Economic Viability

ASSIGNMENT 4-5

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Financial viability

Purchases

To start a technology company, the decision has been made to minimize initial costs by avoiding the need to acquire a physical space. Since the company is focused on the development of mobile applications a specific physical space is not required to operate. Instead of investing in furniture and office equipment, it was decided to use the personal spaces of the founders.

This approach allows us to significantly reduce initial costs by avoiding unnecessary spending on office furniture and equipment. However, taking into account the importance of having replacement parts, a monitor, a computer, and an additional set of peripherals have been purchased to guarantee the continuity of our operations in the event of failures or technical problems with personal equipment.

By adopting this strategy, we can optimize our financial resources and focus them on the development of our mobile application, which is the core of our business. As we grow and expand our operations, we will evaluate the need to acquire physical space and make additional furniture purchases as necessary.

The following table shows a summary of the hardware purchases:

HARDWARE	UNITS	SRP	AMOUNT
Computer	1	**849.00 €**	**849.00 €**
Monitor	1	**131.62 €**	**131.62 €**
Peripherals	1	**29.99 €**	**29.99 €**
TOTAL HARDWARE			**1,010.61 €**

Initial investments

In this section, all the expenses necessary to create the company have been calculated. For this we have taken into account the minimum expenses strictly necessary. These are those related to the creation of the company with the business license and the others are those related to tangible and intangible material.

The initial investments can be split in deferred, tangible, and intangible. The deferred expenses of €400.00 correspond to obtaining the business license required by the town hall, which is a necessary legal requirement for establishing and operating the company properly. On one side, the tangible cost of €1,010.61 is associated with acquiring computer hardware, including computers, monitors, and other equipment necessary for the development and operation of the mobile application. These components are essential for the daily work and development of the company.

On the other side, there aren’t intangible costs incurred at this stage of the business. This means that there are no costs related to assets such as patents, trademarks, or custom software. Regarding the mobile application being developed, there haven't been any specific intellectual property expenses incurred as we plan to use open-source technologies instead of commercially available ones.

	AMOUNT
DEFERRED EXPENSES	400.00 €
Business License (City Hall)	400.00 €
TANGIBLE	1,010.61 €
Computer hardware	1,010.61 €
TOTAL INVESTMENTS	1,410.61 €

Initial financing

The capitalization of €3,000 and the own resources of €12,000 can be justified based on the requirements and circumstances for creating a company (SL) in Spain.

In this country, when creating a *Sociedad Limitada* (SL) company, it is mandatory to have a minimum share capital of €3,000. This requirement ensures that the company has a minimum level of financial stability and initial resources to operate effectively. Therefore, the capitalization of €3,000 meets the legal requirement for setting up the company.

Each founder's choice to contribute €3,000 is influenced by our current circumstances as young individuals managing studies and work, all while facing financial limitations. By investing €3,000 each, we want to show our dedication to the company's success, even with our limited means. This amount allows us to make a significant investment while still staying within our financial capabilities. Furthermore, by equally sharing the financial responsibility, we ensure a fair distribution among the founding team, creating a sense of ownership and equal commitment. Additionally, the €3,000 contribution from each founder will help cover initial expenses like registering the company, starting marketing efforts, and meeting essential operational needs.

Combining the capitalization of €3,000 and the own resources of €12,000, we have a total of €15,000 as initial resources for the company. This total amount satisfies the legal requirement for capitalization while also utilizing the personal funds of the founders to further strengthen the financial position of the company.

Sales Forecast

The estimated population of 20,000 represents the target market that includes all organizations registered in Catalonia. Within these 20,000 organizations, according to our estimates, approximately 10% of these are dedicated to organizing events. Which means that our potential users are approximately 2000. These could be summer camps, sports camps, educational camps, etc.

According to our estimates, we believe that of these 2,000 potential users, at least 30 would purchase our three products.

The catalogue of products and services that the company offers to customers can be classified as follows:

Premium: The premium profile offers the complete functionality of the mobile application without any limitations. By providing a premium subscription, we offer additional features, enhanced convenience, and a seamless experience to the users. The subscription price of 15€ reflects the added value and comprehensive services provided to organizations managing camps. This pricing strategy ensures a sustainable revenue stream for the company.

Algorithm prioritisation: The application contains a recommendation system to advertise organizations based on what a user is looking for. Within this recommendation system, organizations have a service to prioritize their recommendations, at a cost of 8 €/month.

