

Business Plan

Establishment of Cashew-Nut Processing & Export Project

Mtoni Mtongani, Temeke Municipality,
Dar-es-salaam, TANZANIA



HK International (T) Limited
P.O. Box 38579,
Dar-es-salaam,
TANZANIA

August, 2024



HK International (T) Limited

Project Information

Project Name	<ul style="list-style-type: none">Value Addition in Agricultural Crops: Cashew nuts
Project Concept	<ul style="list-style-type: none">Establish one Processing Plant & export marketing of Tanzania's cashew -nuts
The Products	<ul style="list-style-type: none">Cashew Products:<ul style="list-style-type: none">(i) Cashew nut kernels(ii) Cashew nut shells
Project Locations	<ul style="list-style-type: none">Mtoni Mtongani, Plot no. 8, Kilwa Road. Temeke Municipality, Dar-es-salaam
Project Size	<ul style="list-style-type: none">Output –<ul style="list-style-type: none">➤ Cashew-nut kernels 3 MT/Day 75 MT/Month 900MT/Year
Investment Cost	<ul style="list-style-type: none">Total Investment.USD 1,707,567<ul style="list-style-type: none">○ Capital InvestmentUSD 782,543○ Working CapitalUSD 925,024
Project Financing	<ul style="list-style-type: none">○ Equity USD 332,543○ Long-Term LoanUSD 450,000○ Short-term Loan..... USD 925,024
Loan Terms	<ul style="list-style-type: none">5-Year Medium-Term Loan12-month Grace on PrincipalCollateral – Assets of the Project
Investment Period	<ul style="list-style-type: none">8- months
Direct Employment	<ul style="list-style-type: none">315 people
Contact Address	<ul style="list-style-type: none">HK International (T) Ltd, P.O. Box 38579, Dar-es-salaam, TANZANIA
Contact Person	<ul style="list-style-type: none">Hassan Abdul Khan Director

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EXECUTIVE SUMMARY

- Cashew nut, best grown in the Tanzania soil, is one of the important nuts in the world and ranked first. Among the various nuts such as hazelnuts, almonds, etc., cashew nut enjoys an unenviable position and it is an unavoidable snack in all important social functions especially in the western countries.
- Cashew, mostly grown in coastal belts, has become Tanzania's most highly produced traditional cash crop as it accounts for 38.3% of traditional cash crop exports, followed by tobacco (22.5%), coffee (18.4%), cotton (9.3%), tea (5.2%), cloves (3.4%) and sisal (3.0%). The industry provides the basis for the livelihoods of almost 500,000 people, most of them small-scale farmers, farm labourers, processors and traders.
- **HK International (T) Ltd** (shortly, "HK International") is a local private investment company with its Head Offices in Dar-es-salaam. The company is actively working in several initiatives to build an equitable, sustainable and inclusive support system to small-scale farmers to improve agricultural crops value chain.
- Tanzania government has long identified private sector the driving force to the economic development of the country through addressing constraints of financing, management and maintenance of investment projects.
- This Business Plan has been prepared by HK INTERNATIONAL purposely to evaluate the viability of investing in large-scale cashew-nuts processing and export project in the country. The project will source the raw cashews from cashew nut growing areas of Mtwara and Lind regions in the south of Tanzania.
- HK INTERNATIONAL is intending to develop a rural-based sustainable project in the cashew sub-sector which is estimated to cost USD 1.71 million and generate over 315 direct jobs.



Background on HK INTERNATIONAL

2.1 Introduction

- **H.K International** is a Tanzania registered investment company. The founders of the company have been triggered by the business idea of processing and exporting cashew-nuts to produce something of value.
- The company was established in December, 2019 purposely to undertake the proposed Cashew nut processing and export project.

2.2 The Company Legal Status

- The proposed project is being implemented by H.K International, a private limited liability Company registered under Tanzania's Company Laws.
- The company business objectives are, among other things, to carry on the business of agricultural crops processing and marketing as well as wholesale, retail and distribution of various merchandise.
- The company has been granted with the following certification:
 - Certificate of incorporation no. 140-675-458
- The company will, in due course, apply and obtain other relevant certifications.

2.3 The Company Ownership

- H.K International is a corporate company owned by two shareholders. The authorized share capital of the company is TZS 10,000,000 divided into 10,000-shares of TZS 1,000 each. The authorized share capital will be increased overtime to match with the level of investment of the company.
- The company shareholders and their shares distribution are as presented below:

<i>Shareholders' Name</i>	<i>Shares</i>	<i>% Shareholding</i>	<i>Nationality</i>
Hassan Abdul Khan	520	52%	Tanzania
Krunal Bhesanja Mansulhbhai	480	48%	India
Total	1,000	100.00%	

- The shareholders have capacity to develop the project and their profiles are attached to this report.

