UC GENERAL INVESTMENT LIMITED.
P.O. BOX 2860
DAR ES SALAAM – TANZANIA.

BUSINESS PLAN

On

ESTABLISHMENT OF STEEL MANUFACTURING PLANT IN PLOT NUMBER 171 AT KIBAHA, COAST

Prepared by:
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1.1 Index

1.1.1.1 List of Appendices:-

0.1 Introduction

This feasibility study report is being prepared for **M/S UC GENERAL INVESTMENT LIMITED of P.O. Box 2860 DAR ES SALAAM - TANZANIA,** Tanzania hereinafter referred to as UCGIL has undertaken a project to venture into the manufacturing of Steel, and other allied products. The promoters are well experienced in the envisaged line of business. The promoters have enough financial resources to see through the project and will bring in foreign exchange right from the inception stage of the project.

The purpose of this study is to assess the commercial viability and operational feasibility of the project being undertaken by UCGIL Most of the data has been complied by the promoters' own research and study in Tanzania and is first hand information. The financials have also been worked out on the basis of market and cost information provided by the promoters of the project.

This report has additionally deliberated upon the social and related economic benefits (net) that will accrue to the nation and has given adequate weight age for the same in the conclusion & recommendation paragraph.

02. Company Details:

Registration:

M/s UCGIL has been registered with the Registrar of Companies on 3RD of October, 2023 as a limited liability company with a paid- up share capital of T.shs 1,000,000/= The Authorized share capital of the company is same as the paid-up share capital. The registration number of the company is 169017263.

01. The Project:

As stated in the paragraph on introduction, the project is "to process good quality Steel and other related products, by utilizing local inputs to its maximum and thereby contribute towards the manufacturing sector of the economy and create wealth and employment resulting into a positive cascading impact on the entire economy".

The basic purpose of the entire project is to add value to the abundantly available inputs maize, beans, tomatoes, potatoes, cassavas, and all kinds of green vegetables, which have hitherto

not been adequately exploited. The project will create more wealth for the nation and shall endeavor to bring in more prosperity and economic independence.

2 Steel Manufacturing Process

The basic steps in the manufacturing of Steel are generally as follows:

- blending of the mix ingredients
- pasteurization
- homogenization
- aging the mix
- Freezing and Hardening
- packaging

2.1.1.1 Blending

First the ingredients are selected based on the desired formulation and the calculation of the recipe from the formulation and the ingredients chosen, then the ingredients are weighed and blended together to produce what is known as the "fresh material mix". Blending requires rapid agitation to incorporate powders, and often high-speed blenders are used.

2.1.1.2 Pasteurization

The mix is then **pasteurized**. Pasteurization is the biological control point in the system, designed for the destruction of pathogenic bacteria. In addition to this very important function, pasteurization also reduces the number of spoilage organisms such as psychographs, and helps to hydrate some of the components (proteins, stabilizers).

Pasteurization (Ontario regulations): 69° C/30 min. 80° C/25s

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Both batch pasteurizes and continuous (HTST) methods are used.

Batch pasteurizes lead to more whey protein denaturation that some people feel gives a better body to the material. In a batch pasteurization system, blending of the proper ingredient amounts is done in large jacketed vats equipped with some means of heating, usually steam or hot water. The product is then heated in the vat to at least 69 C (155 F) and held for 30 minutes to satisfy legal requirements for pasteurization, necessary for the destruction of pathogenic bacteria. Various time temperature combinations can be used. The heat treatment must be severe enough to ensure destruction of pathogens and to reduce the bacterial count to a maximum of 100,000 per gram. Following pasteurization, the mix is homogenized by means of high pressures and then is passed across some type of heat exchanger (plate or double or triple tube) for the purpose of cooling the mix to refrigerated temperatures (4 C). Batch tanks are usually operated in tandem so that one is holding while the other is being prepared. Automatic timers and valves ensure the proper holding time has been met.