Customer service: Customer service is a vital aspect of any software application, especially when organizations rely on it for critical operations. By offering a dedicated customer service package for 520.00 € per month, we ensure that organizations receive 24/7 assistance and support. This premium service provides peace of mind to users, knowing that help is readily available whenever they need it. The higher pricing for customer service reflects the additional resources and personalized support required to maintain a high level of service.

Profile	Subscription price (€/month)
Premium	15.00 €
Algorithm prioritisation	8.00 €
Customer service	520.00 €

FORECASTING

Premium: The premium profile, priced at 15.00 € per subscription, accounts for 30% of the total sales. This indicates a significant user base opting for the full range of features and capabilities offered by the premium profile. Although the percentage of sales is relatively high, the contribution to the overall revenue is relatively low at 2.54% due to the lower subscription price compared to the other categories.

Algorithm prioritisation: The algorithm prioritization feature, priced at €8.00 per subscription, represents 10% of the total sales. This category serves a targeted group of users who have specific needs for advanced optimization tools in their camp management processes and that they also want their camps to have more relevance within the app and to be able to attract more customers. While the sales percentage is relatively lower, the contribution to revenue is even lower at 0.45% due to the lower price point.

Customer service: The customer service package, priced at 520.00 € per month, accounts for 33% of the total sales. This category represents a significant revenue driver, contributing 97.00% to the overall revenue. The higher price point for customer service, along with its importance in providing 24/7 assistance and support, results in a higher revenue contribution compared to the other categories.

Services	% Sales	SRP	AMOUNT
Premium	30%	**15.00 €**	**1,620.00 €**
Algorithm prioritisation	10%	**8.00 €**	**288.00 €**
Customer service	33%	**520.00 €**	**61,776.00 €**
TOTAL SALES			**63,684.00 €**

Preliminary results

This section describes the estimated total income of our company during the first year as well as all the total expenses of the same to finally obtain the total net profile that our company could have at the end of the first year.

After the analysis of the initial investments, the cost structure, and the sales forecast, the following preliminary results have been obtained.

Total income:

- Revenue: The amount of 63,684.00€ represents the total sales generated by the company, accounting for 80.94% of the total income.
- Other Income: This category includes any additional sources of income beyond direct sales. In this case, it would be the total capital contributed when the company was created by all the founders. In total contributing 15,000.00€, which represents 19.06% of the total income.

Total Staff cost:

- Own Remuneration: The amount of 38,400.00 € represents the remuneration paid to the workers of the company, accounting for 48.80% of the total income.
- Autonomous Social Security and Personal Expenses and Social Security Workers: There are no costs specified for these two categories, indicating that it is not applicable in this case because all the workers will be hired as self-employed.

Other expense's structure:

- Advertising and Promotions: The company allocates 1,000.00€ for advertising and promotional activities, accounting for 1.27% of the total income. This will be managed in a wallet associated with an account on the Google Ads platform, which charges between 2-4€ for each click made on our ads. Once the money in the wallet is finished, you will no longer spend more money on advertising.
- Taxes: The company incurs 7,680.00€ in tribute expenses (20% on profits) representing 9.76% of total income.
- Transportation: The company incurs 700.00€ (estimation of refuels each month and a half, average fuel cost 1,62€/l, average capacity of a fuel tank 55l), for transportation costs, representing 0.89% of the total income.
- Amortizations Hardware and Amortizations Furnishings: These values represent the depreciation costs for hardware and furnishings, amounting to 202.12€ (0.26% of the total income) and 101.06€ (0.13% of the total income), respectively.

EBITDA:

- EBITDA: The EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) is calculated as 30,904.00 €, which represents the EBIT (Earnings Before Interest and Taxes) value before considering the amortizations.
- Earnings Before Interest and Taxes (EBIT): The EBIT value is calculated as 30,600.82 €, representing 38.89% of the total income.

Net profit:

- It reflects the company's ability to generate income after considering all expenses. . The Net Profit is equal to the EBT value, which is 26,010.69€ (minimum tax of 15% for new SL companies in Spain[1]), representing 33.06% of the total.

CONCEPT	% TOTAL INCOME	AMOUNT
TOTAL INCOME	100%	**76,684 €**
TOTAL STAFF COST	48.80%	**38,400 €**
TOTAL OTHER EXPENSES STRUCTURE	12.31 %	**9,683.18 €**
EBITDA	-	**30,904 €**
EBIT	38.89%	**30,600.82 €**
EBT	38.89%	**30,600.82 €**
Tax income	5.83%	**4,590.12 €**
NET PROFIT	33.06%	**26,010.69€**

[1] https://www.asesoriafiscalsevilla.org/blog/que-impuestos-pagan-las-sociedades-limitadas

Evolution results

In this part we will see the evolution of various financial concepts over a period of time, specifically in the first 3 years, where different variations are presented based on three scenarios: Pessimistic, Neutral and Optimistic Forecasts. For this, the preliminary results obtained in the previous section will be used as a neutral result for the first year.

