A Work Project, presented as part of the requirements for the Award of a Master's degree from the Nova School of Business and Economics.

STRATEGIC REFLECTION OF THE APPS FOR GOOD'S BUSINESS MODELS TO MAKE IT FINANCIALLY SUSTAINABLE AND INTERNATIONALIZATION PLAN

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Abstract

This thesis addresses the financial sustainability challenges of Apps For Good and supports its ambition to expand its impact internationally through the development of strategic business model innovations and a profound internationalization strategy. The thesis is divided into five core segments: an analysis of AFG's current status, improvements to the business model within Portugal, exploration of potential international markets, formulation of a market entry strategy, and a financial forecasting analysis. This approach aims to transform AFG into a financially sustainable and internationally recognized program, increasing digital literacy and fostering digital innovation globally.

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1. Introduction (Group Part)

In an era where digital literacy is not just a skill but a necessity, the transformative role of educational programs like Apps For Good (AFG) cannot be overstated. Originating in the UK and now flourishing in Portugal, this program represents a beacon of innovation and hope. It stands at the intersection of education, technology, and social impact, uniquely positioned to empower the next generation. In a world increasingly governed by digital interfaces, the ability to not just navigate but also create digital solutions is vital. AFG, through its focus on problem-solving within the framework of Sustainable Development Goals (SDGs), is more than an educational program; it's a launchpad for future change-makers (Apps for Good, 2023).

1.1. Problem Statement

Despite its noble intent and significant impact, the sustainability and expansion of AFG face considerable challenges. The program's reliance on sponsorships, primarily from the IT sector, poses a threat to its long-term viability. Moreover, its current operational model, while effective in Portugal, needs a strategic overhaul to facilitate internationalization. The core challenge lies in strategically refining AFG's business model to ensure financial sustainability and to lay a foundation for its global expansion. This necessitates a thorough understanding of the program's strengths, weaknesses, and untapped opportunities, especially in the context of a rapidly evolving digital landscape.

1.2. Approach of the Thesis

This thesis adopts a consultative approach to address the identified challenges. It is structured into five strategic sections:

Status Quo Analysis: The first part involves a comprehensive analysis of the current state of AFG, focusing on its operational, financial, and educational impact in Portugal. It will identify the program's strengths and weaknesses, providing a foundation for enhancement strategies.

Business Model Innovation within Portugal: Building on the insights from the status quo analysis, this chapter aims to innovate and adapt the existing business model. The focus will be on diversifying funding sources and customer segments, enhancing customers willingness to pay, and maximizing impact.

Internationalization – Market Determination: This section involves identifying potential international markets for AFG. It includes an in-depth analysis of environmental and economic conditions, market needs, cultural nuances and educational systems.

Internationalization – Go-to-Market Strategy: Based on the market analysis, this part will develop a tailored go-to-market strategy for the identified market. This strategy will include strategic considerations, marketing mix (4Ps), governance models, stakeholder analysis, timelines and challenges.

Financial Analysis: The final part will provide a financial projection and analysis, assessing the viability and scalability of the proposed business model changes and internationalization strategies considering a variety of potential scenarios.

Through this structured approach, the thesis aims to contribute significantly to making AFG a financially sustainable and globally recognized program, poised to combat digital illiteracy and foster digital innovation across borders.

2. Overview of CDI Portugal and Apps For Good (Nuno)

2.1. Financial Diagnosis of current Business Model (Miguel)

2.1.1. Revenue Analysis

In this section, the financial performance of AFG is examined. Despite being one of the main three initiatives of CDI Portugal, it does not have separate official financial reports (CDI's reports thus aggregate AFG, CDD, RECODE, and others). To address this, a series of meetings with AFG staff were undertaken, to identify and allocate the specific portions of CDI Portugal's revenues and costs directly attributable to AFG. The approach facilitated the construction of an unofficial historical Income Statement for the two last periods available, the academic years 21-22, and 22-23. An important aspect of this financial analysis was to align AFG's, which is based on the school year running from October to August, with CDI Portugal's financial reporting, which follows the traditional fiscal year from January to December. To accurately reflect AFG's operational cycle and analyse performance per school year, an assumption was made: donations and subsidies received in the fiscal year 2021 were allocated to the 2021-2022 academic year, and similarly for the subsequent period. This alignment provides a more coherent and operationally relevant view of AFG's financial performance within the larger framework of CDI Portugal. This approach is particularly justified for donations, as sponsorships for competitions, which constitute a significant portion of the donation revenue, are established prior to the start of the school year.

Building on this financial framework, AFG operates without an organic revenue stream, relying predominantly on donations and subsidies for its operations, with only a minor revenue contribution from private schools. Notably, CDI secured government support in 2019 through the Portugal Compete 2020 program, a fund managed by the Portuguese Government and supported by the European Union, aimed at fostering various initiatives. The 2021-2022 school year saw the final instalment of this three-year funding, amounting to €170k, following €90k in the 2020-2021 period (Interview with João Machado – AFG Financial Controler).

Donations make up the largest portion of AFG's revenue, amounting for €234,000 in 2021 and €187,000 in 2022. In contrast, organic revenue was minimal, totalling just €3.5k in each period, derived from a €750 fee charged to each of the five private schools in AFG's portfolio. When combined, the total revenue for these periods was €408k for 2021-2022 and €191k for 2022-2023, representing a significant decrease of 113.5%. *Appendix – Historical Revenue of Apps For Good* illustrates these figures, highlighting the relative contribution of each revenue stream. It shows that donations constituted 57% and 98%, subsidies accounted for 57% and 0%, and fees made up 0.9% and 2% of the total revenue in the respective periods.

Shifting focus to the specifics of donation revenues, CDI's total donations amounted to €301k in 2021, and €385k in 2022. From that pool of donors, Câmara Municipal do Valongo was excluded, as it is related to CDD. By doing so, AFG's donations were estimated at €234k in 2021, and €187k in 2022, representing a decrease of around €49k. This decrease is largely explained by the Unesco Prize won in 2021, totalling €84.6k, which was partially offset by the new partnership with Area Metropolitan do Porto (sponsor of the first AFG local event), and increased donations from Synopsis and Fundação La Caixa (prize awarded for AFG's work in prisons). When examining the donor list, it is evident that most have business relationships with AFG and can be considered partners. Companies such as GALP (€50k in both periods), .PT (€36.25k vs. €28.75k), Synopsis (€18.87k vs. €43.9k), and BNP (€15k in both periods) each sponsor one competition category that aligns with their interests and goals. Additionally, IBM, Ren, and others regularly donate to AFG but do not sponsor a competition event category individually (CDI Portugal, 2021) (CDI Portugal, 2022).

The donation portfolio reveals a high-risk profile, as a high percentage of total donations, and therefore revenue, comes from a few selected donors. The top three donors account for 73% in 2021 and 65.5% in 2022. These business relationships are never guaranteed and always carry inherent risk. Hypothetically, if AFG were to lose one of its main partners, such scenario would have a severe impact on budget and subsequently operational capabilities, underscoring the need to diversify donation portfolio and organic revenue sources (CDI Portugal, 2021) (CDI Portugal, 2022).

2.1.2. Cost Analysis

AFG's cost structure can be divided into personnel costs (Project Management Costs) and other operational costs.

Concerning personnel costs, these increased from €120k to €140k. AFG employs a budgeting procedure for calculating these costs, as CDI's personnel structure adapts to varying workloads, with three members primarily dedicated to AFG and seven others contributing during peak times, especially in event preparation. To effectively calculate costs, each employee records the time spent on AFG-related activities, with costs then calculated proportionally to their salary. The increase was attributed to both a rise in salaries and an increase in time allocated to AFG tasks, as shared by AFG staff (CDI Portugal, 2021) (CDI Portugal, 2022).