Continuous pasteurization is usually performed in a high temperature short time (HTST) heat exchanger following blending of ingredients in a large, insulated feed tank. Some preheating, to 30 to 40 C, is necessary for solubilization of the components. The HTST system is equipped with a heating section, a cooling section, and a regeneration section. Cooling sections of ice cream mix HTST presses are usually larger than milk HTST presses. Due to the preheating of the mix, regeneration is lost and mix entering the cooling section is still quite warm.

2.1.1.3 Homogenization

The mix is also **homogenized** which forms the fat emulsion by breaking down or reducing the size of the fat globules found in material to less than 1 μ m. Two stage homogenization is usually preferred for fresh material mix. Clumping or clustering of the fat is reduced thereby producing a thinner, more rapidly whipped mix. Melt-down is also improved. Homogenization provides the following functions in fresh material processing:

- Reduces size of fat globules
- Increases surface area
- Forms membrane
- makes possible the use of butter, frozen cream, etc.

By helping to form the fat structure, it also has the following indirect effects:

- Makes a smoother material.
- Gives a greater apparent richness and palatability
- Better air stability
- Increases resistance to melting

Homogenization of the mix should take place at the pasteurizing temperature. The high temperature produces more efficient breaking up of the fat globules at any given pressure and also reduces fat clumping and the tendency to thick, heavy bodied mixes. No one pressure can be recommended that will give satisfactory results under all conditions. The higher the fat and total solids in the mix, the lower the pressure should be. If a two stage homogenize is used, a pressure of 2000 - 2500 psi on the first stage and 500 - 1000 psi on the second stage should be satisfactory under most conditions. Two stage homogenization is usually preferred for material and mix. Clumping or clustering of the fat is reduced thereby producing a thinner, more rapidly whipped mix. Melt-down is also improved.

Ageing

The mix is then **aged** for at least four hours and usually overnight. This allows time for the fat to cool down and crystallize, and for the proteins and polysaccharides to fully hydrate. Aging provides the following functions:

- Improves whipping qualities of mix and body and texture of material and It does so by:

- Providing time for fat crystallization, so the fat can partially coalesce;
- Allowing time for full protein and stabilizer hydration and a resulting slight viscosity increase;
- Allowing time for membrane rearrangement and protein/emulsifier interaction, as emulsifiers displace proteins from the fat globule surface, which allows for a reduction in stabilization of the fat globules and enhanced partial coalescence.

Aging is performed in insulated or refrigerated storage tanks, silos, etc. Mix temperature should be maintained as low as possible without freezing, at or below 5 C. An aging time of

overnight is likely to give best results under average plant conditions. A "green" or unaged mix is usually quickly detected at the freezer.

2.1.2 Freezing and Hardening

Following mix processing, the mix is drawn into a flavour tank where any liquid flavours, fruit purees, or colours are added. The mix then enters the **dynamic freezing process** which both freezes a portion of the water and whips air into the frozen mix. The "barrel" freezer is a scraped-surface, tubular heat exchanger, which is jacketed with a boiling refrigerant such as ammonia or freon. Mix is pumped through this freezer and is drawn off the other end in a matter of 30 seconds, (or 10 to 15 minutes in the case of batch freezers) with about 50% of its water frozen. There are rotating blades inside the barrel that keep the ice scraped off the surface of the freezer and also dashers inside the machine which help to whip the mix and incorporate air.

Hardening

After the particulates have been added, material is packaged and is placed into a blast freezer at -30° to -40° C where most of the remainder of the water is frozen. Below about -25° C, is stable for indefinite periods without danger of crystal growth; however, above this temperature, crystal growth is possible and the rate of crystal growth is depending upon the temperature of storage.

A primer on the theoretical aspects of freezing will help you to fully understand the freezing and recrystallization process.

Hardening involves static (still, quiescent) freezing of the packaged products in blast freezers. Freezing rate must still be rapid, so freezing techniques involve low temperature (-40oC) with either enhanced convection (freezing tunnels with forced air fans) or enhanced conduction (plate freezers).

