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**Study of feasibility for the commercialization of
innovative products in the food sector of IFTA
Company within the Ecuadorian market.**

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DEDICATORY:

This is for my son, so that he can learn that all things are possible.

GRATITUDE:

I want to thank my Director, Ramon Valdivieso for his support and patience in helping me with this thesis.

Table of contents:

Table of Contents

DEDICATORY:	II
<i>This is for my son, so that he can learn that all things are possible.</i>	II
GRATITUDE:	III
<i>Table of contents:</i>	IV
<i>Table of figures</i>	VI
<i>Index of Tables</i>	VI
Introduction:	1
I.I Executive Summary	3
I.II Strategic plan	3
Mission:	3
Vision:	3
Project objectives	4
• Specific objectives	4
I.III Characteristics of the Project	4
Company location:	4
Storage and Logistics Area	5
Administration and Organization Chart:	6
Objectives:	6
II.I Analysis of the Macro Environment and the Specific Market (supply and demand)	8
Level A	9
Level C+	10
II.II SWOT analysis	16
II.III Product:	17
II.IV Price:	18
II.V. Distribution channels:	19
The Product Distribution Structure	19
II.VI Sales strategies:	20
II.VII Marketing Study: Marketing Plan:	21
Chapter III - Technical Study	23
III.I Determination of the optimal size:	23
Company location:	24
III.II Project Engineering: Production Process	24

Product Engineering:	25
Production program:	26
Organizational process analysis:	26
III.III Organization chart:	27
Distribution of functions and responsibilities:	28
General Manager:	28
Sales Area: Collection	29
RESPONSIBILITIES	29
RESPONSIBILITIES	29
Administrative Manager:	30
RESPONSIBILITIES	30
Export manager:	30
RESPONSIBILITIES:	31
CHAPTER IV:	32
IV.I Financial analysis Initial investment:	32
Payroll:	32
Expenses:	33
Price of the product:	35
Dosing Cap with Energizing Content	35
Dosing Cap with Hydrating Content	36
Sales plan:	37
Purchasing plan:	37
Income Statement:	38
Break-even point:	39
Breakeven point: $93,976 / (1.31 - 0.88) = 216,180$ caps sold per year.	39
IV.III Sensitivity and risk analysis:	41
Sensitivity analysis = $((VANn - VAne) / VAne) \times 100,$	41
IV.IV The Environmental Impact of the Project:	42
Conclusions:	44
Bibliography:	46

Table of figures

Figure 1	5
Figure 2	5
Figure 3	5
Figure 4	6
Figure 5	6
Figure 6	14
Figure 7	18
Figure 8	18
Figure 9	18
Figure 10	19
Figure 11	26
Figure 12	27
Figure 13	40

Index of Tables

Table 1	9
Table 2	10
Table 3	10
Table 4	11
Table 5	12
Table 6	12
Table 7	12
Table 8	12
Table 9	12
Table 10	14
Table 11	15
Table 12	15
Table 13	16
Table 14	25
Table 15	25
Table 16	26
Table 17	32
Table 18	32
Table 19	33
Table 20	33
Table 21	33
Table 22	34
Table 23	35
Table 24	36
Table 25	37
Table 26	37
Table 27	38
Table 28	38
Table 29	39
Table 30	39
Table 31	40

ABSTRACT

This project assesses the feasibility of launching a dosing cap business in Ecuador and possibly abroad. First, the project's management and planning will be analyzed, followed by a market analysis and marketing assessment, and finally, the financial development of the project will be evaluated.

Keywords: dosing cap, innovative product, food sector, Ecuadorian market, market analysis, technical study, financial evaluation, feasibility, marketing.

Introduction:

This project arises from a vision focused on the innovation of a product within the growing market of functional drinks. This revolutionary idea is the dosing cap, which separates a drink's content (formula) from the liquid inside the bottle. The consumer mixes the formula with the liquid they want to drink at that very moment. The company that will determine the feasibility of this product within the Ecuadorian market is called IFTA COMPANY CIA, LTDA. Its main objective is to satisfy the preferences and needs of its consumers. The products' feasibility will be determined through a rigorous study that will take into account the analysis of the administration and planning of the project, the analysis of the market and commercialization, a technical study, and an evaluation of the project.

To begin with, it is important to understand that the global beverage market is divided into two macro markets: one made up of consumers in countries with emerging economies who demand big brands and traditional products, such as carbonated drinks, and another in developed markets who seek functional drinks. (Central America Data, 2014) A functional drink is one that offers benefits for health and self-care. These drinks can be natural or have added nutraceuticals such as minerals, vitamins, omega-3 fatty acids, proteins, fibers, l-carnitine, etc. (Editor Alimentos, 2015)

The dosing cap will greatly change the beverage market since consumers will acquire a higher-quality product since it keeps the formula's properties fresh, extending its functional life. As a company, through the dosing cap, we want to deliver a product that is fresh, durable, of excellent quality, honest, and eco-friendly.

The aforementioned shows the high quality of our product, as the dosage cap keeps the components sealed, fresh, and free of preservatives. The ingredients will be protected against oxidation, loss of quality, and harmful ultraviolet (UV) rays while in the cap.

The cap functions as follows: by twisting the cap, the contents are ejected from the chamber and instantaneously mixed with the liquid inside the bottle, resulting in a fresh and beneficial drink when ingested.

Another important factor is that IFTA Company is a small family business that seeks to help the environment by eliminating disposable bottles, so the consumer can create a new drink and reduce their carbon footprint simply by filling the same bottle and using a new dosing cap. The logistics of transporting the caps will also help to minimize pollution, considering the number of caps that can be delivered in relation to bottles. Inside a normal container, the physical dimensions of caps and bottles are 1:28. (Cosmic First Law, s.f.) Furthermore, all packaging materials utilized by IFTA Company are 100% recyclable.

To summarize, high-quality products that are helpful to both the consumer and the environment are for a market that is reinventing itself, and our goal is to continue fostering a consumer culture that values usefulness, durability, and honesty. In addition, one of the most appealing features of the dosing cap is the ability to see the product being prepared at the time of consumption. For the same reason, this thesis describes the development of this company, which has a lot to offer in the future, both in the national and international markets.

Chapter I: Project Administration and Planning

I.I Executive Summary

The consumption of functional food and beverages has been rapidly increasing throughout the world (En Alimentos, 2022), which is why this project to produce the dosing cap arises. IFTA Company will develop a functional and innovative drink that combines exotic ingredients as well as chemical compounds to improve the quality of life of consumers. The company will make various formulas available to the national market through “Action Cap”. A B2B model will be implemented in the future, with IFTA Company providing its caps empty so that other companies can fill them with their own content.

I.II Strategic plan

IFTA COMPANY CIA. LTDA is anticipated to be a business that sells functional beverages and caps separately. Its primary goal is to satisfy the preferences and needs of its customers by providing health benefits.

Mission:

To create a company that offers quality service with fast and efficient attention in order to obtain the total satisfaction of its customers, improving the quality of life of consumers through mainly organic and innovative products.

Vision:

Build a leading company in the functional drinks market through innovation, with a view to expanding internationally before 2024.

Project objectives

- **General objective**

Determining the feasibility and economic viability of developing a new, innovative product that can meet all domestic demand and has plans to expand into the international market.

- **Specific objectives**

- 1) To determine the size of the demand to be satisfied.
- 2) To calculate the investment and costs associated with the development and implementation of the cap, its distribution, and time required to recoup the initial investment.
- 3) To analyze the feasibility and financial viability of carrying out the project.
- 4) To evaluate the business and the general guidelines for starting it up.

I.III Characteristics of the Project

IFTA COMPANY CIA. LTDA. offers an innovative cap in the market that enters to compete in the industry of functional beverages. This is why the company focuses on supplying consumers with a high-quality product that improves their health and/or lifestyle.

In addition to other factors, the company is focused on revitalizing consumers. Achieving customer satisfaction will allow IFTA Company to convey the benefits of its caps and to be recommended. In addition, advertising campaigns will allow IFTA to expand its presence in the Ecuadorian market.

Company location:

The offices of “IFTA COMPANY CIA LTDA” are located in the city of Cuenca, Ecuador, in Circunvalación Sur and Camino a Turi condominium “Jardines del Sol” 17–22. The administration will be handled at the aforementioned address.

The company's warehouses are located in the Industrial Park in Cuenca, Ecuador, where production and logistics take place. Below are images of the facilities:

Storage and Logistics Area



Figure 1

Production area



Figure 2



Figure 3



Figure 4



Figure 5

Administration and Organization Chart:

IFTA Company is made up of an excellent team that has sufficient knowledge and skill, bringing with it that irrefutable desire for success.

Among the members of the IFTA Company are the following:

- Santiago Moreno: General Manager, Sales and Collection Department
- Natalia Kuzminski: Administrator / Export Manager
- Maria Augusta Maldonado: President

The work team of the company, IFTA COMPANY CIA LTDA, is made up of leading and enterprising people who have sufficient knowledge to carry out their work responsibly and professionally.