Pessimistic

The first year considering the pessimistic variation, the company faces a difficult scenario with a loss of 1,665.26€. This could be due to factors such as lower-than-expected revenue, higher costs, or adverse market issues. The second year the company manages to recover and generates a small income of 543.37€, this indicates some improvement in the company's financial situation. Finally, in the third year, the company's financial performance improves significantly, resulting in an income of 36,314.24€, which is not enough to recoup the entire investment.

Neutral

Under the neutral variation scenario, the company experiences consistent and increasing trend over the three-year period. In the first year, the company generates an income of 26,010.69€, indicating a stable financial performance. For the second year, the company's total revenue experienced positive growth, reaching 33,480.16€. This is due to an increase in profits (91,420.80€) and a slight increase in staff costs (42,240.00€) and overheads (10,651.50€), which makes the final calculation favourable. In the third year, the company's economic performance takes a significant leap with a total turnover of 96,799.62€. This substantial growth indicates a successful period for the company, marked by a large increase in revenue 76,420.80€ to 143,289.00€.

Optimistic

Under the optimistic variation scenario, the company experiences significant growth and positive financial outcomes over the three-year period. In the first year, the company generated a total income of 54,762.93€, indicating a substantial increase compared to the neutral scenario. This growth is primarily driven by an optimistic variation of 50% in revenue, resulting in a total of 95,526.00€, and staff costs and overheads rise slightly to 42,240.00€ and 10,118.93€. In the second year, the company continues to demonstrate positive growth. Staff costs, and overheads remain consistent with the previous year, leading to an EBT of 78,772.27€. Finally, in the third year, total income reached 181,230.52€, which represents a substantial leap for the company compared to previous years.

Periods / Prev. Desp benefit. Taxes	Pessimistic		Neutral	Optimistic
Year 1	-1,665.26 €	26,010.69 €	54,762.93 €	
year2	543.37 €	33,480.16 €	66,956.43 €	
year3	36,314.24 €	96,799.62 €	154,045.94 €	

Investment evolution

To choose the Interest and Risk rate values, we take into account the level of Innovation of the project and the current inflation rate. In our case, we consider a 40% risk rate because we consider this project provides a great level of innovation without being too disruptive or revolutionary.

Interest
7.18%
Risk rate
40.00%
update rate
47.18%

Considering this data, we can take a look at our cash flow metrics.

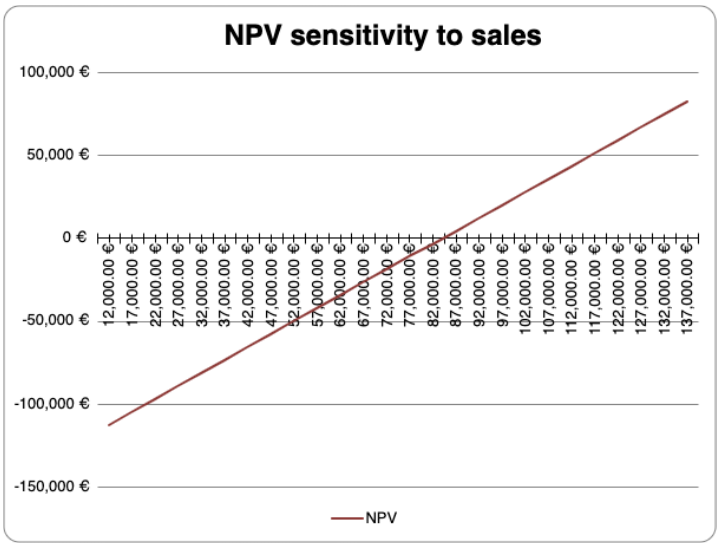
	Cash Flow		
	Pessimistic	**Neutral**	**Optimistic**
Home project	(49,493.79)	(49,493.79)	(49,493.79)
Year 1	-1,665 €	26,011 €	54,763 €
year 2	-12,957 €	18,480 €	50,456 €
year 3	21,464 €	80,300 €	135,896 €
Evaluation criteria of investment			
ROI	-0.8627	1.521	3.8726
Net Present Value (NPV)	-49,874 €	1,897 €	53,632 €
Pay Back Period (PBP)	-29.72	1.90	0.90
Internal Rate of Return (IRR)	-36.64%	49.79%	116.39%

Taking a look at this data, we realise that only the pessimistic outcome does not meet the requirements we set for the investment. In this worst-case scenario, all metrics are negative, because in the 3 years set for this analysis the project would not break even and recoup its initial investment. On the other two outcomes analysed, the metrics are positive, with the optimistic version even reaching more than 3 ROI.