The rate of heat transfer in a freezing process is affected by the temperature difference, the surface area exposed and the heat transfer coefficient ($Q=U\ A\ dT$). Thus, the factors affecting hardening are those affecting this rate of heat transfer:

- Temperature of blast freezer - the colder the temperature, the faster the hardening, the smoother the product.
- Rapid circulation of air - increases convective heat transfer.
- Temperature of material when placed in the hardening freezer - the colder the material at draw, the faster the hardening; - must get through packaging operations fast.
- Size of container - exposure of maximum surface area to cold air, especially important to consider shrink-wrapped bundles - they become a much larger mass to freeze. Bundling should be done after hardening.
- Method of stacking containers or bundles to allow air circulation. Circulation should not be impeded - there should be no 'dead air' spaces (e.g., round vs. square packages).
- Care of evaporator - freedom from frost - acts as insulator.
- Package type, should not impede heat transfer - e.g., Styrofoam liner or corrugated cardboard may protect against heat shock after hardening, but reduces heat transfer during freezing so not feasible.

Formulations can be derived from a number of different starting points. Details and suggested formulas are detailed on the formulations page, but turning the formulation into a recipe depends on the ingredients used to supply the components, and it is then necessary to do a **mix calculation** to determine the required ingredients based on the formula. **Material and** are very similar to the composition of sauces but must contain between 3% and 5% vegetables by legal definition.

The ingredients to supply the desired components are chosen on the basis of availability, cost, and desired quality. These ingredients will now be examined in more detail.

The **limitations** on their use include off flavors, which may arise from some of the products, and an excess of lactose, which can lead to the defect of sandiness prevalent when the lactose crystallizes out of solution. Excessive concentrations of lactose in the serum phase may also lower the freezing point of the finished product to an unacceptable level.

The **proteins**, which make up approximately 4% of the mix, contribute much to the development of structure in material and including:

- Emulsification properties in the mix
- Whipping properties in the vegetables

- Water holding capacity leading to enhanced viscosity and reduced iciness

It has become common in the industry to substitute all or a portion of the sucrose content with sweeteners derived from **corn syrup**. This sweetener is reported to contribute a firmer and more chewy body to the material, is an economical source of solids, and improves the shelf life of the finished product. Corn syrup in either its liquid or dry form is available in varying **dextrose equivalents (DE)**. The DE is a measure of the reducing sugar content of the syrup calculated as dextrose and expressed as a percentage of the total dry weight. As the DE is increased by hydrolysis of the cornstarch, the sweetness of the solids is increased and the average molecular weight is decreased. This results in an increase in the freezing point depression, in such foods as tomato and carrot creams, by the sweetener. The lower DE corn syrup contains more dextrin, which tie up more water in the mix thus supplying greater stabilizing effect against coarse texture.

An enzymatic hydrolysis and isomerization procedure can convert glucose to fructose, a sweeter carbohydrate, in corn syrups thus producing a blend (**high fructose corn syrup, HFCS**) which can be used to a much greater extent in sucrose replacement. However, these HFCS blends further reduce the freezing point producing a very soft ice cream at usual conditions of storage and dipping in the home.

A balance is involved between **sweetness**, **total solids**, and **freezing point**.

COST OF THE PROJECT & MEANS OF FINANCE:-

A. Cost of the Project:-

S. No.	Details	US $
1	Land & Building	250,000/=
2.	Plant & Machinery	360,000/=
3	Furniture, Computers & Fixtures	50,000/=
	Vehicles	210,000/=
4	Others	60,000/=
	Pre-operating Costs	40,000/=
	Initial working capital	30,000/=
	Total Cost of the Project	**1,000,000/=**

B. Means of Finance:-

	Details	**US$**
	Equity Funds	**1,000,000**
	Total Means of finance	**1,000,000**

The total cost of the project consisting of has been estimated at US $1,000,000/= As can be seen from the above chart, majority of the expenses involved will be on plant and machinery and land and Building Nearly 73.33%. Besides considerable money will be required in the starting up of the unit which has been grouped under the head pre-operating and initial working capital costs. The will be implemented within a span of two Building will be a simple structure based on pillars with sidewalls open to facilitate future as day will be achieved gradually, however optimum capacity will be reached within 2 years.

