



NND Healthy
Company

Presented To:

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NND Healthy Company

Project Appraisal

2023



NND Healthy
Company

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Commitment:

This project is completely conceived and created by our company, without any copying or fraudulent intervention.



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List of abbreviations

Name	Explain
BMI	Body Mass Index
TDEE	Total Daily Energy Expenditure
Product 1	Eatclean meal weight loss
Product 2	Eatclean meal weight gain
GDP	Gross Domestic Product
ERP	Enterprise Resource Planning
ROE	Return of Equity
CEO	Chief Executive Officer
AR	Accounts Receivable
AP	Accounts Payable
CB	Cash Balance
EBT	Earnings Before Tax
TIPV	Total Investment Point of View
CIF	Cash Inflow
COF	Cash Outflow

List of abbreviations

Name	Explain
NCF	Net Cash Flow
NPV	Net Present Value
IRR	Internal Rate of Return
BCR	Benefit Cost Ratio
EPV	Equity Point of View
WACC	Weighted Average Cost of Capital
D	Debt
E	Equity
PP	Payback Period
PV	Present Value
F&B	Food and Beverage Service



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Project Introduction

Produce and Provide healthy meals



Project Goals

The project aims to produce and provide healthy meals with predetermined nutritional content and calorie levels based on individuals' dietary preferences and lifestyles.

In the aftermath of the Covid-19 pandemic, consumers are increasingly concerned about health, lifestyle, and nutritional balance. Therefore, this project is created to serve individuals who aspire to a healthy lifestyle but lack time to prepare meals at home.

Furthermore, we also offer customized meals based on specific body indices such as BMI, TDEE, catering to the needs of weight gain, weight loss

The specific amount of food and estimated calorie levels in each nutritious meal will be clearly listed on the packaging, allowing customers to check and enjoy their meals with complete peace of mind.

The project provides customers with a diverse menu of nutritious dishes that vary daily throughout the week, using ingredients from safe sources and specific origins, saving time and effort for each diner.

With a carefully selected team of staff responsible for cooking, shopping, and delivery, we aim to bring convenience, speed, and the best possible experience to our customers.

Introducing the Product

Producing Eatclean nutritious meals

Production

The project's product is Eatclean nutritional meals. The main activity is processing food to create a complete, nutritious meal. Due to economies of scale in the food processing industry, raw materials will be ordered from popular domestic clean food companies and will not be produced by the project itself. The formula is completely created and applied by our company. Some of the brands producing input we consider include:

- Fresh From Farm Store
- Da Lat GAP Store
- Viet Nhat Laughing Vegetable Store
- VietGreenFood Store
- Tan Tai Store
- ORGANICA Store

Brand name

The investor decided to name the company NND Healthy and the product name NND Emeal if this project is feasible and implemented. The trademark will be copyrighted as soon as the project begins.

Target customer

The project's customers are people with high needs for health and fitness. They have average and high income and can be at any age.



Necessity of the product

Macro Analysis

Recent Trend

In a recent report on the food industry by Vietnam Report, it was revealed that the main demand in the food sector in the coming years will be the surge in natural and environmentally friendly products. Additionally, according to AC Nielsen's report on the trend of organic food consumption, up to 86% of Vietnamese consumers prioritize choosing organic products for their daily meals due to safety and nutritional value.

According to Statista's forecast, Vietnam's food market is projected to reach \$96.47 billion in 2023, a 9% increase compared to 2022. The average annual growth rate during the period from 2023 to 2027 is estimated to be around 8.22%.

Vietnam Report forecasts that the next three years will witness a breakthrough in organic food, as well as the use of environmentally friendly ingredients and packaging. The prospects of the Vietnamese food and beverage market align with the global trends in the food and beverage industry, with the potential revenue from organic food and beverages expected to reach \$320.5 billion by 2025.

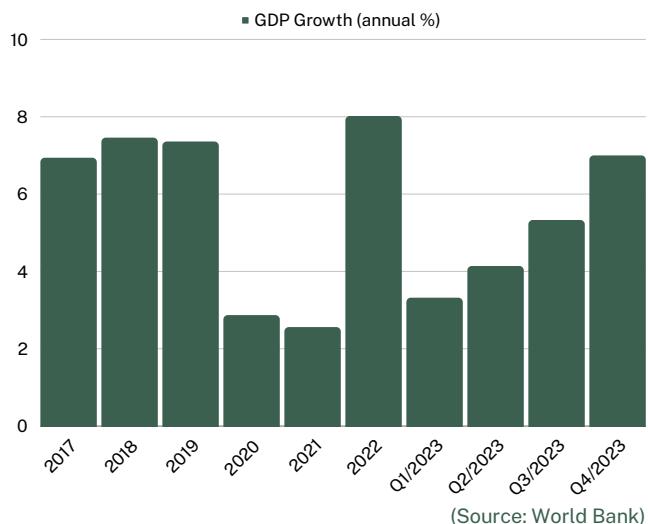
Table 1: Forecasted Food Industry Revenue in 2023 (Source: Statista, 03/2023)

COUNTRY	REVENUE 2023	GROWTH RATE COMPARED TO 2022	AVERAGE ANNUAL GROWTH RATE, 2023 – 2027
VIETNAM	96.47 billion USD	9%	8.22%

Economic Environment

According to World Bank data, in 2020, the scale of Vietnam's economy reached \$1.05 trillion USD, with a per capita GDP of over \$10,000. By the end of 2023, Vietnam's GDP is projected to reach a growth rate of 7%, significantly higher than the forecasted inflation rate of 4%. Domestic consumption is currently the main driving force behind Vietnam's economic growth.

Figure 1: Vietnam's GDP Growth Rate (%)



Necessity of the product

Macro Analysis

Technological Environment

Technology has opened up significant opportunities for the eat clean food business in Vietnam. The prevalence of the internet and mobile devices has created an easily accessible channel for businesses to promote their products and services to a large customer base. In addition, the development of e-commerce has created a favorable environment for online business. Furthermore, applications such as home delivery, online ordering, and online payment have created a convenient and seamless shopping experience for customers. As a result, conducting an eat clean food business has become more efficient.

Social Environment

Ho Chi Minh City is one of the most populous cities in Vietnam, with a population of 9.17 million people, which is 14.73 times the national average. It is also a major economic hub in the country. With its favorable geographical location, the city serves as a cultural exchange center with foreign countries. Therefore, trends from abroad easily penetrate and develop in Vietnam.

Eatclean is also one of the trends that has entered Vietnam and has been widely embraced, not only by women but also by many others. Therefore, statistical data over the years shows that the revenue of the food industry in general, and healthy food in particular, has been increasing rapidly from 2021 to 2022, and it is predicted to further increase in 2023 and 2024.