Other operational costs decreased from €135k to €131.25k, resulting in a net increase in total costs from €225k to €271k. While, decreasing from €73k (54.1% of Other Operational) to €55k (41.9%), platform costs still add up to the largest cost factor. The surplus expense of € 18k in 21-22 covered investment in new functionalities. Governance costs have the second highest share of total costs, and in absolute costs it decreased from € 26k (19.3%) to € 23k (17.5%). This value pertains to the annual fee that AFG Portugal must pay AFG London for operating under their umbrella. In 20-21 the value included some special advisory fees on European

Funds, but this is considered non-recurring, which explains the year-on-year variation. Impact and valuation follows suit, increasing from €10k (7.4% of total) to €11.5k (8.8% of total). Every year, AFG conducts an impact assessment and currently does not have the resources to do so internally. As such, it outsources that task to *Instituto de Educação*.

Regional Events costs decreased from €12.5k (9.3%) to €11.5k (8.8%), owing to a decrease in the average costs per event, from €3.125k to €2.875k (4 events were organized in each period). Concerning the final event, its cost increased from €7k (5.2%) to €11k (8.4%), in view of expenses covering the invitation of special guest in the last edition (CDI Portugal, 2021) (CDI Portugal, 2022).

Roadshows follow suit, which increased from €4k (3%) to €9.5k (7.2%) yoy. These costs correspond to presential visits that AFG does throughout the whole country, and that happen in two moments every year. Once in the beginning of the school year, in October, and once between Abril and May. The goal is to spread the word about AFG, its goals and values, and to potentially raise new clients (CDI Portugal, 2021) (CDI Portugal, 2022).

Remaining costs have had negligible weights in the two periods (21-22 vs 22-23, and are composed by: Fellows and Ninja Community expenses (€ 1.5k both periods); communication and marketing (€ 1k vs. € 1.5k, although some of the marketing costs are counted withing personnel costs, as per info provided by AFG); Local competition events (0 vs. € 3.5k – Local competitions are a new initiative, and AFG hopes to grow the number of events held); Continuity: App Start Up Event (0 vs. €750), and B-learning teacher's training (0 vs. € 2.5k – training was held online on the former, hence no costs associate with the training).

In conclusion, our analysis indicates limited scope for cost savings within AFG's current financial structure, summarized in *Appendix – Historical Cost Structure of AFG*. The majority of the costs incurred are essential to AFG's activities, underlining their critical role in the initiative's operations. This is further corroborated by insights from the staff themselves, as gathered through interviews, which highlight a conservative approach to financial management at AFG. Staff members have emphasized their focus on essential expenditures, ensuring that resources are allocated efficiently and effectively in support of AFG's objectives. Consequently, the opportunity to significantly reduce costs without impacting the quality and scope of AFG's work appears minimal.

3. Navigating New Horizons: Crafting an Effective Go to Market Strategy for International Expansion (Luca)

In the dynamic landscape of digital education, the expansion of innovative programs like AFG beyond their origin territories represents a significant opportunity to effect global change. Hence, this chapter aims to build up on the country analysis performed in *Chapter* ***Error! Reference source not found.***, by narrowing the analysis down to one target country and articulating a comprehensive go-to-market strategy that aligns with the program's ethos, while ensuring financial sustainability and scalability. The following chapter shall explore how AFG can replicate its Portuguese success on a global stage, amplifying its impact and fostering a digitally literate, problem-solving generation worldwide.

3.1.1. Price (Miguel)

In determining the pricing structure for AFG's expansion into Spain, it is prudent to reference the pricing established in Portugal and apply an Absolute Purchasing Power Parity (PPP), rather than engaging in extensive market research. This approach is driven by two primary considerations. First, the current resource constraints of AFG limit the feasibility of conducting comprehensive market research in the Spanish market. Second, the pricing model employed in Portugal is grounded in robust fundamentals, including the team's extensive experience and deep market knowledge. These elements provide a reliable basis for the initial fee setting in Spain. By applying PPP, the pricing can be adjusted to reflect the relative economic conditions and purchasing power in Spain, ensuring that the fees are appropriately tailored for the new market. The average PPP between Portugal and Spain in the last 5 years was *1.109* (OECD, 2023). As such, Spain's fixed fee would be around 830€. This value refers to a one-year contract, and discounts would be applied as mentioned in *Chapter* ***Error! Reference source not found.***.

It is important to acknowledge limitations of this strategy, which include the assumptions on which the PPP theory rests, including stable inflation rate across the two countries, integration of capital and product markets, homogenous goods, no government intervention, and others (Taylor, 2004).

Finally, it is worth noting that once the partner has been present in the Spanish market for an extended period, they should adapt the pricing to a more tailored solution, based on market data gathered in the meantime.

More detailed calculations on the franchising fee charged and resulting profitability of the franchising model for a franchise partner are given in *Chapter 4.4.*

Lastly, this phase shall explore further expansion opportunities, both within Spain and internationally, leveraging the initial successes and learnings.

This structured approach ensures a well-coordinated and systematic entry into the Spanish market for AFG, establishing presence, optimizing operations, expanding impact and setting the foundation for sustainable growth and success in Spain.

4. Towards sustainable growth: A Financial Forecasting Model for Apps for Good (Miguel)

4.1. Introduction and Methodology of Forecasts

4.1.1. Overview of Structure

The analysis unfolds in three distinct steps, each with its unique focus and methodology.

Firstly, an examination of the 'Status quo' scenarios was conducted, projecting the income statement to understand the financial impact of continuing AFG's operations without any of the proposed changes. This step serves as a baseline for comparing the effects of potential strategic adjustments.

Secondly, the Base Scenario analysis is conducted in two parts. The first part assesses AFG's prospects without internationalization, while the second incorporates international expansion into the projection. In the end, a revised projected Income Statement is presented, incorporating all initiatives, to evaluate the feasibility of AFG becoming financially sustainable. Additionally, a standalone project analysis is conducted, focusing on the Internal Rate of Return (IRR), break-even, and cumulative cash analysis. This step is crucial for evaluating the profitability of the proposed project on a standalone basis, considering the necessary investments and the expected incremental revenues.

Thirdly, the chapter culminates in a Sensitivity Analysis. Here, the IRR tables are displayed, alongside a cumulative cash flow graph compiling all scenarios in the same graph. This section aims to illustrate the range of potential outcomes across base, pessimistic, and optimistic scenarios without delving into each scenario's specifics.

It is important to note that the assumptions underlying each scenario are discussed at the beginning of each section, ensuring a clear understanding of the basis for our projections and analyses.

That said, and since the most important and sensitive part of any forecast is revenue growth, its methodology will be discussed in detail in the following subchapter, prior to the forecast analysis itself.

4.1.2. Revenue Forecasting Methodology

Before deciding how to tackle the challenge, it is crucial to consider the most common approaches, their advantages, and disadvantages, AFG's business model, and only then make a thoughtful decision.

It can be said that the two most common concepts are the top-down or bottom-up approach (Donnely, 2023). As value drivers, the former calculates total revenue by multiplying expected market share by the total market size of the market, whereas the latter considers the business-specific value drivers, giving a more realistic and accurate result than top-down forecasting. In AFG case, the appropriate drivers result in the equation Revenue = Nº Schools * Penetration rate * Average fee.