Overall, the company can be considered a great but not perfect investment opportunity, since there is a chance that the investment is not recovered, but if the outcome is neutral or optimistic, the investment will almost double considering the neutral scenario, or more than quadruple considering the optimistic scenario.

Even though with current estimates it may seem that benefits can be obtained, the real profitability of the project must be considered and whether the investment is really viable.

To evaluate the profitability of the project, the NVP tool will be used. By using NPV as an assessment tool, informed decisions can be made about whether to undertake an investment. It helps to assess the profitability, feasibility, and potential risks associated with a project, considering the time value of money. All calculation results are shown below:



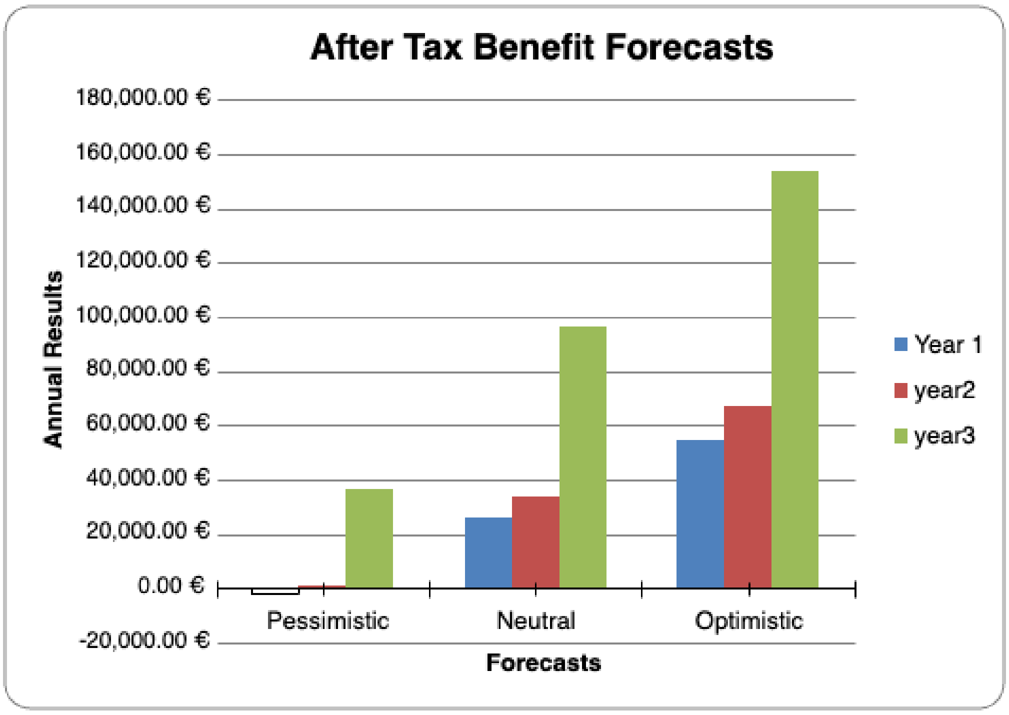
sales	NPV
47,000.00 €	-58,296 €
52,000.00 €	-50,478 €
57,000.00 €	-42,660 €
62,000.00 €	-34,842 €
67,000.00 €	-27,024 €
72,000.00 €	-19,205 €
77,000.00 €	-11,387 €
82,000.00 €	-3,569 €
87,000.00 €	4,249 €
92,000.00 €	12,067 €
97,000.00 €	19,885 €

Analysing the results, it can be seen that estimated sales below a certain threshold may not generate enough cash flows to offset initial investment costs, resulting in a negative NPV. However, as sales exceed a certain point, the NPV turns positive, indicating that the project begins to create value and becomes profitable. In this way, the project becomes viable after sales exceed 87,000€.

Executive Summary

The objective of this document is to analyse the CampManager company as an investment opportunity, taking into account the required initial investment and possible income forecasts to consider if the company is economically viable and worth investing in.