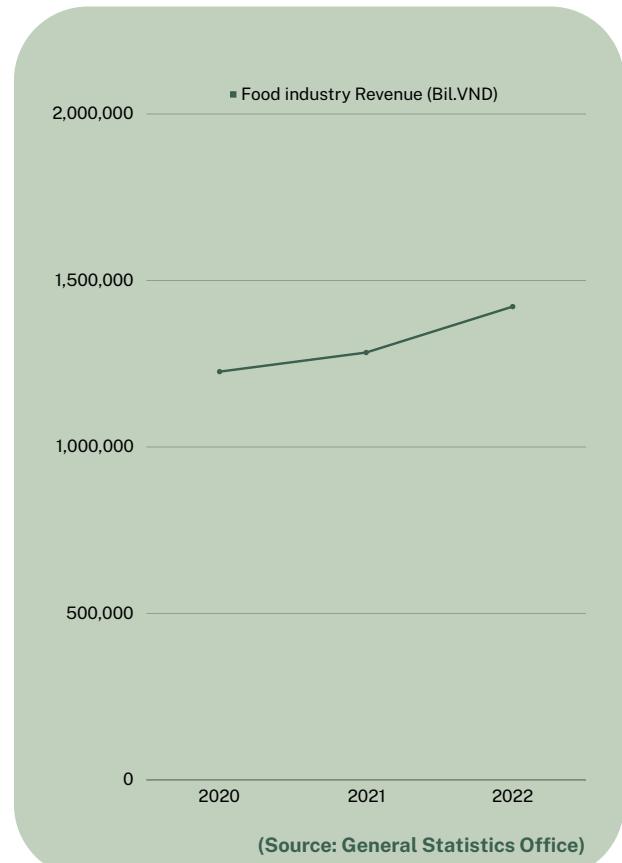


Figure 2: Food Industry Revenue (billion VND)



Necessity of the product

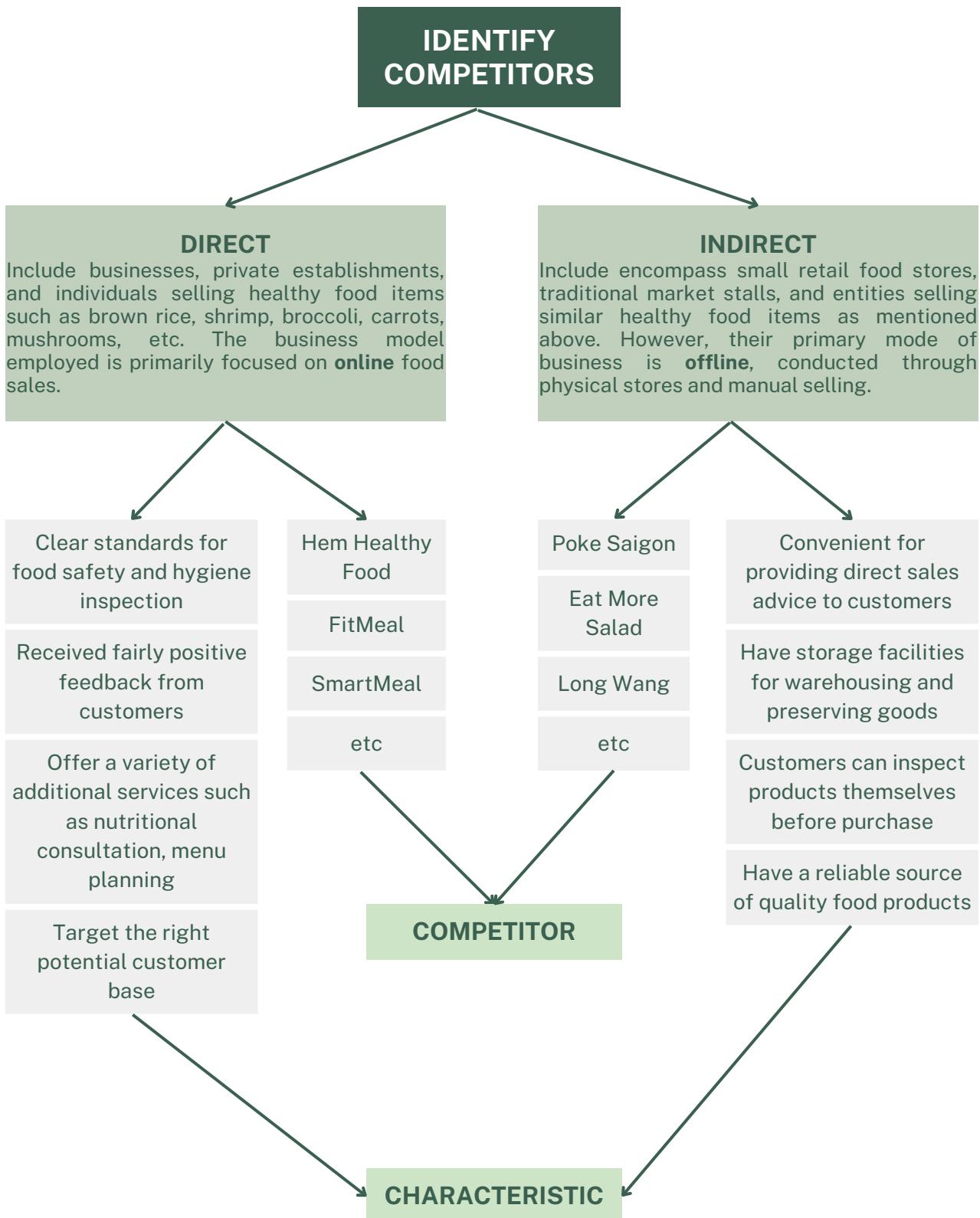
SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none">Clean food products offer numerous health benefits, attracting consumer interest.A newly established company can capitalize on the trends of healthy eating and the growth of the clean food market.There is the ability to create unique and innovative products to meet customer demands.	<ul style="list-style-type: none">Lack of experience in managing and operating a food business company.Limited financial capability, posing challenges for investment and business expansion.A newly established company may face difficulties in building a brand and gaining trust from customers.
Opportunities	Threats
<ul style="list-style-type: none">The clean food market is rapidly growing, with many consumers showing interest in healthy and quality eating.There is the potential to leverage online sales channels and social media to reach and build the brand.Expansion of products and services to meet diverse customer needs is possible.	<ul style="list-style-type: none">High competition from other companies in the clean food industry.Market changes and consumer trends may impact customer demand and interest.Regulations and government authority could influence business operations.



Necessity of the product

Competitor Analysis



Investment Parameters

Timeframe

PLAN	NAME OF WORK	DURATION
PHASE 1	Investment	1 year
PHASE 2	Production and Sale	9 years

Project Expenditure

Phase 1

WORK	DESCRIPTION	ANTICIPATED COSTS
Renting House	A whole house with 1 ground floor and 1 upper floor (33m2)	Rent for the house is 10,000,000 VND/month from the time the contract is signed. The rent is paid at the end of each year. It is estimated that every 3 years, the rental cost will increase by 10%. In the liquidation year, the rent decreases to half of the previous year.
Assets	Machinery, equipment, and essential kitchen utensils	The total cost of purchase, repair, and installation is 120,000,000 VND . The economic lifespan of these assets is 10 years.
Software	Eccount - ERP software used in the sales management process	The fixed cost of sales management is 1,000,000 VND per month.
Business license	Although doing business online, you must also register a business license to sell on commercial platforms and use sales software.	The current business license registration fee for an online business store is 1,000,000 VND indefinitely. Including notarization and completion of all procedures.

Investment Parameters

Project Expenditure

Phase 2

DESCRIPTION OF WORK	ANTICIPATED COSTS
<p>Raw materials preparation for the clean meal: According to our general standards, an eat clean meal from us includes the following food groups.</p>	<ul style="list-style-type: none">Whole grains such as brown rice or other whole grains: 50-100g: 5,000 - 10,000VNDVegetables and fruits: 200-300g: 4,000 - 9,000VNDPlant-based protein: 50-100g (beans, mushrooms, seeds, etc.) or 100-150g (meat, fish, eggs, etc.): 5,000 - 10,000VNDHealthy fats: 20-30g (olive oil, coconut oil, butter, etc.): 5,000 - 7,500VNDWith the above ingredients, the average material cost for one eat clean meal for weight loss is approximately 30,000VND/Emeal, and for weight gain, it is 35,000VND/Emeal. However, these costs may vary according to changes in inflation.
<p>Labor:</p> <ul style="list-style-type: none">Cashier - 1: Responsible for processing orders, handling transactions, and accurately recording all income and expenses during the day. This position demands loyalty, honesty, and precision.Chef - 1: This is the most crucial position, responsible for preparing eat clean meals.Assistant Chef - 2: Another equally important role, responsible for pre-processing and preparing ingredients before cooking.Packaging Staff - 1: The task of the packaging staff is to pack eat clean meals for delivery to customers.Delivery Staff - 3: Delivery staff are responsible for delivering eat clean meals to customers.	<ul style="list-style-type: none">The salary for the cashier is 3,000,000 VND/month.The salary for the chef is 15,000,000 VND/month.The salary for the assistant chef is 8,000,000 VND/month.The salary for the packaging staff is 3,000,000 VND/month.The salary for delivery staff is 8,000,000 VND/month.