Objectives:

The objectives of the company are focused on seeking to satisfy the needs of its customers and generating economic benefit and market positioning.

It is specifically seeking:

- To provide for a significant proportion of the market's unmet demand.
- To be the market leader in this product and to make it affordable.
- To establish itself as a solid and reliable company in the market.

- To create and maintain a positive image with existing market customers.
- To have sufficient sales volume.
- To develop in accordance with the increase in demand, as well as to study it thoroughly enough to be prepared for any radical changes that may occur.
- To conduct research on the competition.
- To understand the company's internal and external environment, including its weaknesses, strengths, opportunities, and threats.

CHAPTER II: Market analysis and commercialization

II.I Analysis of the Macro Environment and the Specific Market (supply and demand)

According to Alba Ranís Franquet, the analysis of the macroenvironment is used to identify external forces that will have an indirect impact on an organization and that exist regardless of whether there is commercial activity. He also mentions that the company will have no effect on the macroenvironment, which is an important factor. Through the examination of the macroenvironment, effective planning and strategy can be developed. This will facilitate the company's growth, enabling it to face threats and seize opportunities.

This project gathered demographic data in order to identify a segment of the Ecuadorian market that could be served. It was based on stratification of socioeconomic status obtained from the National Institute of Statistics and Censuses. We focused on levels A, B, and C+ for this undertaking. The reason for this is that our product's price (\$1.31 USD) is unaffordable to the entire Ecuadorian population, but rather to specific demographic groups. On the following page, the division of socioeconomic levels and their respective characteristics will be displayed.

In the section of the chapter that follows the socioeconomic levels, sales data for specific dosing cap-like products from 2016 to 2020 will be presented. These specific products are: B-Complex and Natural Concentrates: mixtures of provitamins and vitamins, whether or not they are in solutions, including natural concentrates such as: vitamin A and D concentrate, etc. With this information, a five-year sales forecast with a solid base can be determined.

In addition, the sales of the largest pharmaceutical manufacturing companies in Ecuador will be analyzed, both in millions of dollars (2017) and as a percentage of the total sales of these pharmaceuticals. Finally, sales estimates for the project will be projected.

In the following section, the classification of the various socioeconomic levels according to the National Institute of Statistics and Censuses is displayed.

Level A

Table 1

<p>Technology:</p> <ul style="list-style-type: none"> - 99% of this population has internet service in their homes. - The majority of this population has a computer or desktop in their homes. - The average home has four cellphones.
<p>Consumption habits:</p> <ul style="list-style-type: none"> - Members of high-stratum households buy most of their clothing at shopping malls. - These households have internet access. - 99% have personal emails - 92% use social media - 76% of households at this level have read books other than study manuals and work-related reading in the last three months.
<p>Features of the dwellings:</p> <ul style="list-style-type: none"> - The predominant flooring material in these dwellings is hardwood, parquet, plank, or laminate flooring. - On average, they have two bathrooms with a shower for exclusive household use.
<p>Assets:</p> <ul style="list-style-type: none"> - All households have access to conventional telephone service. - All households have a refrigerator. - More than 95% of households have a kitchen with an oven, washing machine, sound system, and/or mini-component. - On average, these households have two color televisions. - More than 80% of these households have two or more cars for exclusive use.

Table 2

Level B:

<p>Education:</p> <ul style="list-style-type: none"> - The head of the household has a higher level of education.
<p>Economics:</p> <ul style="list-style-type: none"> - 26% of the heads of households in level B are employed as scientific, intellectual, technical, and middle-level professionals. - 92% of households are members of or have coverage through IESS insurance (general insurance, voluntary insurance, or rural insurance) and/or ISSFA or ISSPOL insurance. - 47% of households have private health insurance with hospitalization, private health insurance without hospitalization, international insurance, AUS, municipal and provincial council insurance, and/or life insurance.
<p>Technology:</p> <ul style="list-style-type: none"> - 81% of households have internet services and desktops. - 50% have laptops. - The average household has three cellphones.
<p>Consumption Habits:</p> <ul style="list-style-type: none"> - The majority of people from these households buy most of their clothing at shopping malls. - 98% use internet. - 90% have personal email accounts. - 76% use social media. - 69% of households at this level have read books other than study manuals and work-related reading in the last three months.

Table 3

Level C+

<p>Education:</p> <ul style="list-style-type: none"> - The head of the household has a secondary level of education.
<p>Economics:</p> <ul style="list-style-type: none"> - The heads of households in level C+ work as service workers, merchants, and machine installation and assembly operators. - 77% of households are members of or have coverage through IESS insurance (general insurance, voluntary insurance, or rural insurance) and/or ISSFA or ISSPOL insurance. - 20% of households have private health insurance with hospitalization, private health insurance without hospitalization, international insurance, AUS, municipal and provincial council insurance, and/or life insurance.

Resource: INEC

The following table displays, based on the information provided, the market segment to which IFTA Company will sell its products.

Total population of: CUE, GYE, UIO, TUN and El Oro	8.039.139,00	
Nivel A	1,90%	
Nivel B	11,20%	
Nivel C+	22,80%	
Demand	35,90%	2.886.050,90

Table 4

Consideration was given to the three levels (A, B, and C+) when calculating demand in Cuenca, Guayaquil, Quito, Tungurahua, and El Oro. Using this information, IFTA Company will be able to serve approximately 36 percent of the population in the aforementioned cities, or 2,886,050.90 individuals.

The next step in the macroenvironmental analysis is to identify items produced by companies based on their primary product classification. This information was extracted from 2016 to 2020.

ARTICLES MANUFACTURED BY COMPANIES, ACCORDING TO THE CENTRAL PRODUCT CLASSIFICATION (VALUES IN DOLLARS) 2016					
Product Description	Unit of Measurement	Quantity Produced	Production value	Quantity Sold (domestic)	Value Sold (domestic)
B-complex (vitaminas B1, B6, B12)	LITRES	364.871	2.866.365	328.260	4.209.054
Natural concentrates, mixtures of provitamins and vitamins, whether in solutions or not, including natural concentrates such as vitamin A plus D concentrate, etc	LITRES				

Table 5

ARTICLES MANUFACTURED BY COMPANIES, ACCORDING TO THE CENTRAL PRODUCT CLASSIFICATION (VALUES IN DOLLARS) 2017					
Product Description	Unit of Measurement	Quantity Produced	Production value	Quantity Sold (domestic)	Value Sold (domestic)
B-complex (vitaminas B1, B6, B12)	LITRES	870.529	3.308.473	822.067	7.017.853
Natural concentrates, mixtures of provitamins and vitamins, whether in solutions or not, including natural concentrates such as vitamin A plus D concentrate, etc	LITRES	149.693	375.551	99.515	891.072

Table 6

ARTICLES MANUFACTURED BY COMPANIES, ACCORDING TO THE CENTRAL PRODUCT CLASSIFICATION (VALUES IN DOLLARS) 2018					
Product Description	Unit of Measurement	Quantity Produced	Production value	Quantity Sold (domestic)	Value Sold (domestic)
B-complex (vitaminas B1, B6, B12)	LITRES	154.859,00	2.727.728,00	148.049,00	5.396.835,00
Natural concentrates, mixtures of provitamins and vitamins, whether in solutions or not, including natural concentrates such as vitamin A plus D concentrate, etc	LITRES	127.221,00	467.484,00	143.407,00	1.342.929,00

Table 7

ARTICLES MANUFACTURED BY COMPANIES, ACCORDING TO THE CENTRAL PRODUCT CLASSIFICATION (VALUES IN DOLLARS) 2019					
Product Description	Unit of Measurement	Quantity Produced	Production value	Quantity Sold (domestic)	Value Sold (domestic)
B-complex (vitaminas B1, B6, B12)	LITRES	140.316,00	841.603,00	132.366,00	1.881.581,00
Natural concentrates, mixtures of provitamins and vitamins, whether in solutions or not, including natural concentrates such as vitamin A plus D concentrate, etc	LITRES	913.376,00	2.174.879,00	915.133,00	7.237.744,00

Table 8

ARTICLES MANUFACTURED BY COMPANIES, ACCORDING TO THE CENTRAL PRODUCT CLASSIFICATION (VALUES IN DOLLARS) 2020					
Product Description	Unit of Measurement	Quantity Produced	Production value	Quantity Sold (domestic)	Value Sold (domestic)
B-complex (vitaminas B1, B6, B12)	LITRES	172.013	936.827	166.754	2.145.700
Natural concentrates, mixtures of provitamins and vitamins, whether in solutions or not, including natural concentrates such as vitamin A plus D concentrate, etc	LITRES	477.677	1.026.518	473.563	3.193.848

Table 9

Resource: INEC

The projected base was calculated using these numbers, as shown in the table below.