Project Concept

3.1 Introduction

- Tanzania is among the world's largest producers of raw cashew nuts and accounts for 75% of the total production in East Africa.
- More than 80% of Tanzanian cashews are exported as raw cashew nuts to Vietnam and India for processing, before entering the global market.
- This project is set to contribute to the increased quantity of cashew-nut kernels (CNK) that will be exported from Tanzania with the view to address the impeding problem of Tanzania's perpetual loss in the cashew industry.



3.2 The Concept

- HK INTERNATIONAL is planning to invest in the cashew processing and export of CNK to new markets.
- The project entails increased value of raw cashew nuts from Tanzania while generating rural employment, increasing government revenues, among other benefits.
- The project will involve establishment of a modern cashew-nuts processing plant that will produce high-quality CNK for the USA, Europe and Asia markets.
- The processing plant will strategically be installed in Dar-es-salaam to tap the raw materials from cashew growing areas of Mtwara and Lind Regions.
- The processing plant will be sourced from China and will have capacity to produce 3,000Kg of Cashew nut kernels per annum, equivalent to a total of 10,500Kg of raw cashew nuts per day.



HK INTERNATIONAL STRATEGIC OBJECTIVES

4.1 Introduction

- The main promoter of the project is HK INTERNATIONAL. The project will primarily increase the export value of Tanzania' cashew industry through production of high-quality CNK that will meet international food standards.

4.2 HK INTERNATIONAL Vision

- Cashew processing project has been conceived with the national vision of creating strong economic base in global competitive environment.
- HK INTERNATIONAL **vision** is to bring about long term, socio-economic development of rural communities and stimulate the growth of a Tanzania's economy.

4.3 HK INTERNATIONAL Mission

- In this project, HK INTERNATIONAL **mission** is to reduce poverty by empowering smallholder cashew farmers in Tanzania to improve their overall wellbeing through investment in the agro-processing for value-addition of their cashew produce.

4.4 Project Objectives

- The development planning for the proposed project has broad national goals beyond that of a micro economy. The project aims to achieve national development targets in aspects of employment, industrial output, exports and environment protection.
- Accordingly, the HK INTERNATIONAL aims to attain the following:
 - Provide over 200 additional employments in five years
 - Increase national industrial output by processing over 10,000 MT/year raw cashew nuts.
 - Increase CNK export from Tanzania
 - Increase national output, government revenues and disposable income
 - Improve wellbeing of the rural community around the project areas.

The Business Opportunity

5.1 Cashew Value Chain

- While Africa accounted for 52% of global RCN production in 2018, it only processed 7.1% of this share. However, Asia produced 42.7% of global output of RCN but processed 87.5%. Statistics from the Cashew Nuts Board of Tanzania (CBT) shows in 2020/2021 harvest season, the country's RCN annual production was around 280,000 tonnes, of which only 14,000 tonnes were processed.
- HK INTERNATIONAL is working to increase the proportion of cashew processed in the country to gain more value for the people wellbeing.

5.2 USA and Europe Market

- United States of America (USA) and Europe present a huge market for CNK. Presently, Vietnam commands 80% of about 190,000-MT of CNK that the USA purchases annually followed by India. The two countries (India and Vietnam) are the major importers of Tanzania's RCN. Further, statistics show that Tanzania continues to lose over USD 180 million annually which is equivalent to TZS 414 billion for exporting 90% of its annual harvest in a raw form.
- HK INTERNATIONAL is positioning itself to ensure Tanzania takes a good share of USA market for CNK through direct export to USA and Europe.

5.3 Expertise in CNK Markets

- HK INTERNATIONAL is partnering with international stakeholders to expedite the export market. The company will establish network with stakeholders from cashew growing African countries: Tanzania and Mozambique (East Africa); Benin, Burkina Faso, Togo, Ghana, Nigeria, Senegal, Cote d'Ivoire and Guinea Bissau (West Africa).
- HK INTERNATIONAL will capitalise on shareholders' expertise to gain market access in USA, Europe, Middle East and Asian countries.

5.4 Government Support

- Several cashew-growing countries in Africa provide incentives to promote local processing. The bulk of these incentives are fiscal incentives that take the form of reductions of or exemptions from taxes, tariffs and fees, but there are also examples of regulatory measures and direct subsidies.
- Tanzania's government recognizes the role of private sector in bringing about socio-economic development through investments.
- In this project, HK INTERNATIONAL is expected to get the benefits of government incentives will constitute fiscal and non-fiscal investment incentives.