Investment Parameters

Project Expenditure

Phase 2

DESCRIPTION OF WORK	ANTICIPATED COSTS
Labor:	These figures are estimated for year 0. To ensure a decent standard of living for employees and encourage their long-term commitment to the company, the investor plans to increase the actual salary by an additional 6% annually. Additionally, nominal salaries will be adjusted annually according to local regulations and the inflation rate.
Electricity and Water costs: Depending on the production output <ul style="list-style-type: none"> • Electricity Costs • Water Costs 	<ul style="list-style-type: none"> • Cooking electricity (stove, rice cooker, oven, etc.); Lighting electricity (illumination, heating, etc.); Refrigeration electricity (refrigerator, air conditioner, freezer, etc.): 5,000,000 VND/month • Domestic water (cooking, washing fruits and vegetables, washing dishes, etc.); Wastewater (wastewater treatment): 3,000,000 VND/month. <p>Therefore, the total electricity and water costs that need to be paid are 8,000,000 VND/month. These costs are subject to inflation changes in year 0.</p>
Packaging: Depending on the production output	<p>Includes: Containers, bags, utensils, paper, straws: 3,000 VND/ Emeal.</p> <p>These costs are subject to inflation changes in year 0.</p>
Management and Sales:	<p>This includes various expenses such as the salary of the management and sales department, phone bills, equipment, office supplies, transaction fees, marketing, and other costs: 20,000,000 VND/month.</p> <p>These costs are subject to inflation changes in year 0. The management and sales costs in the liquidation year (year 10) are estimated to be 50% of the previous year (year 9).</p>

Investment Parameters

Price & Output

Price

Investors expect a very competitive selling price, only about **60,000VND/weight-loss Emeal** and **70,000VND/weight-gain Emeal**, estimated for year 0. This price will change annually under the certain impacts. Real prices will increase by 6% per year and nominal prices will increase according to the domestic inflation rate.



Expected output

The processing and packaging capacity of the store is **80 weight-loss Emeals/day** and **20 weight-gain Emeals/day**. Actual production capacity in the first 3 years is expected to reach about 70% of design capacity. The next three years will reach 85% and the final three years of operation will reach 95% of design capacity.

Product storage

Because our project is to process and sell fresh food during the day, the project has no inventory. Assume that there is no inventory of processed materials. However, machinery and equipment will be liquidated in year 10 (year of liquidation).

Investment Parameter

Working Capital - 121,000,000 VND with 70% of machine & equipment cost borrowed in the first year

Account Receivable

As the project sells food for immediate consumption, estimated receivables are **0% of sales revenue.**

Inventory

Raw materials inventory is only kept for a week of operation to ensure food safety. Therefore, inventory for the next operating year is estimated to be **0%**.

Cash Balance

Estimated about **1% of annual revenue** to ensure liquidity and pay for small and unexpected expenses.

Account Payable

Estimated approximately **5%** of the cost of purchasing cooking ingredients, due to agreements reached with suppliers.

Tax 1.5%

According to the regulations in Appendix 01 issued with Circular 92/2015/TT-BTC, value-added tax and personal income tax are calculated based on taxable revenue and the tax rate applied to the revenue.

For wholesale and retail activities of goods:

- The percentage for calculating value-added tax: 1%.
- The personal income tax rate: 0.5%.

Year	2022	2023	2024
Inflation Rate	3.16	3.45	4.60

Table 3: Inflation Rate

The investor plans to borrow **70%** of the investment cost for the factory and equipment from commercial banks by the end of year 0, with a nominal interest rate of 6.5% per year. This loan will need to be repaid over the next 5 years, with equal principal and interest payments. The remaining investment capital belongs to the investor. The actual return on equity (ROE) is projected to be 11% per year, based on data from Stockbiz's food and beverage industry.

Bank	BIDV
Preferential interest rate(%/year)	6,5
Maximum loan rate (%)	100
Maximum loan term (year)	30
Amplitude (%)	4,5
Early repayment penalty fee (%)	1

Table 2: Interest Rate

Inflation

According to Mr. Tran Ngoc Bau, the CEO of WiGroup, a Data and Financial Technology Corporation, he predicts that inflation will fluctuate around 4.6% - 4.7% in the following year (2024). However, based on macroeconomic analysis and historical data, we assume inflation to be at **4%**, in line with the target inflation rate.

Depreciation

of fixed assets using the **straight-line method** (evenly depreciated every year)

FINANCIAL ANALYSIS

INCOME STATEMENT - WORKING CAPITAL

TABLE 4: INCOME STATEMENT (MILLION VND)

YEAR	0	1	2	3	4	5	6	7	8	9	10
SALES		1617.13	1782.73	1965.28	2630.78	2900.17	3197.15	3939.19	4342.56	4787.24	
DIRECT COSTS		1892.69	2018.28	2154.04	2535.89	2704.31	2886.37	3311.12	3533.47	3773.96	
BUSINESS LICENSE		0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
MANAGEMENT & SALE COST (-)		249.60	259.58	269.97	280.77	292.00	303.68	315.82	328.46	341.59	
INTEREST (-)		5.46	4.50	3.48	2.39	1.23					
EBT		-530.73	-499.75	-462.32	-188.39	-97.48	6.99	312.13	480.52	671.57	
TAX		0.00	0.00	0.00	0.00	0.00	0.10	4.68	7.21	10.07	
NET INCOME		-530.73	-499.75	-462.32	-188.39	-97.48	6.88	307.45	473.32	661.50	

TABLE 5: WORKING CAPITAL TABLE (MILLION VND)

YEAR	0	1	2	3	4	5	6	7	8	9	10
AR		0	0	0	0	0	0	0	0	0	
AP		38.14	39.67	41.25	52.10	54.18	56.35	65.49	68.11	70.84	
CB		16.17	17.83	19.65	26.31	29.00	31.97	39.39	43.43	47.87	
DELTA AR		0	0	0	0	0	0	0	0	0	
DELTA AP		-38.14	-1.53	-1.59	-10.84	-2.08	-2.17	-9.15	-2.62	-2.72	70.84
DELTA CB		-16.17	-1.66	-1.83	-6.65	-2.69	-2.97	-7.42	-4.03	-4.45	47.87

TABLE 6: CASHFLOW STATEMENT - TIPV (MILLION VND)