This approach enables predictions related to specific products or services, customer segments, or geographies, giving the company an internal view of its capabilities for competing with other market players. For instance, it allows a detailed analysis of value drivers per school segment (1st Cycle, 2nd Cycle, 3rd Cycle, Secondary and Universities), possibly assuming different penetration rates and fees for each one, if such assumptions make sense considering the proposed business plan. That said, it does have its drawbacks. Gathering all information, especially for large organizations, can be time intensive. Additionally, data may even be unavailable for all segments, leading to gaps in the forecast. Finally, it fails to capture overarching trends in the industry or sector, which could impact sales performance.

Conversely, a top-down approach is much quicker and thus suitable for fast decision making, providing a high-level sense of what is possible in the market. Due to its simplicity (Donnely, 2023), it allows for regular re-forecasting should new market data become available. It is thus more stable and less sensitive to short term fluctuations, as it focuses on broad trends.

After thorough consideration of both methodologies, it was determined that the bottom-up approach is more aligned with our forecasting objectives for several reasons. Despite AFG's presence in the EdTech industry, its unique business model lacks direct comparables in the market, rendering the procurement of reliable market-size data unfeasible. Consequently, utilizing the total EdTech market size would yield inaccurate results. Furthermore, AFG's operation across multiple business segments necessitates individualized forecasting, achievable only through a bottom-up approach. This method also enables precise incorporation of proposed innovations in the business model, enhancing the accuracy of sensitivity and scenario analyses. Studying the effect of average fee charged per school is more insightful and realistic than assessing the effect of +/- 0.1% total market share change, especially considering how difficult it would be to accurately size AFG market size. As such, revenue will be equal to: Nº Schools in segment (1st,2nd,3rd, secondary, Universities) *Penetration rates*Average Fee.

4.2. Financial Forecasts

4.2.1. Status quo – Assumptions

Inflation Rate: From hereinafter, when an accounting figure is said to grow at inflation level, it will do so according to the following exhibit:

Inflation		2025	2026	2027	2028	2029	2030
	3.20%	2.40%	2.00%	2.00%	2.00%	2.00%	2.00%

Table 1 - Forecasted Inflation Rates

Values were sourced from the European Commission (Comission, 2023) until the last available year (2025) and assumed to remain at 2% (ECB's target inflation) for the remaining of the forecast period.

Average Fees: Kept unchanged, at 750€.

Private Schools: The number of colleges participating in the AFG program is projected to remain steady at five. As evidenced by the historical data on private schools within the program there has been a noticeable trend of stagnation ***Error! Reference source not found.***. This trend is expected to persist should no new initiatives or changes be implemented.

Nº Schools	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
Public	106	168	181	221	224	180	186	151
Private	3	5	7	7	7	5	5	5

Table 2 - Historical Nº Schools

Subsidies: Not considered for the analysis. As per information provided by AFG's Financial Controller, the company does not foresee any governmental support in the short to medium term.

Donations: assumed to grow at 2 % per year.

Personnel Costs: The average cost per employee was based on a historical average of AFG budgeting from 21-22 and 22-23 (€13k) and assumed to grow at inflation level throughout the forecast period. The number of employees was kept constant at 10, as per the last two periods.

AFG Platform: € 110k in 23-34, and € 55k hereinafter. The latter value is considered the baseline costs (*Chapter 2.1.2)*. In the year 23-24, the company has an investment planned, which includes launching a mobile version of the platform, and some minor costumer experience improvements.

Governance Costs (London fee): Assumed to remain constant at £ 20k per year, as it has remained for the last few years. Forecasted exchange rates were sourced up to 2025, the last available year (Bloomberg, 2023). For the remainder of the forecast period, the fee was fixed at 23k€, which has an implied exchange rate of 1.150.

Competitions (Final and Regional) - The number of competitions, 1 final and 4 regionals, was kept constant. With regards to the average cost per event, both cases took the last period as a reference and subsequently increased the average cost at inflation level.

Impact and Valuation – Taking last available year as reference, and subsequently growing at inflation level. AFG started outsourcing the assessment to a new company in the last school year, hence the decision to not use the average historical average.

Education Partner Roadshows; Fellows and Ninja Community, Communication and Marketing – Departing from the cost in 22-23, increasing at inflation level.

Competitions (Local) – As previously explained, AFG predicts an increase in the number of local events. As such, average price will grow at inflation level, while number of events is assumed to follow the schedule:

Nº Local events	23-24	24-25	25-26	26-27	27-28	28-29	29-30
	2	3	4	4	4	4	4

Table 3 - Forecasted Nº Local events

Continuity (App Start Up Event) - Taking last period as reference (initiative that started last school year), and then growing at inflation level.

B- Learning teacher's training - Taking last period only as reference, and then growing at inflation level. 21-22 was not considered as training was done online during the pandemic.

Concerning the IRR calculations, it is worth noticing the model assumed a perpetuity in the last period, as the incremental cash flows are expected to be recurring for the foreseeable future. To account for the inherent risk of this assumption, a discount rate of 15% was used in the calculation. The discount rate is conservative, as it is not guaranteed both the new school fees and partnerships in Portugal, nor the franchisee in Spain, to be risk-free even after being already successfully established.

4.2.2. Status quo - Results

The projected income statement, as depicted in Appendix - Status Projected Income Statement, conclusively indicates financial unsustainability. Based on the previously stated assumptions, our projections consistently show a negative financial outcome for the entire forecast period. Despite a gradual reduction in losses, from negative € 125k in the 23-24 period to € 80k in 29-30, these results underscore the necessity of adopting new initiatives. Additionally, *Appendix – Status Quo Revenue Breakdown* portrays the residual contribution of organic revenue to AFG’s total budget, as donations will continue to account for more than 98% of the budget without new initiatives. Only through such strategic changes can AFG hope to achieve financial sustainability in the future.

4.2.3. Base Scenario – Assumptions

The Base Scenario in your financial analysis represents a crucial comparison point. It describes the financial impact of incorporating all your proposed changes. By contrasting the Base Scenario with the status quo, it is possible to effectively demonstrate the financial ramifications of your proposals. Only assumptions that differ from the status quo model will be mentioned bellow:

Private Schools and **Universities** numbers change as follows:

		23-24	24-25	25-26	26-27	27-28	27-28	28-29
Private Schools	5	21	37	53	69	85	100	
Implied penetration rate	0.3%	0.3%	1.4%	2.5%	3.7%	4.8%	5.9%	
Universities		0	7	14	21	28	35	40
Implied penetration rate	0.0%	2.4%	4.9%	7.3%	9.7%	12.2%	13.9%	
Incremental Revenues	-	17,250	34,500	51,750	69,000	86,250	101,250	

Table 4 - Private School and Universities - Base Scenario

Incremental revenues represent the total incremental revenues from private schools and universities, when comparing to the status quo scenario.

Donations: Assumed to grow as per described in the exhibit below. The higher donations growth rate is a consequence of all business model innovations detailed in *Chapter3*. Incremental donations are the absolute difference between donations in base scenario vs status quo, which will be used in the project IRR calculation.

Donations	23-24	24-25	25-26	26-27	27-28	27-28	28-29
growth rate	3.2%	10.0%	8.4%	6.8%	5.2%	3.6%	2.0%
Incremental	-	14,688	28,588	40,222	48,903	54,023	55,104

Table 5 - Donations - Base Scenario

Personnel Costs: The average cost per new employee was based on a historical average cost per full-time employee at CDI (22.7k€) and assumed to grow at inflation level throughout the forecast period. To support the various initiatives proposed, including entering the University segment, the increased competition efforts, the communication and marketing, the following hiring schedule is assumed:

Additional Hirees	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Portugal	0.5	0.5	1	1	2	2	2

Table 6 - Hiring Schedule - Base Scenario Portugal

Competitions (Final and Regional) - The number of competitions, 1 final and 4 regionals, was kept constant. Concerning costs, the base scenario assumes a considerable mark-up on the cost per event, as our projections point towards a tripling of the total number of schools in the program, and thus competitions are expected to become more costly to organize.