Sales Forecast (L)			Complex B	Natural Concentrates
Year 1			575.164	-
Year 2			485.058	121.461,00
Year 3			140.207,50	529.270,00
Year 4			149.560,00	694.348,00
Average			337.497	448.359,67
Projected Base			392.928	

Figure 6

The projected base was 392,928 L, taking into account both concentrations (Complex B and natural concentrates). With this, we continued to forecast the sales for the project. The preceding data (392,928 L) served as a starting point and point of reference for the first year of the sales forecast.

The following table shows the calculations.

SALES FORECAST FOR THE PROJECT BY PRODUCT (THERE ARE 2 PRODUCTS)					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
TOTAL SALES QUANTITY (L)	392.928	401.337,13	408.681,60	414.811,82	420.204,37
% OF PROJECT SALES	0,50%	0,60%	0,70%	0,80%	0,90%
PROJECT SALES QUANTITY (L)	1.964,64	2.408,02	2.860,77	3.318,49	3.781,84
UNITS PER LITER OF 8ML	125,00	125,00	125,00	125,00	125,00
TOTAL UNITS PER LITER OF PROJECT SALES OF 8ML	245.580,29	301.002,85	357.596,40	414.811,82	472.729,92
UNIT PRICE (\$)	\$ 1,32	\$ 1,32	\$ 1,32	\$ 1,32	\$ 1,32
TOTAL REVENUE (\$)	\$ 323.217,44	\$ 396.161,15	\$ 470.646,05	\$ 545.949,42	\$ 622.177,61
INFLATION	2,14%	1,83%	1,50%	1,30%	1%
HOURS OF WORK PER YEAR	1920	1920	1920	1920	1920
PRODUCTION PER HOUR (L)	1,023251194	1,254178523	1,489984988	1,728382586	1,969708005

*FUENTE : statista

Table 10

TOTAL SALES (L)			14.333,77
TOTAL INCOME (\$)	\$		2.358.151,67

On the basis of these projections, it is anticipated that by the end of the next five years, a total of 14,333.77 liters of the two formulations will have been sold, amounting to \$2,358,151.67 USD.

In this section of the project, the sales (in millions of dollars) of the leading pharmaceutical manufacturing companies in Ecuador were investigated, as well as the classification of pharmaceutical production. This information was obtained from the Guayaquil Chamber of Commerce to determine the portion of the Ecuadorian market that IFTA Company could cover.

Sales of the leading pharmaceutical manufacturing companies (in millions of dollars)			
	Year 2017		
Roche Ecuador S.A	117		19,8%
Acromax Laboratorio Quimico Farmaceutico SA	62		10,5%
Laboratorios Seigfried S.A	53		9,0%
Tecnandina SA Tensa	46		7,8%
Nefrocontrol S.A	33		5,6%
Laboratorios Gugonza S.A	7		1,2%
Laboratorio Vida (Labovida) S.A	7		1,2%
Industrias Reunidas CIA. LTDA. Indunidas Lab	6		1,0%
Equinsa Equipos e insumos S.A	5		0,8%
TOTAL	592		
*FUENTE: Camara de comercio Guayaquil			

Table 11

The five pharmaceutical companies with the most sales in Ecuador and the four with the fewest sales in Ecuador were analyzed. With the aid of this data, an average estimate of IFTA's potential market share in Ecuador was formulated. This information can be found in the "Project Sales Forecast" table, in the "% of Project Sales" box.

Alongside the analysis conducted on the pharmaceutical companies, it is possible to appreciate the research conducted on the quantity of natural concentrates and similar products that IFTA Company will sell and the quantities sold by the aforementioned pharmaceutical companies. With this data, reference was made to the percentage of the Ecuadorian market in which IFTA Company can also participate.

Ecuador: Characterization of Pharmaceutical Production	Year 2017	Sales in millions of dollars	%
Medications containing vitamins or provitamins		5	1,3%
Natural concentrates, mixtures of provitamins and vitamins, whether or not in solutions, including natural concentrates.		5	1,3%
Complex B		4	1,0%
TOTAL		391	
*FUENTE: Camara de comercio Guayaquil			

Table 12

After projecting sales based on the market segment in which IFTA Company will concentrate (35.9% of the Ecuadorian population, or 2,886,050.90 people) and investigating the sales of similar products and pharmaceutical companies that sold similar products, it was determined that IFTA Company could sell 14,333.77 liters, or \$2,358,151.67 USD, in the first five years.

II.II SWOT analysis

A SWOT analysis evaluates the organization's strengths, weaknesses, opportunities, and threats. It is a tool that can help analyze what a company does best now and design a successful strategy for the future. In addition, a SWOT analysis can reveal areas of a business that are being held back or that rivals could exploit if left unprotected. This technique examines both internal and external factors, that is, what happens inside and outside the organization. Therefore, some of these factors will be within the company's control, while others will not. In either case, the most prudent course of action will become more apparent after the company has identified, recorded, and analyzed as many relevant factors as possible. (Mind Tools, 2021)

After learning what a SWOT analysis is, IFTA Company decided to conduct one. It can be seen in the table below.

Table 13

Internal Factors Controllable	External Factors Uncontrollable
<p>Strengths (+)</p> <ul style="list-style-type: none"> ● Contacts with potential distributors. ● International contacts. ● Motivated personnel. ● High-quality products. ● Innovative products. 	<p>Opportunities (+)</p> <ul style="list-style-type: none"> ● First and only ones in the market. ● Good acceptance of these products in the international market. ● Participation in trade fairs to introduce the product. ● The supply of these types of products is not seasonal but rather constant.
Weaknesses (-)	Threats (-)

<ul style="list-style-type: none"> ● We haven't tested the product in the market and cannot forecast its acceptance or demand. ● We don't have our own distribution channel. 	<ul style="list-style-type: none"> ● Complex industry and significant competitors. ● Possible imitations
--	--

II.III Product:

ACTION-CAP is a cap that contains a concentrated formula for a product. By twisting it, the formula is released from the dispensing cap and instantly combined with the liquid inside the bottle. The system offers the best and only opportunity for formulators and marketers to significantly increase and improve the functional efficacy, dosing, and sensory impact of their products.

By removing oxygen from the capsule, ACTION-CAP decreases and prevents spoilage and eliminates the need for chemical preservatives in perishable items. ACTION-CAP's precise dosing and instant mixing capabilities enable revolutionary packaging systems for chemical, medical, and pharmaceutical applications.

There are numerous applications for ACTION-CAP, including beverages, nutraceuticals, aeration, hygiene, hair care, pharmaceuticals, chemicals, and more. This product differs from others because, firstly, there is no change in consumer behavior, and secondly, by activating ACTION-CAP, an interesting interaction is created between the product and the consumer, since shaking and mixing the product serves as visual confirmation of the consumer's demand for a functional and instant product.

ACTION-CAP has the following advantages:

- It requires no change in consumer behavior to become active.
- Active ingredients are preserved until consumption.
- Enhances product quality.
- Eliminates preservatives.
- Extends the life of the product.
- Ensures accurate dosing.
- Environmentally conscious.

In the following images, you can see the product (ACTION-CAP):



Figure 7



Figure 8



Figure 9

II.IV Price:

Given that we are new to the market and the product is new, the agreed-upon price for the acquisition of the product will be competitive. IFTA Company will not disregard the minimum profit levels necessary to maintain profit margins, as future revenue and the company's stability depend on this.

The caps' price will be relatively higher than comparable products on the Ecuadorian market and will maintain customer expectations, making them want to purchase it again not only for its quality but also for its functionality and benefits.

After researching the prices of similar products in Ecuador, it was possible to verify that \$1.99 USD is ideal for ACTION-CAP. The reason for this is that TONWAS, a product with the same function as the IFTA Company's dosing cap, costs between \$1.85 and 2.25 USD. (Fybeca, 2022) Also ranging between \$3.49 and \$3.79 USD are oral serums containing electrolytes, such as Pedialyte and Hidraplus, among others. (Fybeca, 2020)

II.V. Distribution channels:

The distribution is organized according to the following scheme:

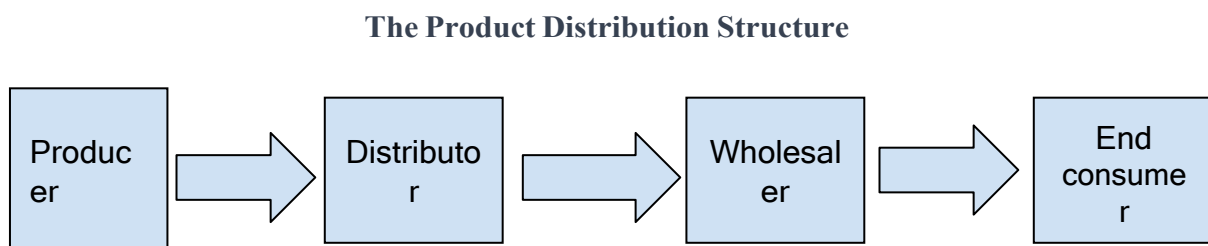


Figure 10

Producer: refers to the company that will manufacture the product in order to offer it to our customers.