YEAR	0	1	2	3	4	5	6	7	8	9	10
CIFS											
SALES		1617.13	1782.73	1965.28	2630.78	2900.17	3197.15	3939.19	4342.56	4787.24	0.00
DELTA AR		0	0	0	0	0	0	0	0	0	0
LIQUIDATION											12
TOTAL CIF		1617.13	1782.73	1965.28	2630.78	2900.17	3197.15	3939.19	4342.56	4787.24	12.00
COFS											
INVESTMENT PHASE											
BUSINESS LICENCE	1										
MACHINE EXPENDITURE	120										
OPERATION PHASE											
MAIN COST		762.80	793.31	825.04	1041.91	1083.59	1126.93	1309.89	1362.29	1416.78	
BUILDING RENT		10.40	10.82	11.25	14.48	15.05	15.66	22.66	23.57	24.51	18.14
LABOR SALARY		806.96	889.59	980.68	1081.11	1191.81	1313.85	1448.39	1596.71	1760.21	
ELECTRICITY WATER		8.32	8.65	9.00	9.36	9.73	10.12	10.53	10.95	11.39	
PACKAGING		73.82	76.77	79.84	100.83	104.86	109.06	126.76	131.83	137.11	
MANAGEMENT & SELLING COST		249.60	259.58	269.97	280.77	292.00	303.68	315.82	328.46	341.59	252.82
DELTA AP		-38.14	-1.53	-1.59	-10.84	-2.08	-2.17	-9.15	-2.62	-2.72	70.84
DELTA CB		-16.17	-1.66	-1.83	-6.65	-2.69	-2.97	-7.42	-4.03	-4.45	47.87
TOTAL COFS	121	1857.58	2035.54	2172.37	2510.95	2692.27	2874.16	3217.49	3447.15	3684.42	389.68

CASH FLOW STATEMENT

TOTAL IN-FLOWS - OUT-FLOWS AND NET CASH FLOW

TABLE 6: CASHFLOW STATEMENT - TIPV (MILLION VND) (CONT)

YEAR	0	1	2	3	4	5	6	7	8	9	10
TOTAL COFS INCLUDING TAX	121.00	1857.58	2035.54	2172.37	2510.95	2692.27	2874.26	3222.17	3454.36	3694.49	389.68
NCF BEFORE TAX	-121.00	-240.45	-252.82	-207.09	119.83	207.90	322.99	721.69	895.41	1102.82	-377.68
TAX	0.00	0.00	0.00	0.00	0.00	0.00	0.10	4.68	7.21	10.07	0.00
NCF AFTER TAX (TIPV)	-121.00	-240.45	-252.82	-207.09	119.83	207.90	322.88	717.01	888.20	1092.75	-377.68

Financial Analysis

The project generates negative cash flow in the first 3 years of operation and in the liquidation year, but in the remaining 6 years of operation, the project brings significant and positive profits to compensate for the losses incurred in the initial years.

Therefore, we can witness a positive **NPV**, which means our project would bring a positive profit of **544.97 million VND**. It proves the feasibility of the project.

Additionally, IRR reflects the rate of return that an investment or project would need to achieve to break even or provide a desired return. **IRR** is **26%**, which is higher than the project's required rate of return (WACC which is calculated in table 8), so the investment may be considered attractive.

Moreover, BCR indicates the value of benefits generated per unit of cost incurred. **BCR** is **5.5**, which is greater than 1, indicating that the project's benefits outweigh the costs, making it potentially economically viable. BCR of this project can be considered attractive to investor

NPV	IRR	BCR
544.97	0.26	5.50

CASH FLOW STATEMENT - EPV

Equity Point of View

TABLE 7: CASHFLOW STATEMENT - EPV (MILLION VND)

YEAR	0	1	2	3	4	5	6	7	8	9	10
NCF AFTER TAX (TIPV)	-121.00	-240.45	-252.82	-207.09	119.83	207.90	322.88	717.01	888.20	1092.75	-377.68
FINANCING CASHFLOW											
DISBURSEMENT OF LOANS	84										
PAYMENT OF LOANS		20.21	20.21	20.21	20.21	20.21					
NCF EPV	-37.00	-260.66	-273.03	-227.31	99.62	187.69	322.88	717.01	888.20	1092.75	-377.68

Financial Analysis

The project has significant cash inflows occurring earlier in its lifespan (84 million VND borrowed from the bank), so the EPV approach gives a higher NPV compared to TIPV (at just 544.97). In conclusion, the project is feasible and even gives the investors higher profit.

Similar to some criteria analyzed in the TIPV approach, IRR and BCR in the EPV approach indicate the project's feasibility and the profit that it can earn in the next 10 years.

NPV	IRR	BCR
558.20	0.27	16.09

WACC CALCULATION

Weighted Average Cost of Capital

INFLATION RATE: 4%

INTEREST: 6.50%

REAL RATE : 11%

NOMINAL REAL RATE : 15.44%

TABLE 8: WACC

YEAR	0	1	2	3	4	5	6	7	8	9	10
D (MILLION VND)	84.00	69.25	53.53	36.80	18.98	0.00	0.00	0.00	0.00	0.00	0.00
E (MILLION VND)	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00
%D	0.69	0.65	0.59	0.50	0.34	0.00	0.00	0.00	0.00	0.00	0.00
%E	0.31	0.35	0.41	0.50	0.66	1.00	1.00	1.00	1.00	1.00	1.00
WACC	0.09	0.10	0.10	0.11	0.12	0.15	0.15	0.15	0.15	0.15	0.15
WACC AVERAGE	0.13										

WACC reflects the opportunity cost of capital and provides a benchmark for evaluating investment opportunities. The expected return of the project (IRR) is higher than the WACC, so it may be considered financially viable.

IRR - TIPV

0.26

PAYBACK PERIOD

CRITERIA

TABLE 9: PAYBACK PERIOD (NOT DISCOUNTED)

YEAR	0	1	2	3	4	5	6	7	8	9	10
NCF AFTER TAX (TIPV) (MILLION VND)	-121.00	-240.45	-252.82	-207.09	119.83	207.90	322.88	717.01	888.20	1092.75	-377.68
NCF ACCUMULATED (MILLION VND)	-121.00	-361.45	-614.27	-821.36	-701.53	-493.63	-170.75	546.27	1434.47	2527.21	2149.54
PP (NOT DISCOUNTED)	0	0	0	0	0	0	6.24	0	0	0	0

PP (NOT DISCOUNTED)

6 years 3 months

TABLE 10: PAYBACK PERIOD (DISCOUNTED)

YEAR	0	1	2	3	4	5	6	7	8	9	10
DISCOUNT FACTOR	1.00	0.88	0.78	0.69	0.61	0.54	0.48	0.42	0.37	0.33	0.29
PV (MILLION VND)	-121.00	-212.44	-197.35	-142.82	73.02	111.92	153.57	301.31	329.77	358.45	-109.46
PV ACCUMULATED (MILLION VND)	-121.00	-333.44	-530.79	-673.61	-600.60	-488.67	-335.10	-33.79	295.98	654.43	544.97
PP (DISCOUNTED)	0	0	0	0	0	0	0	7.10	0	0	0

PP (DISCOUNTED)

7 years 1 month

In general, the F&B industry is a challenging sector to work in; it cannot quickly repay capital but requires long-term thinking. With a business model spanning 9 years, the project needs about 6 years for the Payback period and about 7 years for the Discounted Payback period, making it quite suitable for recovering the initial investment cost. However, there may be differences in reality, so we need to consider several solutions to prevent adverse scenarios.

ANNUAL DEBT SERVICE COVER RATIO

Determinant of the maximum loan that can be raised against project revenue

TABLE 11: ANNUAL DEBT SERVICE COVER RATIO

YEAR	0	1	2	3	4	5
ADSCR		-11.90	-12.51	-10.25	5.93	10.29

Financial Analysis

An ADSCR of less than 1 denotes a negative cash flow, and we may be unable to cover or pay the debt obligations without drawing on outside sources or borrowing more in years 1, 2, and 3.