Competitions	23-24	24-25	25-26	26-27	27-28	28-29	29-20
Final	11,352	11,920	12,516	13,141	13,798	14,488	15,213
Status quo	11,352	11,624	11,857	12,094	12,336	12,583	12,834
Regionals	12,000	12,600	13,230	13,892	14,586	15,315	16,081
Status quo	11,868	12,153	12,396	12,644	12,897	13,155	13,418

Table 7 - Competitions - Base Scenario

Communication and Marketing – New proposals (described in chapter **Error! Reference source not found.**) reflected in higher communication and marketing expenses.

Comm. & Mark.	23-24	24-25	25-26	26-27	27-28	28-29	29-20
Base	10,000	10,240	10,445	10,654	10,867	11,084	11,306
Status quo	1,548	1,585	1,617	1,649	1,682	1,716	1,750

Table 8 - Communication and Marketing - Base Scenario

Intangibles / Amortization – The average price per new course offered is fixed at € 10k (*Chapter **Error! Reference source not found.***). Useful life is fixed at 5 years, and the amortization will be done using a straight-line method (evenly spreading the cost of the asset over its useful life). The low useful life of the content reflects the fast pace and continuously evolving nature of the EdTech industry. The rollout timeline is illustrated in the Exhibit below:

Nº new Courses	23-24	24-25	25-26	26-27	27-28	28-29	29-30
	1	1	1	0	0	0	0.2

Table 9 - Course Roll - Out

Internationalization

The only internationalization model considered in this analysis is franchising. As discussed in the previous chapter, the goal would be to secure a strategic partnership in each county with a company or institution.

Franchisee fee revenues forecasts will be analyzed in-depth later in *Chapter 4.4*.

As for estimated costs, these can be divided into partnership costs (setup and recurring), and incremental personnel costs. Withing setup costs, it is the training of the new team that accounts for most of the investment. The Franchisee would be setup in such a way that AFG Portugal would only have to cover for their own team expenses thorough the initial development phase. All other costs related to the franchisee operation would be their own responsibility.

To help support AFG in their internationalization efforts, it is assumed that for the first two periods AFG would have incremental personnel costs, while having no extra costs for the remaining of the forecast period. The rationale is that after effectively sitting up the franchisee, and provided it is running smoothly, it will require minimum effort to maintain.

New employees	23-24	24-25	25-26	26-27	27-28	28-29	29-20
Portugal	0.5	0.5	1	1	2	2	2
International	1	1	1	1	2	2	2

Table 10 - New Hires - International Base

The total training time is estimated to be two months and would require the presence of two AFG staff members. Considering an average ticket flight of 200, average living expenses in Spain of 1500€ per month, and four separate two week stays, setup costs would amount to 9.2k€.

Concerning recurring costs (not covered by incremental personnel costs), it is assumed that AFG would only need to cover the travel and living expenses related to the final competition in the franchisee country. As shared by the company in an interview, it is of the utmost importance to be present at the event every year. Although in Emirates Draft Proposal CDI suggests that the partner should cover those expenses, the argument for such a structure is rather weak. From the partner's perspective, it would look like an increase in the franchise fee initially proposed.

Considering this, and assuming the presence of two AFG personnel, with an average stay of one week, flights at 200€, total recurrent costs would sum to 1150€ per year.

It is important to notice that the additional personnel costs already encompass all monitoring, consulting, and ongoing online training predicted to happen every year.

4.2.4. Base Scenario - Results

As a first step, the analysis focuses on standalone project evaluation, where all incremental investments and anticipated incremental revenues are considered and compared to the status quo, enabling the calculation of the IRR and break-even. To analyze the proposals in Portugal, four additional costs were considered, as outlined in the previous chapter: Personnel, Content, Marketing, and Competitions. As a result, incremental revenues from donations, private schools and universities are expected to materialize, as shown in *Appendix – Incremental Cash Flows - Portugal Base Scenario*.

Concerning the analysis of internationalization, and due to its interdependency with the proposals in Portugal, where AFG will move internationally after making all the business model innovations to improve its value proposition and therefore the likelihood of establishing a partnership, only incremental cash flows in Spain are considered. *Appendix – Incremental Cash Flows - Spain Base Scenario better illustrates the rationale.*

Accordingly, IRR's, break-even and cumulative cash results as described as follows:

	IRR	Breakeven
Portugal	**89.9%**	**25 - 26**
Spain	**75.3%**	**25 - 26**

Figure 1 - IRRs Base Scenario

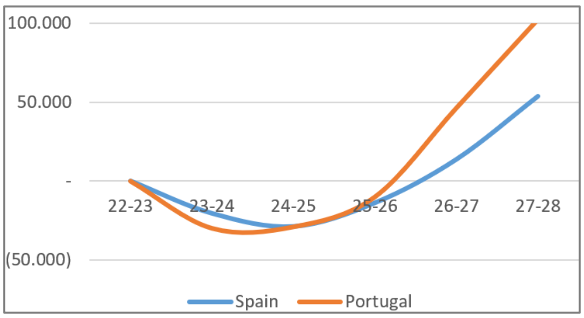

Figure 2 Cumulative Cash

From the cumulative cash graph, internationalization has a higher cash burning profile. In this scenario, AFG is expected to burn more cash until 2025-2026 due to the incremental investments required for expansion into the Spanish market. However, post 2025-2026, a reversal in this trend is anticipated. The shift towards a more positive cash flow is primarily due to the accruing franchisee fees from the Spanish operations and the benefits of low recurrent costs from the strategic partnership. Both projects break-even in the same year, 2025-2026, although the internationalization does so later in the year. In terms of IRR, both Portugal (90%) and Spain (75%) are notably high. Such elevated IRRs are more typical for a small company like AFG with substantial growth potential, rather than a mature, established firm, especially considering the dynamic and innovative industry AFG acts on.

Although in this case both initiatives are not mutually exclusive, and thus the goal of the IRR analysis is not to decide which project to invest in, it is still interesting to analyze the different results.

Despite its lower IRR, internationalization represents a strategic decision supported by the profile of the forecasted cash flows and the limitations of using IRR as a standalone measure for evaluating different projects. Firstly, IRR does not adequately account for the interdependencies between the scenarios. Successful internationalization is contingent upon the implementation of business model innovations in Portugal, which are then applied in Spain. Additionally, assuming an established partnership, the franchise fees from international operations present a lower risk profile compared to AFG's domestic cash generation in Portugal, characterized by low recurring costs and stable cash inflow. This highlights IRR's limitations in comparing projects with varying risk (Damodaran, Corporate FInance, Theory and Practice, 2004). Consequently, the long-term financial benefits and reduced risk, evidenced by increased net cash production in later years, solidify internationalization as a viable strategy for AFG.

To help visualize the impact of the indicatives on AFG financial sustainability, a new income statement was constructed, incorporating the incremental revenues and costs of both initiatives.

Revenue is subdivided in status quo revenue~~,~~ and all incremental revenue sources expected, including donations, private schools, universities, and franchisee fees. Following the same logic, both personnel costs and other operational costs are divided in status quo and incremental costs. Though in the first forecasted period, 2023-2024, the net result is more negative vs. the status, that immediately reverts in the following period. As AFG manages to establish new long-term partnerships, the additional revenue sources quickly overcome the required investments. The first positive net result is predicted to be in the year 26-27 (€ 1.6k), culminating in a remarkable net profit of €56.7k in 27-28, underscoring a real possibility of becoming financially sustainable in the medium to long-term.