11. Project Financials:-

11.01 Assumptions

a) The rate of one US $ is equal to T.shs 2,500/=
b) Required labor force will be available
c) Required permits will be granted within the limited time schedule to ensure implementation as per schedule.
d) The first phase will be operational within a span of three months.
e) Output in first phase will be 100 cubic meters of ice cream and Ice cream taken together, per day.
f) The second phase will taken nearly 21 months to complete after the start of first year and will increase the capacity to 450 cubic meters per day.
g) Total investment will be US$ 1,000,000
h) The project will have own finance
i) Land will be available on lease in future as and when required.
j) Import duty exemption and deferment of VAT will be available on import of plant and machinery.

11.02 Projected Five Years Profitability Statements

As can be seen from the enclosed projected profitability statement, the company will not earn profits in the first year where the operations are to run only for six months, however there will be cash- profits.

The company will attain a turnover of US $ 0.62 million in first six months; will go up to US $ 9.240 millions in the next years and from third year of operation will remain steady at US $ 0.8 millions.

The profits will start coming from the 2nd year of operations. From the year 4 and onwards the annual profits will be in the range of US $ 200,000 and above. The project enjoys a payback period of 5 years.

The company will be earning gross profit @ 6% and net profit of nearly 2.5%. For a very large project, like this a net profit of 2% is quite reasonable. Government will earn lot of revenues due to such high turnover.

Selling costs have been assumed at 2% of the sales and other overheads have been assumed not to cross US $ 50,000 a month including manpower costs.

Depreciation has been provided as per the prevailing income tax rates. Further full depreciation has been provided on assets purchased during the year. Separate schedules are attached with this report for calculation of depreciation.

Projected Five Years Balance Sheet

The enclosed balance sheet shows very sound positions of the company. The current assets ration is in excess of 1.2 from the beginning and by the year 5 it reaches 2.

Inventory will be maintained only for a period of one week. The reason being the plant is going to be located in the close proximity of ice cream.

Since majority of sales will be done outside Tanzania, vide advance TT or L.C debtors are not expected to be on the higher side. However for demotic sales on month credit has been considered. Creditors will be outstanding for a period of 15 days and suppliers of services will be paid at the expiry of one month.

Projected Five Years Funds Flow Statements:-

As can be seen from the appended projected funds flow statement the company will be financed by the promoter's own funds. In the initial year (2005) the investment will be of US $ 1,000,000/=.

Operating profits will be ploughed in to the business. Once the operations are steadied form the year 2006, the annual contribution of operational profits shall be the tune of US $ 900,000/=

Depending on the surplus available, promoters loan will be re-paid. As can be seen the company shall be in a position to commence repayment or promoters' loan by the year 2006.

As the operations will grow, the net working capital requirement will also grow. As can be seen the increase in net current assets will be from US $ 90,000/= (year 2005) to US $ 680,000/= (year 2008). The company assumes to maintain a positive cash balance of US $ 25,000/= to US $ 50,000/=.

Projected Five Years Taxation Schedule:-

The company will enjoy tax incentives as per the governing laws of the country. It will have taxable profits only from the year 2008 and will then onwards contribute to the exchequer in excess of US $ 150,000/= in the first year and then onwards in excess of US $ 340,000/= The company may reduce its tax burden by investing or expanding its operations and in either case the country benefits.

Social & Development Benefits:-

- **Employment creation**

  As has been observed earlier this project will provide direct employment opportunities to more than 100 locals inclusive of skilled, semi- skilled and un-skilled class. Few expatriates will also be employed as per the requirement of the project.