Distributor: It is the person or organization that is in charge of selling the dosing caps with its sales team.

Wholesaler: These are the stores that will be in charge of selling to the retailer or other wholesalers.

End consumer: corresponds to customers who consume directly.

With these elements, the communication between the members of the producer and consumer chain will have direct contact, which represents an additional advantage when perceiving the needs, expectations, and desires of customers and being able to continuously enhance the service and the product.

II.VI Sales strategies:

The promotional strategies for this new product are outlined below, taking current trends into consideration.

1. Preparation of a Plan for Key Accounts:
 - Develop brand stationery, folders, and business cards.
 - Create a proposal document and product presentation.
 - Create a plan for negotiations and visits.
 - Consider using intermediaries with strong connections.
 - Develop an international negotiation proposal.

2. Development of a business plan
 - Product validation.
 - Validation of brand image and packaging
 - Development of Promotions Plan
 - Preparation of sales plan and budget.
 - Hire and train a sales team.

3. Encourage the frequency of consumption
 - Development of communication and graphic lines to promote weekly consumption.
 - Preparation of "weekly" packs.
 - Activations in gyms (Crossfit, Yoga, Fabrics, TRX, climbing, Tracking, etc.)
 - Communication plan through influencers.
 - Alliances with nutritionists and sports specialists.
 - Alliances with pharmaceuticals.

4. Building a valued and aspirational brand

- Develop a digital marketing plan (Instagram, Facebook, blog, Twitter, etc.)
- Production of photos and videos of:
 - Lifestyle.
 - Healthy and organic products.
 - Developing a brand story
- Public relations plan with a brand spokeswoman.

II.VII Marketing Study: Marketing Plan:

The majority of the marketing strategy will be implemented via social networks. This decision is based on the fact that 81% of the population of Ecuador, or 14.60 million people, use social networks (Medina, 2021). Through this form of advertising and marketing, we will be able to effectively segment our clientele and garner their individualized attention. We will provide more information to those who are interested in our product, expose promotions and publicity, and increase general brand recognition among our consumers.

Camello Viral, which will offer the following services, will outsource and manage the marketing and advertising departments:

Social networks: Camello Viral will be responsible for designing, constructing, and managing effective communication strategies on the various social platforms on the Internet, with the goal of establishing and sustaining a long-term, mutually beneficial relationship with each community and fostering customer loyalty.

Administration and monitoring tools: Camello Viral has demonstrated that it handles effective and cutting-edge tools for the administration and monitoring of our campaigns, such as Similarweb, Socialbakers, Tracx, etc., which contribute to their increased effectiveness.

Strategy: Camello Viral's strategy is based on occupying the platforms of Google Search, Google Display, Programmatic, WhatsApp, and Pinterestads to create traffic and growth for a community on Instagram, Facebook, and Blog platforms, in which they will publish 20 monthly ads, this being a daily one about: the benefits of the dosing cap, videos of how the dosing cap works in the drinks that use it, benefits of drinks in relation to sports, work, and daily life, and selected information for the community of ACTION-CAP/IFTA Company.

Media Plan Optimization: Within the strategy is the review and optimization of the social platform plan, which will be reviewed every 6 months to determine whether the strategy should continue or be optimized.

Graphic elements supporting the media strategy: As part of the agreement with Camello Viral, they will review the images and writing that will be used in each publication, whether the images are created, taken, or purchased online.

Monthly Reports: Each month, Camello Viral will provide us with reports on each of the campaigns and their impact on the various social platforms, including a breakdown of community interaction and growth in comparison to the previous month

Chapter III - Technical Study

The technical study entails consideration of the necessary operational technical aspects and the available resources for producing the desired product. This study determines the optimal production site dimensions, location, facilities, and organization. This study is significant because it allows for an economic valuation of the project's technical variables, facilitates an approximate appreciation of the resources required for the project, and provides useful information for the financial study. (Gómez A.M, s.f.)

III.I Determination of the optimal size:

The optimal size of a project is its installed capacity, which is measured in annual units of output. It is deemed optimal if it operates with the lowest total costs or the greatest economic profit. First and foremost, it is essential to analyze the manufacturing process that should be used to produce the product in question. This implies that the activity of acquiring inputs, such as raw materials, labor, and energy, must be considered. (Terrazas, 2013)

Consequently, IFTA Corporation requires space for a two-part mold. The first part of the mold has the following measurements (L*W*H): 53*50*62 cm. The second component, which is compatible with the first, has the following dimensions (L*W*H): 68*60*78 cm. It is evident, based on these findings, that a space larger than 3 m by 3 m will not be required for the two-part mold within the establishment. When it comes to raw material, it will start with 5000 kg of polypropylene that is presented in bags with the following measurements per bag (L*W*H): 88*55*25cm. Since each sack contains 25 kg, to achieve 5000 kg, 200 sacks will need to be imported.

In consideration of the space required for the raw materials, it was determined that at least 40 m² would be required. The amount of liquid that will be introduced into the caps will not be determined until the marketing plan is implemented and the quantity that will be sold is determined. The primary objective is to ensure that the products are manufactured with safe raw materials and to obtain natural products that meet market demands.

Company location:

IFTA COMPANY CIA. LTDA's offices are located in the city of Cuenca, in the Circunvalación Sur and Camino a Turi condominium "Jardines del Sol" 17-22; from this location, all administrative aspects of the business will be managed.

The Industrial Park houses the company's warehouses, production, and logistics facilities.

The location decision is strategic, given that both the mold and the raw material will be located within a third company that has extensive knowledge of molds and more than 20 years of experience working with them. IFTA Company is aware that should a problem arise, this company will be able to assist with mold maintenance.

III.II Project Engineering: Production Process

Raw materials and supplies: It is obvious that 8 grams of concentrate will be required to fill each unit. In the first table, the components of the lid containing the energizing substance are detailed. Following is a table detailing the specifications and quantities of the lid's hydrating content.

Energy

Description	Quantity	Units
Guayusa	4	grams
Prebiotics	1	Grams
Probiotics	1	grams
Natural Caffeine	0.05	grams
B3	0.05	grams
B5	0.5	grams
B6	0.5	grams
B12	0.5	grams

Table 14

Hydrate

Description	Quantity	Unit
Maca	4	grams
Probiotics	1	grams
Prebiotics	1	grams
Resveratrol	0.50	grams
Potassium	0.05	grams
Vitamin A	0.05	grams
Vitamin B3	0.05	grams
Vitamin B5	0.05	grams
Vitamin B6	0.05	grams
Vitamin B12	0.05	grams
Vitamin D	0.05	grams
Vitamin E	0.05	grams
Calcium	0.05	grams
Phosphorus	0.05	grams

Table 15

Product Engineering:

The factory coordinates the entire process of gathering raw materials in order to process them, begin production, and ultimately deliver the finished product.

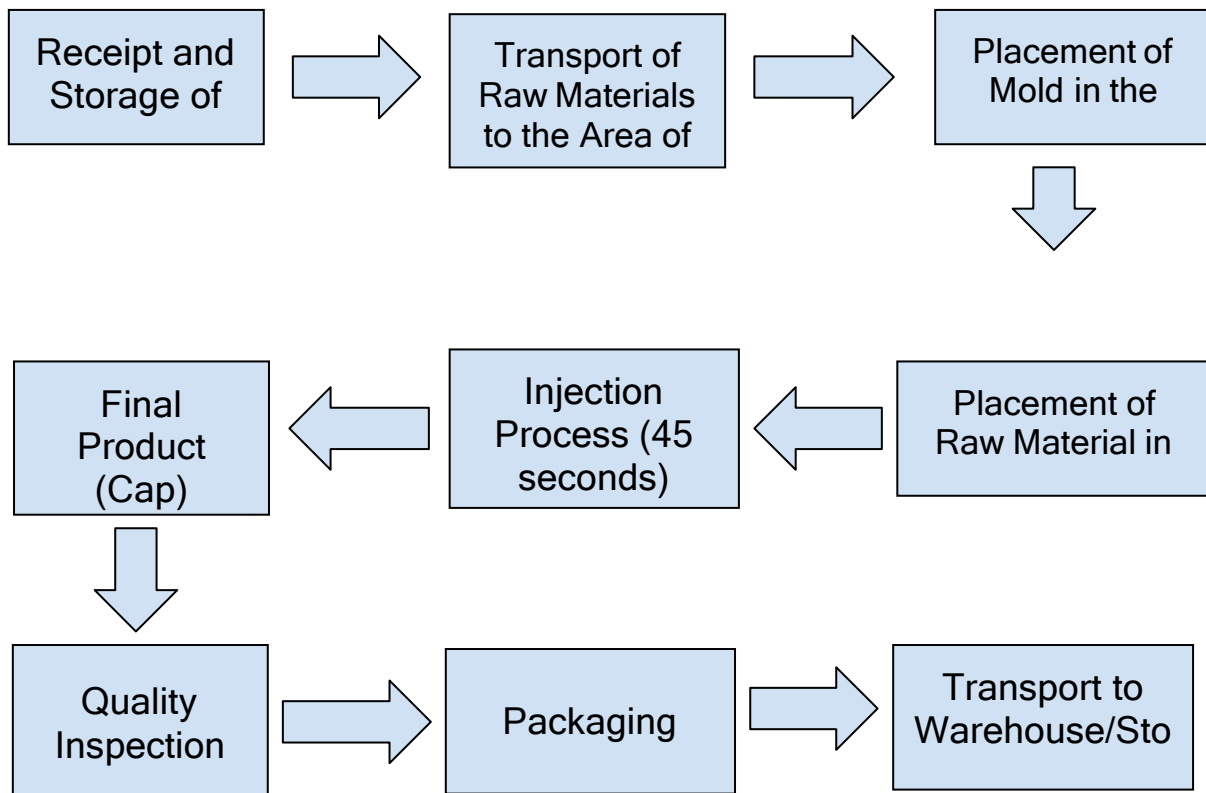
Production program:

Table 16

PRODUCTS	NAME OF FACTORY
Manufacturing the dosing cap	INMEPLAST
Manufacturing the formula and packaging of the dosing cap	INNOVAQUIM

Flowchart of Production Processes:

Figure 11



Organizational process analysis:

The analysis of organizational processes is a discipline that provides a variety of models, techniques, and tools for addressing and treating a variety of (internal and external)

organizational problems. It aids in addressing and treating key issues that (directly or indirectly) determine organizational performance. (Cueto, s.f.)

Among the members that make up the IFTA company are:

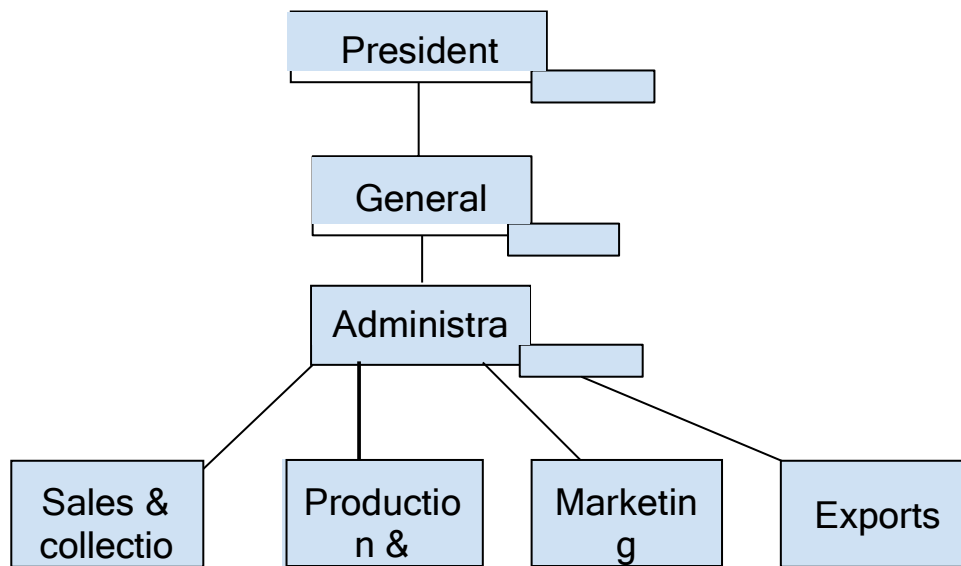
1. *Santiago Moreno*: General Manager, Sales and Collection Department He has experience in the advertising market as a manager.
2. *María Augusta Maldonado*: President and Administrator. She has experience in the automotive market as a manager and assistant manager.
3. *Natalia Kuzminski*, Head of the Export and Administration Department, has experience with start-up companies and in import and export.

The work team of the company, IFTA COMPANY CIA LTDA, is new; it is comprised of pioneering and enterprising individuals with the necessary knowledge and skills to perform their work responsibly and professionally. This organization's goals are centered on achieving general well-being, putting individuality aside. That is, on the one hand, attempting to meet the needs of IFTA Company's customers while also generating economic benefit and market positioning.

III.III Organization chart:

This project seeks to create and form a company with a multidisciplinary team of professionals who will ensure compliance with the commitments made, both internally and externally, in a functional organization. The company IFTA COMPANY CIA. LTDA presents a vertical organization chart in which we can clearly appreciate the lines of authority and responsibility followed by each and every one of the members that make up this work team.

Figure 12



Distribution of functions and responsibilities:

Administrative organization is the technical structure of the connections that need to exist between levels of authority, functions, and individual duties in order for all of the activities to work better. (Ministry of Finance, 2003) This will be the organizational structure of the administrative department. Currently, IFTA COMPANY CIA LTDA will have a manager who will direct all company processes, oversee sales and portfolios, and be the president or administrator. In addition, it will have an export department. The production, logistics, and marketing departments will be outsourced.

General Manager:

Name of Position: General Manager	Reports to: Board of Directors
Level: Executive	Coordinates activities with: -Administrative manager -Sales and collections manager -Production and Logistics Department
Supervises: -Administrative manager -Sales and collections manager	

RESPONSIBILITIES

Materials: constantly handles easy-to-use equipment and materials.

Confidential Information: Directly handles a high degree of confidentiality.

Decision-Making: The decisions are based on specific policies and defined procedures in order to achieve specific objectives, enhance methods, or establish techniques and standards.

In addition to these managerial duties, we also include the following:

Sales Area: Collection

The manager of the company will be in charge of coordinating and monitoring sales.

RESPONSIBILITIES

Materials: constantly handles easy-to-use equipment and materials.

Confidential Information: Directly handles a high degree of confidentiality.

Decision-Making: The decisions made for the execution of the work at the operational level are based on previous procedures and experiences.

Production and Logistics Area: All production of caps and beverages will be outsourced to a company that is qualified for the development of this process and certified with the ISO-9001 Standard. In relation to the outsourced companies, the manager will be in charge of this company's distribution of the goods to their various destinations.

RESPONSIBILITIES

Materials: constantly handles easy-to-use equipment and materials.

Confidential Information: Directly handles a high degree of confidentiality.

Decision Making: The decisions that are made are based on specific policies and defined procedures to achieve specific objectives, improve methods, or establish techniques and standards.

Administrative Manager:

Name of Position: Administrative manager	Reports to: General Manager
Level: Executive	Coordinates activities with: -General manager -Sales and collections manager -Production and Logistics Department -Marketing Department
Supervises: -Sales and collections manager -Production and Logistics Department -Marketing Department	

Administrative area:

Responsible for managing the company's resources in the organization and distribution of activities to people in order to work efficiently and meet the needs of clients. In this area, she will be the manager responsible for coordinating the company's sales and collections.

RESPONSIBILITIES

Materials: constantly handles easy-to-use equipment and materials.

Confidential Information: Directly handles a high degree of confidentiality.

Decision Making: Decisions are made based on previous procedures and experiences for the operational execution of the work.

Export manager:

Name of Position: Export manager	Reports to: General Manager
Level: Executive	Coordinates activities with: -General manager -Administrative manager -Sales and collections manager -Production and Logistics Department

	-Marketing Department

The Export Department will be in charge of transporting the company's exports to customers in other regions. The exports manager will be responsible for coordinating the search for new contacts as well as maintaining existing ones, selecting regional distributors, participating in negotiations with various importers, processing export processes, and establishing contact with customs, consultancies, and carriers. In addition, it will coordinate market information, analyze competition, and attend international trade shows.

RESPONSIBILITIES:

Materials: constantly handles easy-to-use equipment and materials.

Confidential Information: Directly handles a high degree of confidentiality.

Decision Making: The decisions that are made are based on specific policies and defined procedures to achieve specific objectives, improve methods, or establish techniques and standards.

CHAPTER IV:

IV.I Financial analysis Initial investment:

After a meticulous financial study, the following results could be evidenced: To begin with, data collection for the initial investment was made. It was concluded that IFTA Company would have to start with an investment of \$169,854 USD.