	Real	Real	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.
k€	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**	**26-27**	**27-28**	**28-29**	**29-30**
Revenues	408	191	197	238	285	330	373	408	429
Base (Portugal)	408	191	197	234	269	302	332	358	379
Franchisee Fees	-	-	-	4	16	29	41	50	50
% growth		-53%	*3%*	*21%*	*20%*	*16%*	*13%*	*10%*	*5%*
Operating Costs	(135)	(131)	(209)	(152)	(158)	(161)	(163)	(166)	(168)
Base (Portugal)	(135)	(131)	(200)	(151)	(157)	(159)	(162)	(164)	(167)
Franchisee Costs	-	-	(9)	(1)	(1)	(1)	(1)	(1)	(1)
% revenues	33%	69%	106%	64%	55%	49%	44%	41%	39%
Personnel costs	(120)	(140)	(153)	(156)	(159)	(163)	(191)	(194)	(198)
Status quo	(120)	(140)	(130)	(133)	(136)	(138)	(141)	(144)	(147)
Inc. Personnel	-	-	(23)	(23)	(24)	(24)	(49)	(50)	(51)
% revenues	29%	73%	78%	66%	56%	49%	51%	48%	46%
EBITDA	153	(80)	(165)	(70)	(32)	7	19	48	62
% revenues	37%	-42%	-84%	-30%	-11%	2%	5%	12%	15%
D&A (content)	-	-	-	(2)	(4)	(6)	(6)	(6)	(6)
EBIT	153	(80)	(165)	(72)	(36)	1	13	42	56

Net interest expense	-	-	-	-	-	-	-	-	-
EBT	153	(80)	(165)	(72)	(36)	1	13	42	56
Taxes	-	-	-	-	-	-	-	-	-
Net income	153	(80)	(165)	(72)	(36)	1	13	42	56

Table 11 - Income Statement - Base Scenario

Moreover, organic sources should account for 36% of total revenues by 29-30 (Table 12 - Revenue Breakdown Base Scenario). Private schools, Universities, and Franchisee fees respectively 17.5%, 7%, and 12%. A much more promising result, as opposed to just 1.5% in organic revenue in the status quo case.

	Real	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.
k€	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Total Revenue	191	197	238	285	330	373	408	429
Donations	187	193	213	230	246	259	268	274
% Total	98%	98%	89%	81%	75%	69%	66%	64%
Private	4	4	16	28	40	52	64	75
% Total	2,0%	1,9%	6,6%	9,7%	12,0%	13,9%	15,6%	17,5%
Universities	-	-	5	11	16	21	26	30
% Total	0,0%	0,0%	2,2%	3,7%	4,8%	5,6%	6,4%	7,0%
Franchisee fees	-	-	4	16	29	41	50	50
% Total	0%	0%	2%	6%	9%	11%	12%	12%

Table 12 - Revenue Breakdown Base Scenario

4.3. Scenario Analysis

4.3.1. Scenario Analysis – Assumptions

Conducting sensitivity analysis in earnings forecasts is essential, particularly due to the inherent uncertainty and variability of financial projections. This approach entails systematically adjusting key assumptions and inputs in the forecasting model to gauge their effect on outcomes, acknowledging the significant uncertainty introduced by uncontrollable external factors. Given AFG's venture into a new segment and internationalization, both areas where the firm has limited experience, the importance of sensitivity analysis is further reinforced, as it provides valuable insights into potential financial outcomes under various scenarios.

In line with the aforementioned approach, two additional scenarios were established- optimistic and pessimistic - to assess the effects of variable assumptions diverging from the base model. Although more scenarios may be more realistic than fewer, it becomes more difficult to collect information and differentiate between the scenarios in terms of project revenues, and thus the usual approach is to setup three scenarios (Damodaran, Corporate Finance, Theory and Practice, 2004). This evaluation encompasses AFG's operations in Portugal as well as its international expansion plans. Specifically, within the Portuguese context, the focus was on analyzing key variables: penetration rates in private schools and universities, donations, personnel costs, as well as costs associated with communication, marketing, and content creation. *Appendix – Scenario Analysis* will present the trajectories of these variables under the baseline, optimistic, and pessimistic scenarios. The rationale was to apply a 5% change on the incremental donations, average cost per employee, and Communication and Marketing Costs. For the remaining key variables, that is, nº of private schools, nº of universities, and cost per new course, values per scenario were inputted manually. In the context of internationalization, forecasted revenues from the strategic partners were also reviewed, which in turn affect our expected franchisee fees. Additionally, initial setup costs, particularly training, as well as ongoing expenses for monitoring and support, have been analyzed (*Appendix – Scenario Analysis*).

4.3.2. Scenario Analysis – Results

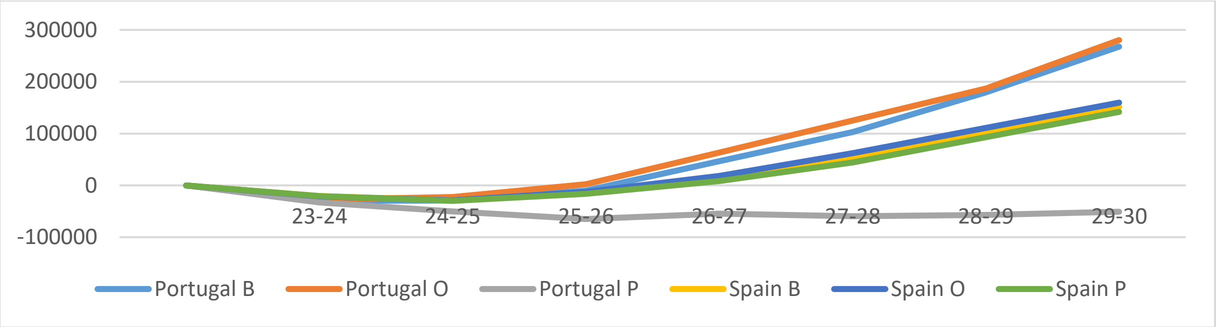

Figure 3 - Cummulative Cash - Scenario Analysis

IRR	Base	Optimistic	Pessimistic
Portugal	89.9%	102.0%	-2.7%
Spain	75.3%	77.2%	71.8%

Table 13 - IRRs - Scenario Analysis

The sensitivity analysis for AFG, which includes two scenarios — Portugal and Spain as a franchisee — shows distinct volatility for each case. For Portugal, the IRR demonstrates considerable variability, ranging from a high of 102% in the optimistic scenario to a negative -2.7% in the pessimistic scenario, centering around 90% in the base case. In contrast, the Spanish operation, under the franchisee model, shows remarkable stability with IRRs fluctuating narrowly between 72% and 75%. This difference in volatility can be attributed to the nature of the franchisee model in Spain, which involves lower recurring costs and stable cash inflow from franchisee fees, quickly capping at 50k. This leads to a more predictable and steady financial performance. Conversely, the Portuguese scenario underscores the criticality of achieving targeted penetration rates in private schools and universities to justify the incremental investments. The break-even analysis further supports this, indicating that AFG is likely to break even in all scenarios except the pessimistic one in Portugal.

Should AFG observe its penetration in targeted segments falling short of projections, mirroring trends akin to the pessimistic scenario, scaling back investments would be a prudent measure to avoid excessive cash burn. In such circumstances, it would be advisable to reassess and possibly recalibrate the proposed strategies, rather than persisting with the cash-intensive approach outlined in the pessimistic forecast.

As such, despite the results from the pessimistic scenario in Portugal, this analysis instills a high level of confidence in the projections, supporting the strategic decisions underpinning AFG's expansion and operational plans.