Therefore, we provide several solutions to manage difficulties in paying off the debt:

- Negotiate with the Bank
- Seek Additional Financing
- Asset Sale
- Cost Cutting and Operational Improvements
- Seeking Financial Counseling

As a result of the calculation, the project generates enough net operating income to cover its debt obligations 5.93 times in year 4 and 10.29 times in year 5. In other words, the project's income is five times and ten times larger than its required debt payments in years 4 and 5, respectively.

YEAR 4

5.95

YEAR 5

10.29

RISK ANALYSIS

One-way

Product 1

Price decreasing to 56K VND gives the negative NPV

Price decreasing to 53K VND gives the negative IRR

Price decrease to 50K VND, BCR is still positive

If the price is lower than 56K VND, there would be a risk of getting a negative NPV.

Output decreasing to 73 meals/day gives the negative NPV

Output decreasing to 65 meals/day gives the negative IRR

Output decrease to 65 meals/day, BCR is still positive

Output of product 1 should be kept higher than 73 meals/day to get the positive NPV

Main cost increasing to 36K VND/meal gives the negative NPV

Main cost increasing to 40K VND/meal gives the negative IRR

Main cost increasing to 40K VND/meal, BCR is still positive

There would be a risk if main cost increase by 6K VND

Product 2

Price decreasing to 56K VND gives the negative NPV

Price decrease to 50K VND, IRR is still positive

Price decrease to 50K VND, BCR is still positive

If the price is lower than 56K VND, there would be a risk of getting a negative NPV.

Output decreasing to 14 meals/day gives the negative NPV

Output decrease to 10 meals/day, BCR is still positive

Output decrease to 10 meals/day, BCR is still positive

Output of product 1 should be kept higher than 14 meals/day to get the positive NPV

Main cost increasing to 45K VND/meal, NPV is still positive

Main cost increasing to 45K VND/meal, IRR is still positive

Main cost increasing to 45K VND/meal, BCR is still positive

There is no risk when main cost of product 2 increase by 10K

Other Costs

Other factor such as **building rent, Machine & Equipment Cost, Electricity & Water Cost** have insignificant impact on the profitability of this project.



RISK ANALYSIS

Two-way analysis - NPV - Price & Product Cost

Table 12: Product Cost & Price of Product 1

Product Cost																	
544.974	0.020	0.022	0.024	0.026	0.028	0.030	0.032	0.034	0.036	0.038	0.040	0.042	0.044	0.046	0.048	0.050	
0.050	96.926	-165.508	-427.942	-690.760	-953.673	-1216.925	-1480.271	-1743.882	-2007.494	-2271.105	-2534.717	-2798.328	-3061.940	-3325.551	-3589.162	-3852.774	
0.052	448.979	186.545	-75.888	-338.322	-600.926	-863.786	-1126.858	-1390.109	-1653.568	-1917.179	-2180.790	-2444.402	-2708.013	-2971.625	-3235.236	-3498.848	
0.054	800.674	538.599	276.165	13.731	-248.703	-511.137	-773.952	-1036.812	-1300.043	-1563.294	-1826.864	-2090.476	-2354.087	-2617.698	-2881.310	-3144.921	
0.056	1151.877	890.120	628.101	365.785	103.351	-159.083	-421.517	-684.117	-946.977	-1209.976	-1473.227	-1736.549	-2000.161	-2263.772	-2527.384	-2790.995	
0.058	1502.622	1241.170	979.566	717.547	455.404	192.970	-69.464	-331.897	-594.331	-857.143	-1120.003	-1383.161	-1646.412	-1909.846	-2173.457	-2437.069	
0.060	1852.862	1591.786	1330.463	1068.896	806.993	544.974	282.590	20.156	-242.278	-504.712	-767.309	-1030.169	-1293.094	-1556.346	-1819.597	-2083.142	
0.062	2203.102	1942.026	1680.950	1419.756	1158.189	896.439	634.420	372.210	109.776	-152.658	-415.092	-677.526	-940.335	-1203.195	-1466.279	-1729.530	
0.064	2553.342	2292.266	2031.190	1770.115	1509.039	1247.482	985.885	723.866	461.829	199.395	-63.039	-325.473	-587.906	-850.501	-1113.361	-1376.221	
0.066	2903.582	2642.506	2381.430	2120.354	1859.279	1598.203	1336.775	1075.208	813.312	551.293	289.015	26.581	-235.853	-498.287	-760.721	-1023.526	
0.068	3253.822	2992.746	2731.670	2470.594	2209.519	1948.443	1687.367	1426.069	1164.501	902.758	640.739	378.634	116.201	-146.233	-408.667	-671.101	
0.070	3604.019	3342.986	3081.910	2820.834	2559.759	2298.683	2037.607	1776.531	1515.362	1253.794	992.204	730.185	468.166	205.820	-56.614	-319.048	
0.072	3953.734	3693.099	3432.150	3171.074	2909.999	2648.923	2387.847	2126.771	1865.695	1604.620	1343.088	1081.520	819.631	557.612	295.440	33.006	
0.074	4303.133	4042.814	3782.179	3521.314	3260.239	2999.163	2738.087	2477.011	2215.935	1954.860	1693.784	1432.381	1170.813	909.077	647.058	385.039	
0.076	4652.309	4392.154	4131.894	3871.259	3610.479	3349.403	3088.327	2827.251	2566.175	2305.100	2044.024	1782.948	1521.674	1260.107	998.522	736.504	
0.078	5000.933	4741.299	4481.174	4220.974	3960.339	3699.643	3438.567	3177.491	2916.415	2655.339	2394.264	2133.188	1872.112	1610.967	1349.400	1087.832	
0.080	5349.557	5089.923	4830.289	4570.195	4310.039	4049.419	3788.783	3527.731	3266.655	3005.579	2744.504	2483.428	2222.352	1961.276	1700.200	1438.693	

Table 13: Product Cost & Price of Product 2

Product Cost																	
544.974	0.025	0.027	0.029	0.031	0.033	0.035	0.037	0.039	0.041	0.043	0.045	0.047	0.049	0.051	0.053	0.055	
0.050	-7.068	-72.676	-138.284	-203.893	-269.501	-335.110	-400.718	-466.327	-531.935	-597.604	-663.319	-729.034	-794.749	-860.464	-926.179	-991.895	
0.052	80.946	15.337	-50.271	-115.880	-181.488	-247.097	-312.705	-378.313	-443.922	-509.530	-575.146	-640.861	-706.576	-772.291	-838.006	-903.721	
0.054	168.959	103.351	37.742	-27.866	-93.475	-159.083	-224.692	-290.300	-355.909	-421.517	-487.126	-552.734	-618.402	-684.117	-749.832	-815.547	
0.056	256.973	191.364	125.756	60.147	-5.461	-71.070	-136.678	-202.287	-267.895	-333.504	-399.112	-464.721	-530.329	-595.944	-661.659	-727.374	
0.058	344.986	279.378	213.769	148.161	82.552	16.944	-48.665	-114.273	-179.882	-245.490	-311.099	-376.707	-442.316	-507.924	-573.533	-639.200	
0.060	432.999	367.391	301.782	236.174	170.565	104.957	39.349	-26.260	-91.868	-157.477	-223.085	-288.694	-354.302	-419.911	-485.519	-551.128	
0.062	521.013	455.404	389.796	324.187	258.579	192.970	127.362	61.753	-3.855	-69.464	-135.072	-200.680	-266.289	-331.897	-397.506	-463.114	
0.064	608.899	543.394	477.809	412.201	346.592	280.984	215.375	149.767	84.158	18.550	-47.059	-112.667	-178.276	-243.884	-309.493	-375.101	
0.066	696.765	631.261	565.756	500.214	434.606	368.997	303.389	237.780	172.172	106.563	40.955	-24.654	-90.262	-155.871	-221.479	-287.088	
0.068	784.631	719.127	653.622	588.117	522.613	457.010	391.402	325.794	260.185	194.577	128.968	63.360	-2.249	-67.857	-133.466	-199.074	
0.070	872.498	806.993	741.488	675.983	610.479	544.974	479.415	413.807	348.198	282.590	216.981	151.373	85.765	20.156	-45.452	-111.061	
0.072	960.364	894.859	829.354	763.850	698.345	632.840	567.335	501.820	436.212	370.603	304.995	239.386	173.778	108.169	42.561	-23.048	
0.074	1048.151	982.725	917.221	851.716	786.211	720.706	655.202	589.697	524.192	458.617	393.008	327.400	261.791	196.183	130.574	64.966	
0.076	1135.866	1070.474	1005.082	939.582	874.077	808.573	743.068	677.563	612.058	546.554	481.022	415.413	349.805	284.196	218.588	152.979	
0.078	1223.581	1158.189	1092.797	1027.405	961.944	896.439	830.934	765.429	699.925	634.420	568.915	503.410	437.818	372.210	306.601	240.993	
0.080	1311.296	1245.904	1180.512	1115.120	1049.729	984.305	918.800	853.296	787.791	722.286	656.781	591.277	525.772	460.223	394.614	329.006	