IFTA COMPANY PRE-OPERATIONAL INITIAL INVESTMENT			
INITIAL INVESTMENT COSTS	-1	TOTAL	WEIGHT
	ene-23		
Sending Patent to USA	\$ 275	\$ 275	0,18%
Trademark Patent Procedures	\$ 4.000	\$ 4.000	2,64%
Video Payment	\$ 1.350	\$ 1.350	0,89%
Mold Replacement Parts	\$ 20.000	\$ 20.000	13,19%
Trip to Los Angeles and Las Vegas Fair	\$ 13.000	\$ 13.000	8,57%
Creation of 4 Formulas with ARCSA	\$ 4.500	\$ 4.500	2,97%
Canvas study	\$ 890	\$ 890	0,59%
Website (Camello Viral)	\$ 1.700	\$ 1.700	1,12%
New website (Engage)	\$ 3.600	\$ 3.600	2,37%
Changes of 3D video	\$ 1.500	\$ 1.500	0,99%
Sending samples	\$ 500	\$ 500	0,33%
Financial costs	\$ 2.911	\$ 2.911	1,92%
Legal services for patents	\$ 5.000	\$ 5.000	3,30%
Various	\$ 2.429	\$ 2.429	1,60%
Machinery	\$ 90.000	\$ 90.000	59,35%
		\$ -	0,00%
		\$ -	0,00%
		\$ -	0,00%
		\$ -	0,00%
		\$ -	0,00%
		\$ -	0,00%
		\$ -	0,00%
IVA	\$ 18.199	\$ 18.199	
INVESTMENT	\$ 151.655	\$ 151.655	100,00%
PRE-OPERATIONAL INVESTMENT	\$ 169.854	\$ 169.854	
TAX CREDIT	\$ 18.199	\$ 18.199	

Table 17

Payroll:

Regarding payroll, it was established that the manager will have a salary consisting of \$2,500.00 USD per month and two salespeople with a salary of \$500.00 USD each.

Table 18

SALARY	2.023	2024	2025	2026	2027
MANAGER	2.500	2500	2500	2.500	2.500
SALES PERSON 1	500	500	500	500	500
SALES PERSON 2	500	500	500	500	500

In consideration of the manager's base salary, employer contribution, personal contribution, thirteenth, fourteenth, and accumulated vacations, a total of \$40,320.00 USD has been accrued until the year 2027. This can be seen in the following table.

Table 19

Taking into account the basic salary, employer contribution, personal contribution, thirteenth, fourteenth, and accumulated vacations for the

TOTAL YEAR 2023	TOTAL YEAR 2024	TOTAL YEAR 2025	TOTAL YEAR 2026	TOTAL YEAR 2027
37.820,00	37.820,00	37.820,00	37.820,00	40.320,00
30.000,00	30.000,00	30.000,00	30.000,00	32.500,00
3.645,00	3.645,00	3.645,00	3.645,00	3.645,00
2.835,00	2.835,00	2.835,00	2.835,00	2.835,00
2.500,00	2.500,00	2.500,00	2.500,00	2.500,00
425,00	425,00	425,00	425,00	425,00
1.250,00	1.250,00	1.250,00	1.250,00	1.250,00
7.904,00	7.904,00	7.904,00	7.904,00	8.562,67
7.904,00	7.904,00	7.904,00	7.904,00	8.562,67

seller, it was determined that IFTACcompany will be required to pay a total of \$39,405.00 USD over the course of five years, given that there are two sellers.

Table 20

TOTAL YEAR 2023	TOTAL YEAR 2024	TOTAL YEAR 2025	TOTAL YEAR 2026	TOTAL YEAR 2027
37.820,00	37.820,00	37.820,00	37.820,00	40.320,00
7.904,00	7.904,00	7.904,00	7.904,00	8.562,67
7.904,00	7.904,00	7.904,00	7.904,00	8.562,67

Table 21

Expenses:

Every business incurs operational expenses, which are costs associated with the normal operation of the business (Santos Aznaran, 2022). We have taken into account the

administration expenses that consist of: water, electricity, internet, payment papers, accountants, and others. We also focused on marketing expenses such as art, guidelines, and ad agency payments; these totaled \$17,400.00 USD annually. The total over five years is \$78,168.00 USD. This can be seen in the following two tables.

Table 22

Supuesto	
Accountant	\$ 100,00
Internet	\$ 45,00
Water	\$ 10,00
Rent	\$ 300,00
Electricity	\$ 40,00
Marketing Agency	\$ 1.000,00

DESCRIPTION OF COSTS	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
	AÑO 2023	AÑO 2024	AÑO 2025	AÑO 2026	AÑO 2027
OPERATIONAL COSTS	37.656,00	78.168,00	78.168,00	37.656,00	78.168,00
ADMINISTRATIVE COSTS	20.256,00	60.768,00	60.768,00	20.256,00	60.768,00
Payroll	53.628,00	53.628,00	53.628,00	53.628,00	53.628,00
Accountant	1.200,00	1.200,00	1.200,00	1.200,00	1.200,00
Internet	540,00	540,00	540,00	540,00	540,00
Water	120,00	120,00	120,00	120,00	120,00
Rent	3.600,00	3.600,00	3.600,00	3.600,00	3.600,00
Electricity	480,00	480,00	480,00	480,00	480,00
Various	1.200,00	1.200,00	1.200,00	1.200,00	1.200,00
Sales & Marketing costs	17.400,00	17.400,00	17.400,00	17.400,00	17.400,00
Marketing Agency	12.000,00	12.000,00	12.000,00	12.000,00	12.000,00
Layout	3.600,00	3.600,00	3.600,00	3.600,00	3.600,00
Art	1.800,00	1.800,00	1.800,00	1.800,00	1.800,00
None operational costs (financial)	8.389,21	6.879,30	6.736,09	2.975,45	856,59
Disbursement interest	8.389,21	6.879,30	6.736,09	2.975,45	856,59

Price of the product:

Based on the market segmentation analysis described in Chapter II, it was determined to begin production with 10,000 dosing caps. The costs of each dosing cap are specified in the tables below, depending on the function that IFTA Company will bring to the market.

Dosing Cap with Energizing Content

Table 23

PRE CALCULATION OF ENERGY DOSING CAP								
Product Code	BOX OF 8-PACK							
	TOTAL BOXES						69	
	TOTAL UNITS						5000	
	TRAYS PER BOX						9	
	UNITS PER BOX						72	
	VOLUME PER UNIT						8	
VOLUME PER BOX (GR)						576		
STRUCTURE OF PRODUCT								
No.	Code	Description	Minimum Purchase	Quantity of minimum purchase	Cost per box	Cost per unit		
1	Gram	Top Cap Resin	\$5.000,00	1375000	\$2,1802	\$0,0303		
2	Gram	Bottom Cap Resin			\$1,2902	\$0,0179		
3	Gram	Resin Waste (or Scrap) from Top Cap			\$1,0728	\$0,0149		
4	Gram	Resin Waste (or Scrap) from Bottom Cap			\$0,7488	\$0,0104		
5	Unit	Formula	\$0,34	1	\$24,4800	\$0,3400		
6	Unit	Heat shrink	\$289,80	9000	\$2,3184	\$0,0322		
7	Unit	Carton box packaging	\$208,00	1000	\$0,2080	\$0,0029		
8	KG	Liner	\$48,00	20Kg	\$0,3658	\$0,0051		
9	Unit	Tray of 8 units	\$2.592,00	9000	\$2,5920	\$0,0360		
10		Total raw material			\$35,2562	\$0,4897		
		Description	Cost per hour	Seconds in an hour	Seconds passed	Cost per box	Cost per unit	
11	Direct Labor (DL)	Injection Mold (dosing cap)	\$ 16,00	3600	90	\$3,6000	\$0,0500	
12		Injection Mold (bottle)	\$ 16,00	3600	90	\$3,6000	\$0,0500	
13		Cap Packaging				\$3,6000	\$0,0500	
14		Cap filling				\$7,2000	\$0,1000	
15		Advertising Cost						
		Description	Cost per hour	Boxes per month	Units per month	Real unit costs	Cost per box	Cost per unit
16		A&P	\$1.000,00	69,44	5.000	\$0,2000	\$6,3964	\$0,0888
17		Transportation						
18		Unit Transport Cost				\$3,0000	\$0,0417	
		Description	Asset Cost	Asset Units	Cost per box	Cost per unit		
19		Depreciacion Molde	\$ 90.000,00	8000000	\$0,8100	\$0,0113		
20								
21		Total Manufacturing Expenses			\$28,2064	\$0,3918		
22							BOTTLE COST	\$0,8814
23							BOX COST	\$63,4626

Exactly 5,000 caps with energizing content and 5,000 caps with hydrating content will be released. The following table shows the study of the cost of the lid product with hydrating content.