4.4. View from Strategic Partner

The goal of this analysis is to highlight the profitability and mutual benefits of internationalization, while also forecasting what is the expected franchisee fee for AFG. Using AFG's historical data as a reference, a tailored financial projection that, despite its simplifications, serves as a valuable indicator of potential success in the Spanish market. Although it has its limitations, as described below, it could be used as a building block for a pitch to a potential partner.

AFG initially proposed a franchising fee structure where the strategic partner would pay 15% of its total income, capped at €40,000 per year. However, research into industry standards reveals that typical franchising fees range from 4% to 12% of gross revenues (Group, s.d.) (Review, s.d.). Considering this, a better approach could be to reduce the percentage charged on gross revenues while increasing the maximum cap. This adjustment would not only make the fee structure more competitive and in line with industry norms but also has the potential to enhance AFG Portugal's long-term revenue prospects by attracting and retaining more suitable partners. Therefore, for the forecast, a fee based on 10% of total revenue was assumed, with a cap of 50k€ per year.

As discussed in *Chapter 3*, Spain's market would have to be addressed per autonomous region, as each has its own education governing body. The ranking previously obtained will dictate the order in which AFG is to enter the market in each one. In the first Internationalization year, it is assumed that AFG will enter the most attractive region, and subsequently enter 3 regions per year, following the ranking order. The goal is to act in all regions by school year 29-30 (7-year horizon).

To project revenues, we're using a revenue pool equivalence method based on target populations. For example, if Portugal's target population (encompassing 2nd, 3rd cycle, and secondary students) is 1 million, and a specific Spanish region's is 500k, the estimated revenue for year 7 in Spain would be AFG Portugal's year 7 revenue times the 500k/1 million ratios, and finally multiplied by the PPP to account for the higher fees, as described in *Chapter 3.1.1*.

This method, however, has limitations due to the different education systems in Spain and Portugal. In Spain, secondary education spans ages 12-16, while in Portugal, the 2nd cycle is for ages 10-11 and the 3rd cycle for 12-14. The most viable solution was to align Portugal's 2nd and 3rd cycles with Spain's secondary education for revenue estimation. While not precise, this approach offers a practical way to project potential revenues in Spain based on AFG Portugal's historical data.

As for estimated costs, six categories were considered: personnel costs, competitions (includes all levels), office rents, platform costs (maintenance levels), others (Include communication and marketing, ninjas, roadshows, and any remaining cost).

Personnel costs are assumed to follow the same trajectory as AFG, with the additional up-tick of the PPP. Competition Costs will converge to the last available aggregate value from AFG by year 3 of the expansion and remain constant after (competitions will be smaller and fewer in the first years of expansion). Rent per office is assumed to 15k€ (CDI's rent is 10k€), and from year 3 of the expansion 2 offices are accounted for. Regarding platform costs, again, the thought process is similar, where the maintenance value for Portugal (55k€) is the reference on which the PPP is applied. Regarding other costs, the assumptions is 20k€ per year, a conservative one, considering that value is higher than observed in Portugal.

Two graphs below present the results: one shows the cumulative cash flow, considering total inflows and outflows, and the other reflects the operating margin, defined as total revenues minus franchisee fees. Additionally, for both variables, two extra scenarios, Optimistic and Pessimistic, are included, with a 10% change applied to total revenues and a 5% change on total costs. The rationale for these scenarios has been previously explained in *Chapter 0.*

The graphs (*Figure 4 - Cumulative Cash Franchisee View & Figure 5 - Franchise Revenue Net of Franchising Fee*) depicting the internationalization process demonstrate its profitability for the franchisee partner. The cumulative cash flow graph indicates an initial cash burn during the setup phase, followed by a medium-term break-even in all three scenarios. This is a positive outcome, affirming the venture's financial viability. However, it's important to acknowledge the model's limitations, particularly its lower accuracy compared to the Portugal forecasts. As a next step, developing a more precise model for use in pitches to potential partners is recommended, enhancing the reliability of these financial projections.

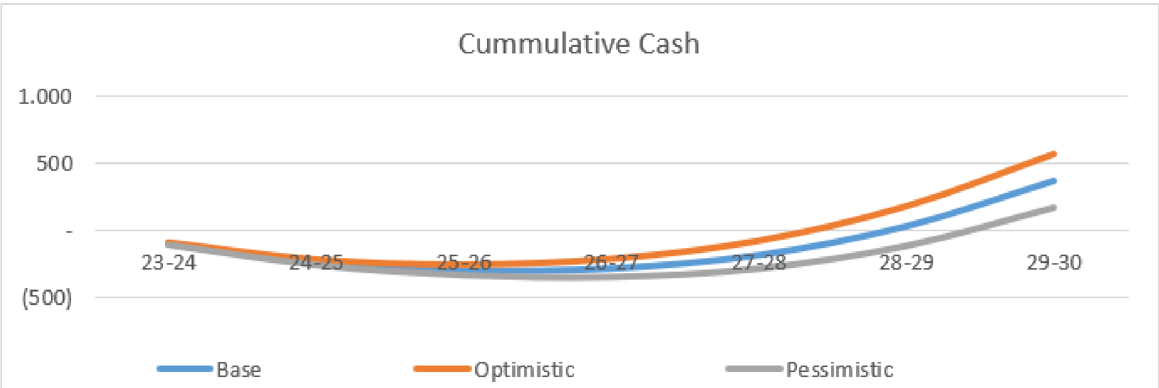

Figure 4 - Cumulative Cash Franchisee View

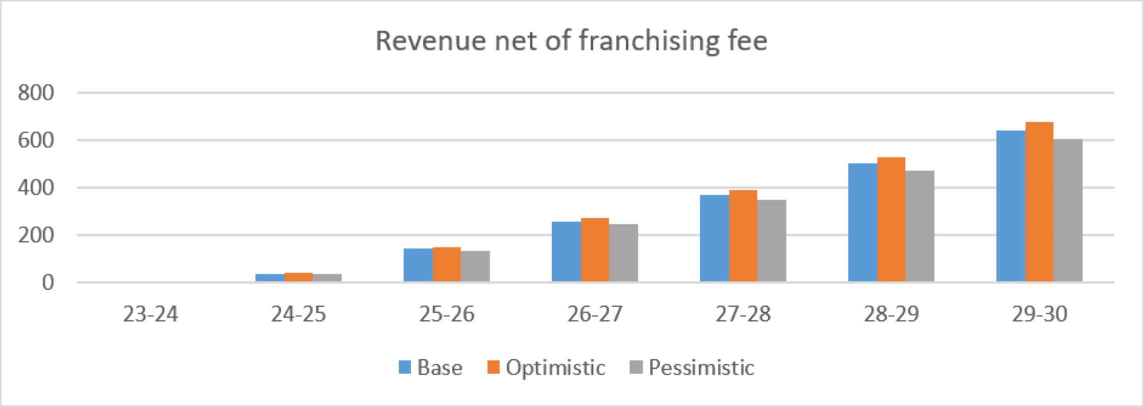

Figure 5 - Franchise Revenue Net of Franchising Fee

4.5. Financial Sustainability

The initiatives previously put forward demonstrate a clear trajectory towards AFG's objective of financial sustainability. This positive outcome stems from two main factors: the potential for medium to long-term cash generation and a substantial decrease in reliance on donations, thanks to diversified revenue streams from private schools, universities, and franchisee fees. These projections are further substantiated by robust results in the sensitivity analysis.

4.6. SDGs

In the final chapter of the thesis, the SDG's impacts of the proposed innovations and AFG's international expansion will be examined. Given AFG's dedication to enhancing educational experiences, this analysis is pivotal. The focus is on measuring the broader effects of the strategies, confirming that AFG's definition of success includes not just financial growth but also significant educational and social contributions.