Investment Components

6.1 Introduction

- A key challenge for African cashew nut producers is the limited processing capacity, making many African cashew producers miss valuable economic opportunities. Presently, most cashew producers from Tanzania, export a larger part of their cashew harvest to Vietnam and India for processing.
- The project is investing in the processing facilities with the view to bring additional value to the crop as well as improve living conditions of the people in the cashews growing areas and the country at large.
- The project will extract CNK, which form only 20% to 24% of the cashew nut, and the remainder will become raw materials to be used in the manufacture of cashew-nut shell liquid (CNSL), charcoal briquettes and other products.



6.2 Project Components

Investment in the project will involve the following components:

a) Land and Buildings –

- The project has purchased the land for the development of the project in Mtoni Mtongani area in Temeke Municipality, suburb of the city of Dar-es-salaam.
- The project will construct a cashew nut processing factory building in the identified premises. The buildings will include warehouses for storage of raw materials and finished products, and other building amenities.
- It will, also, involve construction of boundary wall, administrative offices, civil works for water and electricity infrastructure and other external works. The civil works will, also, involve inner roads development.

b) Machinery and Equipment –

- The project will invest in a complete set of Cashew Processing plant with annual processing capacity of 3.0MT of Cashew Kernel per day.
- The project will import from China the cashew nut processing plant which will use hot processing system and will comprise of the following machinery components:

(i) RCN Calibrator system –

- The calibration equipment will have daily capacity of cleaning 10.5/tons of RCN per day.
- The unit will comprise of impurities removal system, RCN calibrator with feeding elevator, collecting conveyor, silo container for RCN and conveyor system.



(ii) RCN Steam Cooking System –

- The RCN steam cooking system will have steaming capacity of up to 10.5MT per day.
- The equipment will include cashew steamer automatic system, collecting and Transfer elevator, cashew nuts dryer machine, transfer conveyor system and silo reserve materials.



(iii) Shelling and Separation equipment –

- The shelling and separation machine will have capacity to process 10.5tonnes of RCN per day.
- The equipment will include cashew shelling machines.
- Other equipment include kernel collecting and transfer conveyor system, cleaning blower, feeding conveyor, trolley container cashew kernel, colour sorter, shell collector conveyor system and shell container silo.



(iv) Kernel Drying & Conditioning equipment –

- The kernel drying and conditioning equipment will have daily capacity to dry 10.5 tonnes RCN.
- The equipment will include cashew kernel dryer, extra dryer trolley with tray and humidifier material system.



(v) Peeling & Sorting Unit –

- The peeling and sorting equipment will have peeling capacity of 10.5 tonnes per day.
- The unit will comprise of cashew peeling machines, automatic feeding conveyor, kernel collecting and transfer conveyor, separate broken kernel drum, feeding and discharge conveyor,
- Other equipment includes colour sorter for broken kernel, feeding conveyor for colour sorter, colour sorter, feeding conveyor, discharge conveyor and trolley container.



(vi) Cashew Grading –

- The machine will include cashew kernel grading equipment, sorting conveyor, grading table for broken kernel, grading table for manual re-peeling and cashew kernel dryer.



(vii) Packing & Fumigation equipment –

- The packing and fumigation equipment will comprise of vacuum packing line for flex packs and metal detector (mesutronic).



(viii) Accessories –

- The project will procure various other equipment and tools including wood-fired steam boiler, pile line and air screw compressor.
- Others are dust collector system, pasteurization machine, cashew moisture tester, Electric Generator, and other factory cleaning tools.



c) Support Facilities

- The project will, further, procure support facilities including the following:
 - Utilities –
 - The project site will be connected to electricity from the main grid supplied by Tanzania Electricity Supply Company (TANESCO). The project will, also, have standby fuel-electric generator.
 - The project will have water wells and water pumps and pipes to supply water to the production units.
 - Motor vehicles –
 - The project will procure trucks for supply of raw materials and transport of finished products.
 - Office furniture & equipment –
 - The project will procure office furniture and office equipment including computers and computer accessories.

d) Pre-Operating Expenses

- The project will incur Pre-operating costs which include finance costs (loan arrangement fees, legal fees, interest during implementation, etc.) and non-finance costs (staff recruitment and training, initial establishment and marketing costs, etc).
- The project will hire services of qualified technical staff to assist in production and quality management.