Dosing Cap with Hydrating Content

Table 24

PRE CALCULATION OF HYDRATING DOSING CAP								
Product Code			BOX OF 8-PACK					
			TOTAL BOXES			69		
			TOTAL UNITS			5000		
			TRAYS PER BOX			9		
			UNITS PER BOX			72		
			VOLUME PER UNIT			8		
			VOLUME PER BOX (GR)			576		
STRUCTURE OF PRODUCT								
No.	Code	Description	Minimum Purchase	Quantity of minimum purchase	Cost per box	Cost per unit		
1	Gram	Top Cap Resin			\$2,1802	\$0,0303		
2	Gram	Bottom Cap Resin			\$1,2902	\$0,0179		
3	Gram	Resin Waste (or Scrap) from Top Cap	\$5.000,00	1375000	\$1,0728	\$0,0149		
4	Gram	Resin Waste (or Scrap) from Bottom Cap			\$0,7488	\$0,0104		
5	Unit	Formula	\$0,34	1	\$24,4800	\$0,3400		
6	Unit	Heat shrink	\$289,80	9000	\$2,3184	\$0,0322		
7	Unit	Carton box packaging	\$208,00	1000	\$0,2080	\$0,0029		
8	KG	Liner	\$48,00	20Kg	\$0,3658	\$0,0051		
9	Unit	Tray of 8 units	\$2.592,00	9000	\$2,5920	\$0,0360		
10		Total raw material			\$35,2562	\$0,4897		
		Description	Cost per hour	Seconds in an hour	Seconds passed	Cost per box	Cost per unit	
11	Direct Labor (DL)	Injection Mold (dosing cap)	\$ 16,00	3600	90	\$3,6000	\$0,0500	
12		Injection Mold (bottle)	\$ 16,00	3600	90	\$3,6000	\$0,0500	
13		Cap Packaging				\$3,6000	\$0,0500	
14		Cap filling				\$7,2000	\$0,1000	
15		Advertising Cost						
		Description	Cost per hour	Boxes per month	Units per month	Real unit costs	Cost per box	Cost per unit
16		A&P	\$1.000,00	69,44	5.000	\$0,2000	\$6,3964	\$0,0888
17		Transportation						
18		Unit Transport Cost				\$3,0000	\$0,0417	
		Description	Asset Cost	Asset Units	Asset Units	Cost per box	Cost per unit	
19		Depreciacion Molde	\$ 90.000,00	8000000		\$0,8100	\$0,0113	
20								
21		Total Manufacturing Expenses				\$28,2064	\$0,3918	
22							\$0,8814	
23							\$63,4626	

In conclusion, both the energizing lid and the moisturizing lid will have a cost of \$63.46 USD per box, which will contain 72 caps, and the unit will cost \$0.8814 USD.

Sales plan:

We will initially stock 5,000 servings of both the hydration and energy drinks. The sales strategy of IFTA Company is to increase by 350 caps per month for both caps containing hydrating and energizing ingredients. Regarding the unit price, which is \$1.31 USD, 10,000 caps will be multiplied, resulting in the first month's revenue of \$13,161.38 USD. The following month, due to an increase of 350 caps, the total will rise to \$13,622.02 USD, and so on. This analysis was conducted with the VAT in the subsequent five years in mind. The following table shows the annual sales plan. At the end of five years, total sales are anticipated to amount to \$508,113.33 USD.

TOTAL Year 2023	TOTAL Year 2024	TOTAL Year 2025	TOTAL Year 2026	TOTAL Year 2027
94.169,64	127.336,31	160.502,98	193.669,64	226.836,31
94.169,64	127.336,31	160.502,98	193.669,64	226.836,31
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
22.600,71	30.560,71	38.520,71	46.480,71	54.440,71
210.940,00	285.233,33	359.526,67	433.820,00	508.113,33

Table 25

Purchasing plan:

Taking into account the unit cost of the lid (\$0.88 USD) as well as the monthly increase of 350 lids that are going to be sold per product, the annual total in dollars can be shown along with the VAT value for the next five years in the next table. Consequently, \$340,286.58 USD is projected for the year 2027.

Table 26

TOTAL YEAR 2023	TOTAL YEAR 2023	TOTAL YEAR 2024	TOTAL YEAR 2024	TOTAL YEAR 2025	TOTAL YEAR 2025	TOTAL YEAR 2026	TOTAL YEAR 2026	TOTAL YEAR 2027	TOTAL YEAR 2027
63.065,98		85.277,90		107.489,82		129.701,74		151.913,65	
63.065,98		85.277,90		107.489,82		129.701,74		151.913,65	
-		-		-		-		-	
-		-		-		-		-	
-		-		-		-		-	
-		-		-		-		-	
-		-		-		-		-	
15.135,84		20.466,70		25.797,56		31.128,42		36.459,28	
141.267,80	-	191.022,49	-	240.777,19	-	290.531,89	-	340.286,58	-

Income Statement:

According to the table, the net profit for 2023 will total -\$25,601.00 USD, and the net profit for 2024 will improve to -\$10,671.00 USD, resulting in a negative net profit. However, by 2025, the investment is recovered, and a positive result of \$3,338.00 USD is shown. For the fifth year (2027), it is anticipated that the net income will be positive, reaching \$46,163.00 USD, an increase of 10.18%.

Table 27

IFTA COMPANY Income Statement										
	2023	2023	2024	2024	2025	2025	2026	2026	2027	2027
SALES	\$ 188.339	100,00%	\$ 254.673	100,00%	\$ 321.006	100,00%	\$ 387.339	100,00%	\$ 453.673	100,00%
COST OF SALES	\$ 141.940	75,36%	\$ 186.364	73,18%	\$ 230.788	71,90%	\$ 275.211	71,05%	\$ 319.635	70,46%
GROSS PROFIT	\$ 46.399	24,64%	\$ 68.309	26,82%	\$ 90.218	35,43%	\$ 112.128	44,03%	\$ 134.037	52,63%
OPERATIONAL COSTS	\$ 37.656	19,99%	\$ 78.168	30,69%	\$ 78.168	24,35%	\$ 20.256	5,23%	\$ 60.768	13,39%
Administrative Costs	\$ 20.256	10,76%	\$ 60.768	23,86%	\$ 60.768	18,93%	\$ 20.256	5,23%	\$ 60.768	13,39%
Cost of sales	\$ 17.400	9,24%	\$ 17.400	6,83%	\$ 17.400	5,42%	\$ 0,00%	0,00%	\$ 0,00%	0,00%
OPERATING INCOME	\$ 8.743	4,64%	\$ -9.859	-3,87%	\$ 12.050	3,75%	\$ 91.872	23,72%	\$ 73.269	16,15%
FINANCIAL COSTS	\$ 8.389	4,45%	\$ 6.879	2,70%	\$ 6.736	2,10%	\$ 2.975	1,17%	\$ 857	0,19%
INCOME (OTHER)		0,00%		0,00%		0,00%		0,00%		0,00%
UTILITY BEFORE TAXES	\$ 354	0,19%	\$ -16.738	-6,57%	\$ 5.314	2,09%	\$ 88.896	34,91%	\$ 72.413	28,43%
EMPLOYEE PARTICIPATION	\$ 53	0,03%	\$ -2.511	-0,99%	\$ 797	0,25%	\$ 13.334	5,24%	\$ 10.862	2,39%
Income tax	\$ 75	0,04%	\$ -3.557	-1,40%	\$ 1.129	0,35%	\$ 18.890	7,42%	\$ 15.388	3,39%
NET PROFIT	\$ 226	0,12%	\$ -10.671	-4,19%	\$ 3.388	1,06%	\$ 56.671	14,63%	\$ 46.163	10,18%

Cash flow: The income statement, which generally reports assets, liabilities, and equity, and the cash flow statement, which reports net income and expenses to profit or loss, are vastly different. The following table shows the total annual cash flow for IFTA Company.

Table 28

	TOTAL 2023	TOTAL 2024	TOTAL 2025	TOTAL 2026	TOTAL 2027
OPERATING CASH FLOW					2
INCOME	\$ 233.540,71	\$ 315.794,05	\$ 398.047,38	\$ 480.300,71	\$ 562.554,05
OUTFLOWS	\$ 220.367,19	\$ 270.518,63	\$ 320.705,38	\$ 370.930,58	\$ 421.193,80
PURCHASES	\$ 37.108,01	\$ 140.939,91	\$ 185.363,74	\$ 148.343,88	\$ 192.767,72
VAT	\$ 4.452,96	\$ 16.912,79	\$ 22.243,65	\$ 17.801,27	\$ 23.132,13
COSTS	\$ 26.056,00	\$ 78.168,00	\$ 78.168,00	\$ 78.168,00	\$ 78.168,00
VAT	\$ 268,44	\$ 1.059,90	\$ 1.468,08	\$ 1.125,54	\$ 1.539,56
OPERATING CASH FLOW	\$ 13.173,53	\$ 45.275,42	\$ 77.342,00	\$ 109.370,13	\$ 141.360,25
NON-OPERATING CASH FLOW					
NON OPERATING INCOME	\$ 8.389,21	\$ 6.736,09	\$ 4.935,87	\$ 2.975,45	\$ 856,59
EQUITY INVESTMENT					
CREDITS	\$ 8.389,21	\$ 6.736,09	\$ 4.935,87	\$ 2.975,45	\$ 856,59
NON OPERATING OUTFLOW	\$ -	\$ -	\$ -	\$ -	\$ -
PAYMENT OF DIVIDENDS					
FINANCIAL EXPENSES					
TAXES					
NON-OPERATING CASH FLOW	\$ 8.389,21	\$ 6.736,09	\$ 4.935,87	\$ 2.975,45	\$ 856,59
NET CASH FLOW	\$ 21.562,74	\$ 52.011,51	\$ 82.277,87	\$ 112.345,58	\$ 142.216,84
ACUMMULATED CASH FLOW	\$ 91.188,84	\$ 143.200,35	\$ 225.478,22	\$ 337.823,80	\$ 480.040,64

Break-even point:

It is based on the relationship between total revenue (TR), total cost (TC), and the number of units sold (Q). **Break-Even Point (in units) = Total Fixed Costs / (Selling Price per Unit - Variable Cost per Unit)**. It was possible to identify the break-even point for the caps as:

Breakeven point: 93,976 / (1.31 - 0.88) = 216,180 caps sold per year.