The two-way analysis reveals the influence of both price and cost variables on the NPV of the project. Specifically, when prices decrease and costs increase, the project faces a negative profitability. Conversely, when prices increase and material costs decrease, it leads to a higher NPV. Therefore, the project needs to maintain high prices and stable input costs to achieve a positive NPV. Through the two tables illustrating the fluctuations in NPV due to price and cost changes, it can be observed that the project carries a certain level of risk associated with raw material costs and selling prices of the finished product.

RISK ANALYSIS

Two-way analysis - NPV

Table 14: Output & Price of Product 1

		Output																	
		90	88	86	84	82	80	78	76	74	72	70	68	66	64	62	60		
544.97		-656.749	-768.695	-880.641	-992.588	-1104.750	-1216.925	-1329.099	-1441.472	-1553.878	-1666.285	-1778.691	-1891.097	-2003.504	-2115.910	-2228.316	-2340.722		
0.050		-260.576	-381.099	-501.621	-622.259	-743.022	-863.786	-984.614	-1105.622	-1226.629	-1347.751	-1469.005	-1590.260	-1711.514	-1832.769	-1954.023	-2075.278		
0.052		135.484	6.160	-123.164	-252.488	-381.812	-511.137	-640.672	-770.253	-899.834	-1029.651	-1159.491	-1289.423	-1419.525	-1549.628	-1679.730	-1809.833		
0.054		531.468	393.419	255.294	117.168	-20.958	-159.083	-297.209	-435.334	-573.592	-711.990	-850.389	-989.011	-1127.685	-1266.487	-1405.438	-1544.388		
0.056		926.866	780.194	633.523	486.824	339.897	192.970	46.043	-100.883	-247.810	-394.737	-541.781	-688.997	-836.213	-983.704	-1131.211	-1278.944		
0.060		1321.716	1166.525	1011.334	855.890	700.432	544.974	389.296	233.567	77.839	-77.889	-233.617	-389.345	-545.240	-701.273	-857.389	-1013.728		
0.062		1716.144	1552.460	1388.509	1224.547	1060.584	896.439	732.194	567.950	403.489	238.959	74.430	-90.100	-254.630	-419.159	-583.968	-748.818		
0.064		2110.164	1937.724	1765.284	1592.844	1420.216	1247.482	1074.748	901.841	728.810	555.779	382.476	209.145	35.815	-137.516	-310.847	-484.297		
0.066		2504.184	2322.988	2141.792	1960.595	1779.399	1598.203	1416.837	1235.332	1053.826	872.097	690.280	508.391	326.259	144.126	-38.006	-220.138		
0.068		2898.204	2708.252	2518.300	2328.347	2138.395	1948.443	1758.491	1568.538	1378.372	1188.095	997.811	807.207	616.603	425.769	234.836	43.902		
0.070		3292.224	3093.516	2894.808	2696.099	2497.391	2298.683	2099.975	1901.266	1702.558	1503.850	1304.821	1105.773	906.561	707.170	507.677	307.942		
0.072		3686.244	3478.780	3271.316	3063.851	2856.387	2648.923	2441.459	2233.994	2026.530	1819.066	1611.601	1404.004	1196.184	988.342	780.164	571.982		
0.074		4079.856	3863.939	3647.824	3431.603	3215.383	2999.163	2782.942	2566.722	2350.502	2134.282	1918.061	1701.841	1485.621	1269.052	1052.461	835.585		
0.076		4473.258	4248.626	4023.967	3799.307	3574.379	3349.403	3124.426	2899.450	2674.474	2449.498	2224.521	1999.545	1774.569	1549.592	1324.378	1099.015		
0.078		4866.082	4633.007	4399.911	4166.508	3933.106	3699.643	3465.910	3232.178	2998.446	2764.714	2530.981	2297.249	2063.517	1829.784	1596.052	1362.160		
0.080		5258.719	5017.101	4775.297	4533.492	4291.564	4049.419	3807.273	3564.906	3322.418	3079.930	2837.441	2594.953	2352.465	2109.976	1867.488	1625.000		

Table 15: Output & Price of Product 2

		Output																	
		30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15		
544.97		141.487	93.828	46.168	-1.492	-49.152	-96.811	-144.471	-192.131	-239.790	-287.450	-335.110	-382.770	-430.429	-478.089	-525.779	-573.538		
0.050		273.507	221.447	169.387	117.326	65.266	13.205	-38.855	-90.915	-142.976	-195.036	-247.097	-299.157	-351.217	-403.278	-455.338	-507.408		
0.052		405.527	349.066	292.605	236.144	179.683	123.222	66.761	10.300	-46.161	-102.622	-159.083	-215.544	-272.005	-328.466	-384.927	-441.388		
0.054		537.453	476.686	415.824	354.962	294.101	233.239	172.377	111.515	50.654	-10.208	-71.070	-131.931	-192.793	-253.655	-314.517	-375.378		
0.056		669.252	604.105	538.957	473.780	408.518	343.256	277.993	212.731	147.468	82.206	16.944	-48.319	-113.581	-178.844	-244.106	-309.368		
0.058		801.052	731.511	661.970	592.429	522.888	453.272	383.609	313.946	244.283	174.620	104.957	35.294	-34.369	-104.032	-173.695	-243.358		
0.060		932.851	858.917	784.983	711.048	637.114	563.180	489.225	415.162	341.098	267.034	192.970	118.907	44.843	-29.221	-103.285	-177.348		
0.062		1064.546	986.323	907.995	829.668	751.340	673.013	594.685	516.358	437.913	359.448	280.984	202.519	124.055	45.591	-32.874	-111.338		
0.064		1196.119	1113.540	1030.961	948.287	865.566	782.846	700.125	617.404	534.683	451.862	368.997	286.132	203.267	120.402	37.537	-45.328		
0.066		1327.691	1240.727	1153.762	1066.798	979.792	892.678	805.564	718.450	631.336	544.222	457.010	369.745	282.479	195.213	107.948	20.682		
0.068		1459.264	1367.914	1276.563	1185.213	1093.863	1002.511	911.004	819.496	727.989	636.481	544.974	453.357	361.691	270.025	178.358	86.692		
0.070		1590.778	1495.101	1399.365	1303.628	1207.892	1112.156	1016.420	920.542	824.642	728.741	632.840	536.939	440.903	344.836	248.769	152.702		
0.072		1722.118	1622.167	1522.166	1422.044	1321.922	1221.800	1121.679	1021.557	921.295	821.000	720.706	620.412	520.115	419.647	319.180	218.712		
0.074		1853.458	1749.129	1644.799	1540.459	1435.952	1331.444	1226.937	1122.429	1017.922	913.260	808.573	703.885	599.198	494.459	389.590	284.722		
0.076		1984.798	1876.091	1767.383	1658.676	1549.968	1441.088	1332.195	1223.302	1114.408	1005.515	896.439	787.358	678.278	569.197	460.001	350.732		
0.078		2116.138	2003.053	1889.967	1776.882	1663.796	1550.711	1437.453	1324.174	1210.895	1097.616	984.305	870.831	757.357	643.883	530.409	416.742		