The methodology to assess the impact of these initiatives concentrates on estimating the increase in the number of students, teachers, and schools participating in the program due to the proposed changes. This will offer a concrete measure of the initiatives' scope and efficacy in broadening AFG's educational impact. The estimations will be limited to the

Base Scenario, as conducting them across all scenarios may not add substantial value, particularly given the model's limitations.

For AFG in Portugal, a direct method is employed. The forecasted numbers for the final year of the analysis are subtracted from those of AFG's 9th and latest edition to determine the new number of schools. To estimate the number of students and teachers, the forecasted school figures are multiplied by the historical average of teachers and students per school.

For Spain, the methodology differs due to the absence of a forecast for the total number of schools. The first step involves analyzing AFG's historical performance in Portugal by calculating the number of schools, teachers, and students reached per thousand euros of revenue. Using the projected revenue of the strategic partner (*Chapter 4.4*), this ratio is then applied to forecast the expected numbers in Spain.

All in all, the model indicates that by 2029-30, on the Base scenario 1087 schools (413 Portugal and 674 Spain), 2,616 Teachers (986 Portugal and 1630 Spain), and 20,600 students (7,868 Portugal and 12,732 Spain) will be part of the AFG network.

5. Conclusion (Group Part)

The thesis aimed to improve the financial sustainability of CDI's AFG by focusing on enhancements of the current business model and creation of an internationalization strategy. The findings not only provided insights into the unused opportunities within AFG's business model but also illuminated the paths for successful internationalization.

A comprehensive analysis of the current business model formed the basis for proposing business model innovations that would sharpen AFG's structure and improve revenue generation.

The initial step was to conceptualize a faster and more specialized content generation process to better align AFG's value proposition with its customer profile and keep up with the latest human capital needs. This will result in an improved match between AFG's value proposition and its customer profile, leading to increased penetration rates within the current customer segment. Furthermore, a concept to expand into a new customer segment, universities, has been developed, in order to increase and diversify AFG's revenue streams. In tandem, a series of strategies were developed, including a new communications approach, innovative social media promotion tactics, and a revised pricing structure, all designed to increase subscription revenue. The financial forecasts illustrate the effectiveness of these proposals, indicating that positive cash generation in the medium to long term is possible, while simultaneously reducing AFG dependency on donations. These findings are supported by a robust sensitivity analysis.

An additional facet of the proposed strategy was the introduction of a crowdfunding approach to diversify donation revenues and reduce dependence on major donors. Finally, the focus was set on increasing the impact of competitive events through two main strategies. To increase participation from private schools and students, targeted marketing was used to boost their visibility. Additionally, a new categorization was introduced that aligns with SDGs. This alignment with potential donors' CSR activities is expected to significantly broaden the donor base.

Building up on these business model innovations, the internationalization strategy is a method to increase AFG's impact and generate additional revenue. To identify the most suitable market for expansion, a comprehensive two-phased country ranking analysis, supplemented by an in-depth PESTEL Analysis and a Competitor Analysis, was conducted. Spain was determined as the optimal target due to its promising market dynamics.

When developing the go-to-market strategy, the focus laid on leveraging economies of scale and adapting the product to local markets to increase the probability of success. An in-depth regional analysis identified Catalonia, Basque Country, and Andalusia as key areas for expansion. The market analysis further recommends adapting a franchise model, especially with publishing houses and educational foundations, as these industry segments best align with organizational dynamics and complement AFG’s weaknesses in Spain. Furthermore, the strategy involves adapting the product to meet the educational curriculum needs in Spain, resulting in refined customer segments targeting pre-secondary education courses and post-curriculum engagement of ESO students. Moreover, the strategy builds on competition events as the key driver of promotions to attract new sponsors and increase brand awareness. The pricing strategy shall be similar to the Portuguese pricing considering absolute Purchasing Power Parity for the price level adaptions to maximize market penetration and financial viability.

After synthesizing findings achieved, it is evident that the proposed strategic innovations for AFG, along with a targeted international expansion, have the potential to transform its financial trajectory. The combination of improved content development, strategic marketing, and market expansion strategies offers a multifaceted approach to addressing AFG's challenges.

5.1. Outlook

As AFG explores avenues for enhancing financial sustainability and expanding its impact, it is imperative to consider innovative business models that leverage existing resources and networks in the future. Following, this outlook shall conceptualize an idea that, while ambitious and complex, has significant potential to generate additional revenue streams for AFG in the future by creating a new, stand-alone business case - a recruitment platform. A platform like this aims to bridge the gap between the abundant talent pool emerging from AFG's programs and the growing demand for skilled individuals in the tech industry. By aligning student capabilities with industry requirements, the platform not only creates new revenue streams but also reinforces AFG's commitment to empowering youth through meaningful employment opportunities.

The envisioned recruiting platform capitalizes on AFG's existing networks and data. It taps into the network of educational institutions, providing access to students and alumni who are in pursuit of job opportunities. The platform benefits from detailed student data, including contact information and insights into the skillsets developed through the AFG program. This data is pivotal for effective profiling and matching students with suitable job roles.

In parallel, AFG's established network of tech companies opens avenues to companies seeking talented individuals. The platform's credibility is bolstered by AFG's brand recognition, with its success stories serving to showcase the potential of candidates to prospective employers.

The platform's primary feature is its ability to match student profiles with recruiting needs, offering validated skillsets and pre-curated candidates for recruiters, and presenting pre-selected job opportunities for students. This synergy between student capabilities and recruiter requirements forms the core value proposition of the platform.

The financing model of such a platform is multi-layered, with revenue streams including subscription fees from companies accessing the platform, commissions on successful hires, advertising space for relevant services or products, premium services for candidates, such as career coaching or priority job postings and sponsorships from tech companies, supporting the platform’s development.

Developing and maintaining this platform involves significant operational considerations, including platform development and maintenance, marketing and promotion, staff and infrastructure expenses, legal and compliance issues, and the ongoing management of partnerships.

Ultimately, a platform like this offers substantial opportunities, including the diversification of revenue streams to bolster AFG’s financial sustainability. It provides a compelling avenue to attract more tech companies as partners and sponsors. Additionally, the enhanced value proposition can draw new schools and students to the AFG program and turn existing schools not yet willing to pay, into paying customers.

However, challenges such as the development of a robust platform, establishing a comprehensive student evaluation process, tender analysis for job postings, and strict adherence to data protection regulations must be carefully navigated.

This innovative recruiting platform, while complex and ambitious, will align with the organization’s mission of empowering youth through education and technology, creating a sustainable model that, in the future, will benefit students, industry, and AFG alike.

