8%	59,9%	82,0%
Break even point (Euros)			745 694	276 770	525 253
Economical safety margin			168,2%	5393,4%	8583,8%
Average inventory turnover (days)	7	7	7	7	7
Average collection time (days)	300	300	300	300	300
Average inventories payment time (days)	60	60	60	60	60
Cash cycle (days)	247	247	247	247	247

ASSETS	48 300	1 682 741	2 134 310	16 258 953	52 367 328
TOTAL ASSETS	48 300	1 682 741	2 134 310	16 258 953	52 367 328
Equity	48 300	1 605 733	1 740 165	12 221 477	39 032 557
Liabilities	0	77 008	394 145	4 037 476	13 334 771
TOTAL LIABILITIES + EQUITY	48 300	1 682 741	2 134 310	16 258 953	52 367 328

Investment Plan

Un: Euros

	Year 1	Year 2	Year 3	Year 4	Year 5
Tangible Fixed Assets	0	10 000	10 000	20 000	20 000
Intangible Assets	1 700	51 700	51 700	51 700	51 700
TOTAL INVESTMENT	1 700	61 700	61 700	71 700	71 700

Depreciation

Un: Euros

	Year 1	Year 2	Year 3	Year 4	Year 5
Tangible Fixed Assets	0	1 250	2 500	5 000	7 500
Intangible Assets	1 700	51 700	101 700	151 700	151 700
TOTAL DEPRECIATION	1 700	52 950	104 200	156 700	159 200

Financing Plan

Un: Euros

	Year 1	Year 2	Year 3	Year 4	Year 5
Own Capital	50 000	2 000 000	0	4 000 000	0
Medium/Long term Payables	0	0	0	0	0
Short term payables	0	0	0	0	0
TOTAL FINANCING	50 000	2 000 000	0	4 000 000	0

Treasury budget

Un: Euros

	Year 1	Year 2	Year 3	Year 4	Year 5
Total income	50 000	2 060 142	403 333	9 082 807	24 529 120
Total disboursements	1 700	460 319	1 808 161	7 337 191	16 235 119
Cashflow	48 300	1 599 823	-1 404 828	1 745 615	8 294 001
Cash at beginning of period	0	48 300	1 648 123	243 295	1 988 911
CASH AT END OF PERIOD	48 300	1 648 123	243 295	1 988 911	10 282 912

Project Profitability Analysis

Capital opportunity cost (rate)	10%			
Net present value	2 222 409			
Internal Profitability (Rate)	54%			
Payback Period	Nº Years:	4	Nº Months:	7

Ratios

	Year 1	Year 2	Year 3	Year 4	Year 5
Return on sales			6,7%	42,6%	58,8%
Return on assets	-3,5%	-26,3%	6,3%	39,9%	51,2%
Financial autonomy	100,0%	95,4%	81,5%	75,2%	74,5%
Break even point (Euros)			745 694	276 770	525 253

Costs	1 700	442 567	1 865 568	8 722 689	18 800 919
Ir para Versão Web Original	Year 1	Year 2	Year 3	Year 4	Year 5

Income Statement

Un: Euros

Auxiliary Calculations

Assumptions

Cost of Goods Sold And Raw Materials
Outsourced Supplies and Services
Labour costs
Other Costs
Revenues
Sales of Products and Goods
Sales of Services
Other Sales
EBIT
NET PROFIT

Balance Sheet

ASSETS

TOTAL ASSETS
Equity
Liabilities
TOTAL LIABILITIES + EQUITY

Investment Plan
Tangible Fixed Assets
Intangible Assets
TOTAL INVESTMENT

Depreciation
Tangible Fixed Assets
Intangible Assets
TOTAL DEPRECIATION

Financing Plan
Own Capital
Medium/Long term Payables
Short term payables
TOTAL FINANCING

Treasury budget
Total income
Total disboursements
Cashflow
Cash at beginning of period
CASH AT END OF PERIOD

Project Profitability Analysis
Capital opportunity cost (rate)
Net present value