The two-way analysis reveals the influence of both output and price variables on the NPV of the project. From the above analysis, it is evident that the NPV easily becomes negative when the output of both products is generally decreasing. Even in cases where the price of both products increases but the output still decreases, the project remains susceptible to becoming unprofitable. Therefore, we need to take into account the potential risks seriously when considering a decrease in the output of both products during the operational phase of the project.



Scenario Summary

Product 1 - Weight-loss meal

Commentary

We assume in the best-case scenario, when the major factors are favorable, the NPV will reach 4779.26. This is an extremely attractive level of profit for investors.

In the typical case, where the factors remain relatively unchanged, the project still generates a significant profit of 1326.66 along with a high IRR of 46%.

However, in the worst-case scenario, where the production decreases by 5 meals per day and the costs increase accordingly, the NPV turns negative, indicating that the project carries a certain level of risk.

Table 16: Scenario Summary of Product 1

	CURRENT VALUE	BEST CASE (1)	NORMAL CASE (1)	WORST CASE (1)
PRICE	0.06	0.07	0.065	0.06
OUTPUT	80	90	82	75
PRODUCT COST	0.03	0.02	0.032	0.035
MACHINE & EQUIPMENT COST	120	110	115	125
BUILDING RENT	10	9	11	11
ELECTRICITY & WATER	8	7	8.5	9
NPV	544.97	4779.26	1326.66	-477.84
IRR	26%	284%	46%	2%
BCR	5.50	44.06	12.44	2.79

Scenario Summary

Product 2 - Weight-gain meal

Table 17: Scenario Summary of Product 2

	CURRENT VALUE	BEST CASE (1)	NORMAL CASE (1)	WORST CASE (1)
PRICE	0.07	0.08	0.075	0.07
OUTPUT	20	30	25	15
PRODUCT COST	0.035	0.025	0.036	0.04
MACHINE & EQUIPMENT COST	10	9	10	11
BUILDING RENT	120	115	125	125
ELECTRICITY& WATER	8	7	8	8
NPV	544.97	2623.10	1230.85	-48.94
IRR	26%	95%	43%	12%
BCR	5.50	23.61	10.77	0.61

Commentary

We assume in the best-case scenario, when the major factors are favorable, the NPV will reach 2623.10. This is an extremely attractive level of profit for investors.

In the typical case, where the factors remain relatively unchanged, the project still generates a significant profit of 1230.85 along with a high IRR of 43%.

However, in the worst-case scenario, where the production decreases by 5 meals per day and the costs increase accordingly, the NPV turns negative, indicating that the project carries a certain level of risk.



RISK ANALYSIS

Crystal Ball Analysis - Steps to Calculate

Collecting data from competing restaurants

We collect 30 price level and direct cost from other healthy restaurants in Ho Chi Minh city in Excel file

Identify type of Correlation

Next, we calculate the correlation between those date (in figure 3,4)

Figure 3: Define Correlations

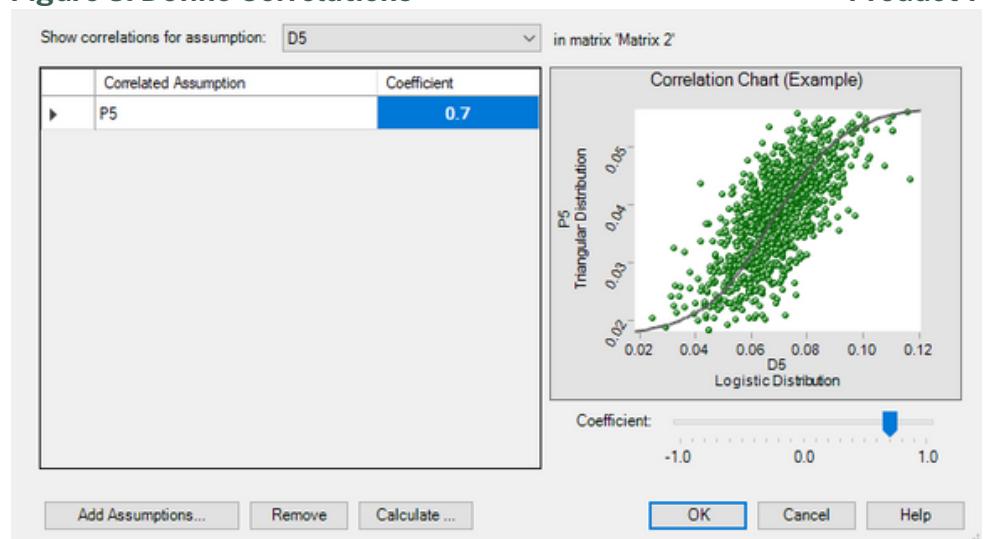
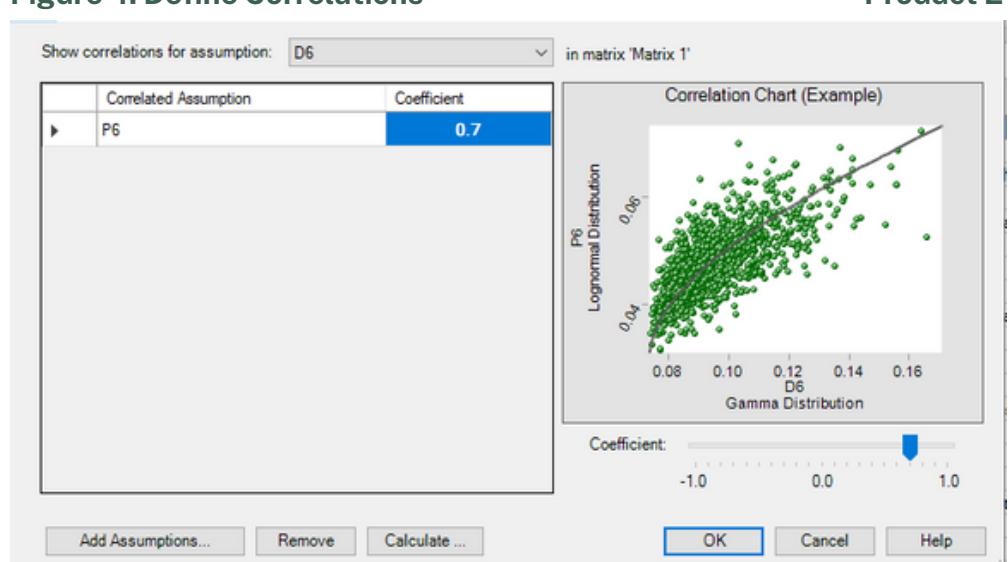


Figure 4: Define Correlations



The chart shows the correlation between price and main costs in the project's risk analysis matrix. The correlation coefficient between price and cost is 0.7, which is a positive correlation. This means there is a positive relationship between price and main costs. In other words, when the main cost of a product increases, the price also tends to increase and vice versa.