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7. Appendix

7.1. Appendix – Abbreviations

Abbreviation	Full Name
AFG	Apps For Good
CDI	Committee for the Democratization of Information Technology
CSR	Corporate Social Responsibility
EdTech	Education Technology
ESO	Compulsory Secondary Education
KPI	Key Performance Indicator
PESTEL	Political, Economic, Social, Technological, Environmental, Legal
PPP	Purchasing Power Parity
TOC	Theory of Change
IRR	Internal Rate of Return

7.2. Appendix – Historical Revenue of Apps For Good

		Real	Real
€k		21-22	22-23
Total Revenue		407,884	191,027
Donations		234,134	187,277
% Total		57%	98%
Subsidies		170,000	-
% Total		42%	0%
Private		3,750	3,750

% Total		0.9%	2.0%

Table 14 - Historical Revenue

7.3. Appendix – Historical Cost Structure of AFG

	21-22	22-23
Total Cost	255000	271250
Personnel Costs	120000	140000
% Total	47.1%	51.6%
Other Operational Costs	135000	131250
% Total	52.9%	48.4%
Platform	73000	55000
% Operational	54.1%	41.9%
Governance	26000	23000
% Total	19.3%	17.5%
Competition: Regional Events	12500	11500
% Total	9.3%	8.8%
Impact and Evaluation	10000	11500
% Total	7.4%	8.8%
Competition: Final Event	7000	11000
% Total	5.2%	8.4%
Education Partner Roadshows	4000	9500
% Total	3.0%	7.2%
Fellows and Ninja Community	1500	1500
% Total	1.1%	1.1%
Communication and Marketing	1000	1500
% Total	0.7%	1.1%
Competition: Local Events	0	3500
% Total	0.0%	2.7%
Continuity: App Start Up Event	0	750
% Total	0.0%	0.6%
B-learning teachers' training	0	2500
% Total	0.0%	1.9%

Table 15- Historical Cost Structure of AFG

7.4. Appendix - Status Projected Income Statement

	Real	Real	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.
	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Revenues	408	191	197	202	206	210	214	218	222
% growth		*(53)%*	*3%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*
Operating Costs	(135)	(131)	(192)	(142)	(147)	(149)	(151)	(153)	(155)
Platform	-73	-55	-110	-55	-55	-55	-55	-55	-55
London Fee	-26	-23	-23	-23	-22	-23	-23	-23	-23
Events	-20	-26	-31	-35	-40	-41	-43	-44	-45
Others	-17	-27	-28	-29	-29	-30	-31	-31	-32
% revenues	33%	69%	97%	70%	72%	71%	71%	70%	70%
Personnel costs	-120	-140	-130	-133	-136	-138	-141	-144	-147
% revenues	29%	73%	66%	66%	66%	66%	66%	66%	66%
EBITDA	153	(80)	(125)	(73)	(77)	(78)	(79)	(79)	(80)
% revenues	37%	-42%	-63%	-36%	-38%	-37%	-37%	-36%	-36%
D&A	-	-	-	-	-	-	-	-	-
EBIT	153	(80)	(125)	(73)	(77)	(78)	(79)	(79)	(80)
Net interest	-	-	-	-	-	-	-	-	-
EBT	153	(80)	(125)	(73)	(77)	(78)	(79)	(79)	(80)
Taxes	-	-	-	-	-	-	-	-	-
Net income	153	(80)	(125)	(73)	(77)	(78)	(79)	(79)	(80)

Table 16 - Status Quo Projected Income Statement

7.5. Appendix – Status Quo Revenue Breakdown

	Real	Real	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.	Forec.
€k	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Total Revenue	408	191	197	202	206	210	214	218	222
Donations	234	187	193	198	202	206	210	214	219
% Total	57%	98,0%	98,1%	98,1%	98,2%	98,2%	98,2%	98,3%	98,3%
Subsidies	170	-	-	-	-	-	-	-	-
% Total	42%	0%	0%	0%	0%	0%	0%	0%	0%
Private	4	4	4	4	4	4	4	4	4
% Total	0,9%	2,0%	1,9%	1,9%	1,8%	1,8%	1,8%	1,7%	1,7%

Table 17 - Status Quo Revenue Breakdown

7.6. Appendix – Incremental Cash Flows - Portugal Base Scenario

	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Content	(10,000)	(10,000)	(10,000)	-	-	-	(2,000)
Marketing	(8,452)	(8,655)	(8,828)	(9,005)	(9,185)	(9,368)	(9,556)
Competitions	(132)	(742)	(1,493)	(2,295)	(3,152)	(4,066)	(5,042)
Personnel costs	(11,353)	(11,625)	(23,716)	(24,190)	(49,347)	(50,334)	(51,341)
Outflows	(29,937)	(31,022)	(44,036)	(35,489)	(61,684)	(63,769)	(67,938)
Incremental Donations	-	14,688	28,588	40,222	48,903	54,023	55,104
Private Schools	-	12,000	24,000	36,000	48,000	60,000	71,250
Universities	-	5,250	10,500	15,750	21,000	26,250	30,000
Inflows	-	31,938	63,088	91,972	117,903	140,273	156,354
Cash Generated	(29,937)	916	19,052	56,483	56,219	76,504	88,415

Table 18 - Incremental Cash Flows - Portugal Base Scenario

7.7. Appendix – Incremental Cash Flows - Spain Base Scenario

	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Personnel Costs	(11,353)	(11,625)	-	-	-	-	-
Internationalization costs	(9,200)	(1,150)	(1,150)	(1,150)	(1,150)	(1,150)	(1,150)
Outflows	(20,553)	(12,775)	(1,150)	(1,150)	(1,150)	(1,150)	(1,150)
Franchisee Fees	-	4,476	16,128	28,728	41,136	50,000	50,000
Inflows	-	4,476	16,128	28,728	41,136	50,000	50,000
Cash Generated	(20,553)	(8,299)	14,978	27,578	39,986	48,850	48,850

Table 19 - Incremental Cash Flows - Spain Base Scenario

7.8. Appendix – Scenario Analysis

Nº Universities	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Base Scenario	0	7	14	21	28	35	40
Penetration rate	0.0%	2.4%	4.9%	7.3%	9.7%	12.2%	13.9%
Optimistic	0	8	16	24	32	14	50
Penetration rate	0.0%	2.8%	5.6%	8.3%	11.1%	4.9%	17.4%
Pessimistic	0	4	8	12	16	20	25
Penetration rate	0.0%	1.4%	2.8%	4.2%	5.6%	6.9%	8.7%

Table 20 - Universities – Scenario Analysis

Private Schools	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Base Scenario	5	21	37	53	69	85	100
Penetration rate	0.3%	1.4%	2.5%	3.7%	4.8%	5.9%	6.9%
Optimistic	5	17	29	41	53	65	75
Penetration rate	0.3%	1.2%	2.0%	2.8%	3.7%	4.5%	5.2%
Pessimistic	5	9	13	17	21	25	30
Penetration rate	0.3%	0.6%	0.9%	1.2%	1.4%	1.7%	2.1%

Table 21 - Private Schools – Scenario Analysis

Cost per employee	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Base Scenario	22,706	23,160	23,623	24,095	24,577	25,069	25,570
Optimistic	21,570	22,002	22,442	22,891	23,348	23,815	24,292
Pessimistic	23,841	24,318	24,804	25,300	25,806	26,322	26,849

Table 22 - Cost per employee – Scenario Analysis

Cost of each new course	
Base	10,000
Optimistic	8,000
Pessimistic	12,000

Table 23 - Cost per new course – Scenario Analysis

Franchisee costs	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Base Scenario	4,400	1,500	1,500	1,500	1,500	1,500	1,500
Optimistic	4,620	1,575	1,575	1,575	1,575	1,575	1,575
Pessimistic	4,180	1,425	1,425	1,425	1,425	1,425	1,425

Table 24 - Franchising costs – Scenario Analysis

Franchisee fee	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Base Scenario	-	4,476	16,128	28,728	41,136	50,000	50,000
Optimistic	-	4,700	16,934	30,164	43,193	50,000	50,000
Pessimistic	-	4,252	15,322	27,291	39,079	50,000	50,000

Table 25 - Franchising fee – Scenario Analysis

Com. & Marketing	23-24	24-25	25-26	26-27	27-28	28-29	29-30
Base Scenario	10,000	10,240	10,445	10,654	10,867	11,084	11,306
Optimistic	9,500	9,728	9,923	10,121	10,323	10,530	10,740
Pessimistic	10,500	10,752	10,967	11,186	11,410	11,638	11,871

Table 26 - Communication and Marketing – Scenario Analysis