  This direct employment of more than 100 individuals will generate indirect employment for more than 1,000 individuals. it can be concluded that this project will have a very positive impact on the level of employment in the country and will be welcome change.

- **Transfer of technology**

  This project being a manufacturing project will usher in the country technology. Although the technology is simple the advantages to the country are quite significant. The country will get the advantage of value addition due to such incoming technology. Further the country can reduce its dependence on imports for the finished products manufactured by this project. Local employees will get on-the-job training from the experts (expatriate) employed and in long run will improve the technical competence of the local population.

- **Inflow of foreign exchange**

  Majority of the output will be exported out of the country. This will have two positive effects on the foreign exchange reserves of the country. In the first place the imports of the output will be reduced which will enable the country to save on the outgo of foreign currency and secondly the output produced will be exported which will bring in the country foreign currency.

Thus this project will provide positive impact on the foreign currency reserves of the country.

- **Lowering of construction cost.**

  As the Materials and will be available from within the country the country will get the benefit of lower cost of manufacture. In a very small way this will have a positive bearing on the cost of manufacture of various items using material and .

- **Contribution to the exchequer.**

  This project will contribute substantially to the society in general and to the exchequer in particular. As has been observed the total turnover at 100% utilization will be in the range of US $ 40 million. This will result into VAT outflow of substantial amounts. Besides the company will be contributing tremendously in terms of PAYE and NSSF. In addition the company will also be contributing in terms of corporate taxation from the year 2008 onwards.

- **Positive cascading impact on the nation's economy.**

  This project will have overall positive impact on the society. It will not only save the precious foreign currency reserves of the country by producing import substitute products, and by exporting the final product, but will also generate direct employment to more than 100 individuals and will provide means of livelihood to more than 1000 individuals. The cascading positive impact on the society will be too great. This project will lead to creation of national wealth. Its contribution to the exchequer will also be quite significant in terms of NSSF, PAYE, VAT and direct taxation apart from skills and development levy.

  One more advantage of this project is its location. Since it is located at Dar es Salaam which is not fully developed, will get more opportunities to commercially expand and develop. This project will thus result into regional development. This project will thus held the government to further its own objective of promoting regional development.

3 Conclusion & Recommendation:-

The foregoing write-up indicates following benefits to the country, which in turn pleads for immediate acceptance of this project as a feasible project.

- The country will get a manufacturing unit, which will add to its scarce manufacturing base. As on date the country's manufacturing base is very low with contribution of 9% to the GDP and thereby making the economy pre-dominantly agriculture oriented.

- The project will bring in latest technology in the relevant field and will ensure training or development of skilled labour force in the country. The labour force will get on –job training and will thus make them more and more competent.

- All products envisaged to be manufactured are basically import substitute and will therefore save the scarce foreign currency for the country. Apart from that the country will save in terms of lowering of cost of manufacture and lower construction cost which will again lead to lower cost of other manufactured items.

- The project when implemented in full over a period of 24 months will ensure that there will be a direct flow of foreign currency in the country to the tune of US $ 1.5 million which is considerable by any standard.

Appendix 1

UC GENERAL INVESTMENT LIMITED INVESTMENTS COST.

USD

	TOTAL
BUILDING AND BUILDINGS	250,000
PLANT AND MACHINERY/EQUIPMENTS	360,000
MOTOR VEHICLES	210,000
OTHERS	50,000
FURNITURE AND FITTING	50,000
WORKING CAPITAL	30,000
	0
PRE-OPERATIONAL EXPENSES	40,000
TOTAL INVESTMENT COST	**1,000,000**