The chart also shows a scatter plot of prices and main costs. The dots on the scatter plot are colored according to the value of the correlation coefficient. Green dots represent areas with positive correlation. And the size of the dots represents the strength of the correlation.

RISK ANALYSIS

Crystal Ball Analysis - Steps to Calculate

Using 1000 samples to determine the fluctuation range and the certainty of NPV

Then, we can see the fluctuation range of NPV. Through this chart, it can be seen that the NPV of this project have a high probability to be positive. The project is the most likely to have the NPV in range from 1000 to 2000. It means our project is attractive as it could bring a great amount of profit for investors in the next 10 years.

Figure 5: NPV Forecast

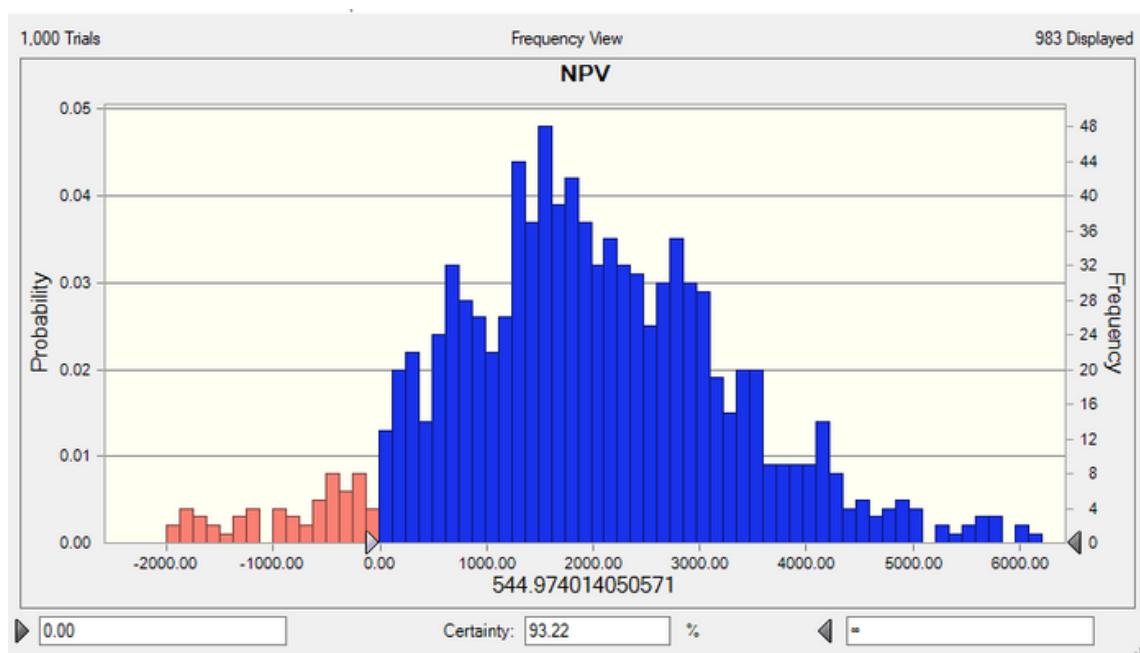
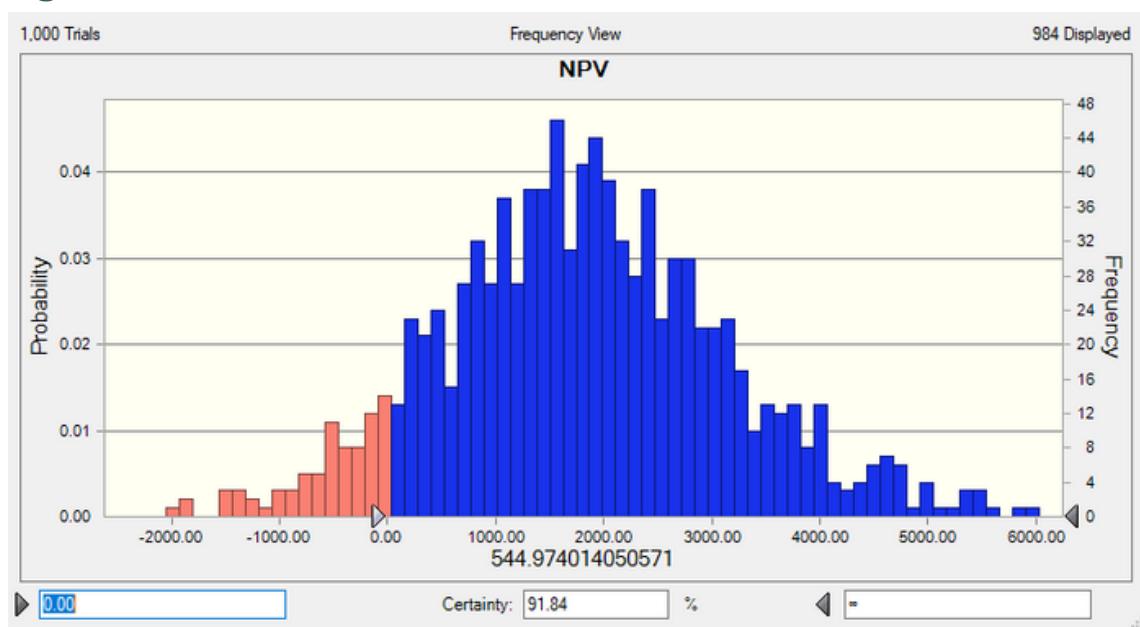


Figure 6: NPV Forecast



IMPACT ANALYSIS

Economics

- The Eat Clean Project is expected to enhance the operational efficiency of the private economic sector by incorporating 4.0 technology into the clean food and beverage business model.
- The development of the Eat Clean Project has contributed in part to the country's GDP through income from consumers, taxes, and other expenditures.

Society:

- The project can promote clean eating, leading to improved public health by reducing the incidence of diet-related diseases such as obesity, diabetes, and cardiovascular issues. In a broader perspective, a healthier population incurs lower healthcare costs, alleviating the burden on the healthcare system and government resources.
- The project's operations involve creating jobs for workers, including medium-salary positions such as delivery workers or kitchen assistants and high-salary roles such as chefs.





Conclusion

Project Summary

The Emeal project is designed to meet the needs of a large segment of the population, especially those who are health-conscious and value a healthy lifestyle. What sets our project apart from similar ones in the market is that we provide balanced and pre-determined calorie meals tailored to the individual's needs at a relatively lower price compared to competing counterparts. Emeal offers a diverse menu, with daily variations in dishes, using fresh, safe, and clearly sourced ingredients. We also provide doorstep delivery services, ensuring trust and convenience for all customers.

The clean food project is highly feasible due to the estimated high profit opportunities coupled with relatively low risk. However, financial analysis indicates that the project has a long payback period, with most of the profits being realized in the later years of operation. Therefore, the biggest challenge of the project lies in repaying the bank loan during the initial years. To make the project feasible and proceed, it is necessary to negotiate with the bank regarding a loan repayment plan for the early years.

On the other hand, when estimating risks, it can be observed that price, raw material procurement costs, and output volume have a significant impact on the project's revenue and profitability. Therefore, the project needs additional measures or contingency plans to address potential shortages in daily sales volume and the cost of raw materials required for production.

The project brings economic and social values through providing nutritious meals, improving the quality of health, as well as the quality of the workforce, and contributing to the overall economy.

Contact us for further inquiries

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