Table 29

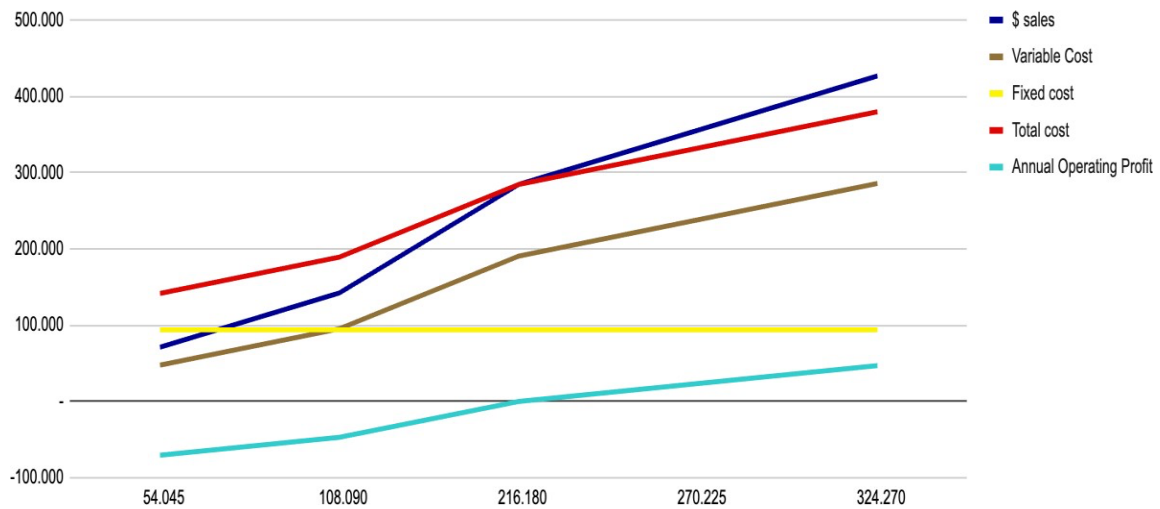
2023	
Price of product	1,3161
Unit cost	0,8814
Fixed costs	93.976
Break Even point	216.180

Table 30

Dosing Caps month	Break Even Point				
	4504	9007	18.015	22519	27022
Q caps per year	54.045	108.090	216.180	270.225	324.270
\$ sales	\$ 71.131	\$ 142.261	\$ 284.522	\$ 355.653	\$ 426.784
Variable Cost	\$ 47.637	\$ 95.273	\$ 190.546	\$ 238.183	\$ 285.820
Fixed cost	\$ 93.976	\$ 93.976	\$ 93.976	\$ 93.976	\$ 93.976
Total cost	\$ 141.613	\$ 189.249	\$ 284.522	\$ 332.159	\$ 379.796

Total cost per unit	\$ 3	\$ 2	\$ 1	\$ 1	\$ 1
Annual Operating Profit	\$ -70.482	\$ -46.988	\$ -	\$ 23.494	\$ 46.988

Figure 13



IV.II Methods that consider the time value of money: NPV and IRR:

The meaning of these two frequently used financial formulas is an assessment of how suitable a project is for a company. Both the net present value and the internal rate of return are directly related to cash flow and seek to improve the accuracy of the calculation of the time it will take a business to recover its initial investment. (Perez, 2021)

A company's NPV value must always be greater than zero in order to be truly profitable. The IRR, on the other hand, is the interest rate at which the NPV equals zero. Its purpose is to indicate the rate at which we will recoup our initial investment in the business after a specified period of time. Consequently, the lower the IRR, the more profitable the project. In contrast, if its value is higher than anticipated, the project will be unprofitable and susceptible to current interest rates. (Perez, 2021)

Table 31

Financial ratios						
Description	(Initial Investment)	Year 1	Year 2	Year 3	Year 4	Year 5
Investor flows	-\$169.854	\$13.174	\$45.275	\$77.342	\$109.370	\$141.360

<i>Acummulated Flow</i>	\$0	\$13.174	\$143.200	\$225.478	\$337.824	\$479.184
Discount rate	12,00%					

With the cash flow, the initial investment, and the accumulated cash flow taken from IFTA Company, the NPV and IRR were calculated. To get the NPV, we use the following formula:

$$NPV = \sum_{t=0}^n \frac{Rt}{(1+i)^t}$$

As a result, IFTA Company has an NPV of \$85,011.00 USD, which means that the project is profitable.

To calculate the IRR, the following formula was used:

$$IRR = \sum_{i=0}^n \frac{CF_i}{(1+IRR)^i} = 0$$

The calculated IRR of IFTA Company is 26%.

IV.III Sensitivity and risk analysis:

To carry out the sensitivity analysis, the cash flow and the NPV are calculated when changing a variable. To calculate the sensitivity, the old NPV and the new NPV are compared, and you must multiply the outcome of this operation by 100. The sensitivity analysis formula is:

$$\text{Sensitivity analysis} = ((VANn - VAne) / VAne) \times 100,$$

Where:

VAN_n: represents the net present value under a new or different scenario or parameter value.

VAN_e: represents the net present value under the base or initial scenario (the "e" stands for "existing" or "baseline").

(Delsol Software, 2022)

In this case, the NPV was changed to \$100,000 USD, allocating that resource to a stronger marketing plan.

$$\text{Sensitivity analysis} = (100,000 - 85,011) / 85,011 \times 100 = 17.63\%.$$

In this case, we can affirm that, thanks to the introduction of a stronger marketing plan, there is a change in sales that brings with it an increase in NPV of almost 18%, so this novelty can be effective.

IV.IV The Environmental Impact of the Project:

Using the dosing cap will result in several benefits and positive impacts on the environment, which will be specified in the following points:

Dosing caps aid in the reduction of wasted product. By utilizing a dosing cap, users can measure the exact amount of product required and avoid using excess. This decreases the amount of product that ends up in landfills or the ocean as waste. (IUCN, 2021)

Lower carbon footprint: The use of dosing caps also helps to reduce the carbon footprint of the products. When users measure the exact amount of product they need, they are less likely

to overuse the product and need to buy it more frequently. This reduces the amount of packaging, transportation, and energy required to produce and distribute the product. (B-cap, s.f)

Safer for the environment: The dosing caps cannot only be used for drinks but also for products such as detergents. Some products can be harmful to the environment if not used correctly. For example, using too much laundry detergent can lead to further pollution in waterways. By using dosing caps, users can ensure they are using the correct amount of product, which can help prevent environmental damage. (B-cap, s.f)

The use of fewer bottles: Several dosing caps can be used with the same bottle of water or any liquid. If the dosing caps are used, fewer bottles are thrown away and more environmental damage is caused, so once the dosing cap has been mixed with the water and it has been operated with its contents, the bottle can be reused.

In conclusion, the use of dosing caps can help reduce waste, lower your carbon footprint, and make products safer for the environment.

Conclusions:

The company IFTA COMPANY CIA, LTDA. offers an innovative product in the market that enters the functional beverage industry. After analyzing the feasibility and financial viability of carrying out the project, determining the amount of investment needed, the costs for the development and implementation of the dosing cap, distribution, and the time it will take to recover the investment, and evaluating the business and the general guidelines for launching it, it can be concluded that this project is feasible as soon as it begins operations in Ecuador.

IFTA Company has based its study and research on various areas, the same ones that are crucial to the project's completion. Currently, there is no significant competition in the Latin American market; however, in North America and Europe, dosing cap manufacturers such as INCAP and Karma Cap already exist. Having no competition within this sector in Ecuador, IFTA Company has the opportunity to position itself as a pioneer and inform Ecuadorian society of this new product.

In conclusion, IFTA Company will establish itself as a leader on a national scale. We are confident that our services will significantly improve our clients' quality of life and the environment. The IFTA project is viable and profitable; it is innovative, sustainable, collective, and of quality; it is flexible with the reality it is going through and with the different changes that can arise along the way.

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