Appendix III

UC GENERAL INVESTMENT LIMITED
FINANCING PATTERN

USD

	FOREIGN	LOCAL	TOTAL
EQUITY	1,000,000		1,000,000
LOAN			
TOTAL			**1,000,000**

Appendix II

UC GENERAL INVESTMENT LIMITEDDEPRECIATIONSCHEDULE

	USD		1	2	3	4	5	6	7	8	9	10
Land and Building	1,480,000	4%	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200
Plant&Machinery/Equip	85,000	12.5%	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400	17,400
Others	25,000											
Motor vehicle	130,000	25%	19,560	19,560	19,560	19,560	19,560	19,560	19,560	19,560	19,560	19,560
Furniture & equipment	290,000	12.5%	22,750	22,750	22,750	22,750	22,750	22,750	22,750	22,750	22,750	22,750
Pre-operational expenses	20,000	20%	4,400	4,400	4,400	4,400	4,400					
	2,030,000		**66,310**	**66,310**	**66,310**	**66,310**	**66,310**	**61,910**	**61,910**	**61,910**	**61,910**	**61,910**

UC GENERAL INVESTMENT
LIMITEDWORKING CAPITAL

Appendix VI

tshs 000

YEAR	**Assump.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Stock											
Materials	3 months	125	141	157	157	157	157	157	157	157	157
	essential										
	packs										
Tiles and others	1 months	29	33	37	37	37	37	37	37	37	37
	requirement										
Utilities	2 months	8	8	8	8	8	8	8	8	8	8
Cash	1 months	12	12	12	12	12	12	12	12	12	12
		174	194	214	214	214	214	214	214	214	214
Debtors											
5% income		387	434	484	484	484	484	484	484	484	484
Creditors											
1 month overheads		32	36	40	40	40	40	40	40	40	40
Total Creditors		32	36	40	40	40	40	40	40	40	40
Net Working Capital		355	398	444	444	444	444	444	444	444	444
Charge in Working											
Capital		**355**	**43**	**46**							

Appendix V

UC GENERAL INVESTMENT LIMITED
OPERATING COSTS

TSHS.000

	1	2	3	4	5	6	7	8	9	10
Repair & Maintenance	45,000	46,000	62,370	31,770	31,770	31,770	31,770	31,770	31,770	31,770
Fuel Oil	23,650	28,010	31,770	18,079	18,079	18,079	18,079	18,079	18,079	18,079
Administration	12,000	17,471	18,079	6,112	6,112	6,112	6,112	6,112	6,112	6,112
Insurance	4,884	5,501	6,112	19,058	19,058	19,058	19,058	19,058	19,058	19,058
Direct Fees	11,058	12,050	19,058	6,869	6,869	6,869	6,869	6,869	6,869	6,869
Other directs costs	5,495	6,182	6,869	50,289	50,289	50,289	50,289	50,289	50,289	50,289
Utilities	41,000	42,500	50,289	78,720	78,720	78,720	78,720	78,720	78,720	78,720
Salaries and Wages	78,720	78,720	78,720	78,720	78,720	78,720	78,720	78,720	78,720	78,720
Total Operating Costs	**221,808**	**236,434**	**273,267**	**289,617**	**289,617**	**289,617**	**289,617**	**289,617**	**289,617**	**289,617**

Appendix VIII

UC GENERAL INVESTMENT LIMITED
OVERHEAD EXPENSES

TSHS.000

	Assumpt.	1	2	3	4	5	6	7	8	9	10
Repairs and Maintenance		501,899	564,637	627,374	627,374	627,374	627,374	627,374	627,374	627,374	627,374
Fueil and Oil		257,418	289,594	321,772	321,772	321,772	321,772	321,772	321,772	321,772	321,772
Tyres and Tubes replacement		352,650	396,731	440,813	440,813	440,813	440,813	440,813	440,813	440,813	440,813
Administrative		68,863	77,471	86,079	86,079	86,079	86,079	86,079	86,079	86,079	86,079
Insurance		4,889	5,501	6,112	6,112	6,112	6,112	6,112	6,112	6,112	6,112
Direct Fees		19,058	19,058	19,058	19,058	19,058	19,058	19,058	19,058	19,058	19,058
TOTAL		**887,387**	**1,352,995**	**1,501,208**	**1,501,208**	**1,501,208**	**1,501,208**	**1,501,208**	**1,501,208**	**1,501,208**	**1,501,208**