Initially, the company requires 49,493.79 € to begin functioning, a number that has been obtained after harsh cost-cutting to make the company as profitable as possible in a realist way. The sales forecast has approximated 63,684.00 € in income a year, a number that has been modified according to one of three possible scenarios: pessimistic, neutral, and optimistic.

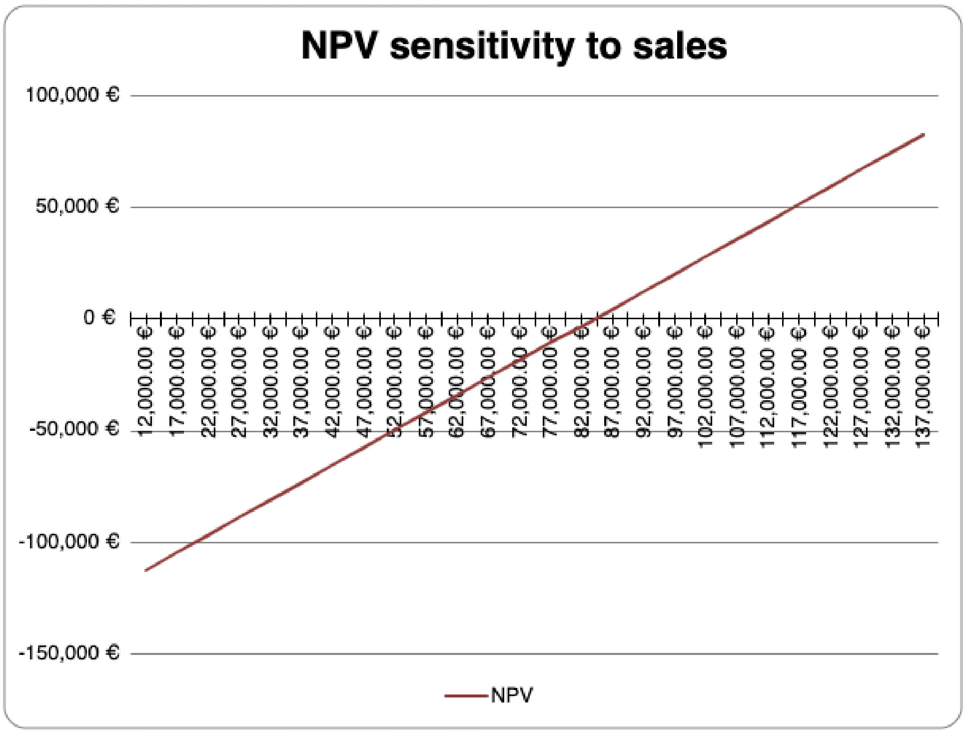


After tax, the two most positive scenarios showed promising results, while the less positive would not break even in the 3 years of scope in this project. This can be seen in detail in the Cash Flow metrics, in which the metrics are negative because there is no benefit. However, the two best scenarios show very promising results, which would consider CampManager as a good but not perfect investment opportunity.

	Cash Flow		
	Pessimistic	**Neutral**	**Optimistic**
Home project	(49,493.79)	(49,493.79)	(49,493.79)
Year 1	-1,665 €	26,011 €	54,763 €
Year 2	-12,957 €	18,480 €	50,456 €
Year 3	21,464 €	80,300 €	135,896 €

Evaluation criteria of investment			
ROI	-0.8627	1.521	3.8726
Net Present Value (NPV)	-49,874 €	1,897 €	53,632 €
Pay Back Period (PBP)	-29.72	1.90	0.90
Internal Rate of Return (IRR)	-36.64%	49.79%	116.39%

Finally, after analysing the viability of the company, using the NPV tool, it has been possible to see that the project is economically viable when sales exceed €87,000. This means that reaching this sales target allows the project to generate enough cash inflows to offset the initial investment and start creating value. The following figure shows a summary of the evolution of NPV as sales increase.



Conclusions

It has been an enriching experience trying to put into numbers everything needed to start our company and experiencing first-hand the process needed to evaluate the economic viability of a technological project.

We have seen how spending money on assets that would seem necessary at first sight, such as new computers (when we already have ours) or office spaces (when we can work from home), would hurt the project in a way bigger than imagined when first deciding what to spend the money on. This has been fixed in a second iteration of the spending and investments, which is the one in the document, in which costs have been adjusted as much as possible to create a realistic forecast of a successful tech startup.

Finally, a new scope of technological analysis has opened to the members of the group after learning the meaning of many economical metrics to analyse the viability of investments.