6.3 Working Capital

- The project will require working capital to finance initial operating expenses including purchase of the raw materials, conversion costs such as electricity, water, labour costs, and other project operating expenses.
- The working capital fund will, also, finance the current assets of the project. The working capital amount will be subject to the level of operation.

Project Investment Costs

7.1 The Choice of Investment

- Investment and business costs are key parameters of the competitiveness of any industry, including the cashew-processing industry, that operates on a globalized market. The project aims to produce CNK for the export markets targeting the western countries including USA and European countries.
- These countries generally have high food safety standards such that the factory set-up must meet their quality standards for the final products to be accepted to enter their market. HK INTERNATIONAL, therefore, will undertake heavy investment in the right technology machineries and support infrastructure.

7.2 Project Investment

- The project will invest in buildings construction, procurement and installation of the new cashew processing plant, and provide for the support infrastructure.
- The project will, further, require working capital funds to support operating costs of the project including raw materials, costs of the utilities (water and electricity), labour costs and other operating costs.

7.3 Project Cost

- The project is estimated to cost a total of USD 1.71 million which include capital expenditure and working capital. The project investment costs for the cashews processing plant are as summarised below:

INVESTMENT PLAN	Amount in USD		Total Investment
	Year-1	Year-2	
Land	109,091	-	109,091
Buildings & Civil works	189,000	-	189,000
Machinery & Equipment	320,390	-	320,390
Motor Vehicles	60,000	-	60,000
Office Furniture and equipment	20,000	-	20,000
Total Physical Assets	698,481	-	698,481
Pre-Operating costs	84,063	-	84,063
Capital Expenditure	782,543	-	782,543
Working Capital	894,544	30,480	925,024
Total Investment	1,677,087	30,480	1,707,567

Proposed Project Financing

8.1 Fund Requirements

- HK INTERNATIONAL, as a profit-making organisation, is positioning to mobilise external resources for people's development in the cashew industry. In Tanzania, development projects usually suffer from lack of inadequate source of finance.
- HK INTERNATIONAL is seeking for low-cost source of finance to develop a sustainable project in the cashew industry. The project will initially mobilise fund to finance physical assets of the project, and working capital funds at commencement of project operation.

8.2 Project Financing

- The funds will be mobilised commensurate with the project implementation plan which is estimated to take one-year. Initially, the project requires finances for investment in the processing plant.
- HK INTERNATIONAL is planning to finance the project through funds from the shareholders in the form of equity and external loans facilities (long-term loans and short-term loans) as follows:

FINANCING PLAN			
	Amount in USD		
	Year-1	Year-2	Total Financing
Equity Financing			
Shareholders' Funds (CAPEX)	332,543	-	332,543
Shareholders' Funds (W/Capital)	-	-	-
Total Equity	332,543	-	332,543
External Financing			
Long-Term loans			
Cashew Processing Plant 1	450,000	-	450,000
Long-Term loans	450,000	-	450,000
Short-term Loans	894,544	30,480	925,024
Total external financing	1,344,544	30,480	1,375,024
Total Financing	1,677,087	30,480	1,707,567
Equity Financing	20%	0%	19%
External Financing	80%	100%	81%
Total	100%	100%	100%

8.3 Nature of the Loans Facilities

- Initially, HK INTERNATIONAL is soliciting for USD 450,000 medium-term loan to finance capital expenditure including machinery and buildings construction works.
- The project will, also, source for USD 925,000 short-term loan to finance RCN purchase and other operating expenses.

Project Status

9.1 Project Conception

- Supportive business environment and well-functioning physical and financial infrastructure are important enablers for the sustainable growth of cashew-processing industry.
- From the initial project design, HK INTERNATIONAL is working to address these potential stages to the project implementation, operation and management.

9.2 Statutory Documentation

- HK INTERNATIONAL is a dully registered private investment company in the country. Already,
- The company will, in due course, apply for licenses and permits for the establishment of cashew processing factory. The project will also be registered with the Tanzania Investment Centre (TIC).

9.3 Project Premises

- The project has already identified suitable factory premises for establishing the projects. HK INTERNATIONAL will utilise a plot of land in Mtoni Mtongani, Dar-es-salaam.

9.4 Plant and Machinery

- HK INTERNATIONAL has already identified the main machinery and suppliers of the cashew processing project. The machinery component will be imported from the China and other machinery components will be locally sourced.

9.5 Other facilities

- The project will, in due course, procure and install support facilities such electricity and water as well as office furniture and equipment. Cost estimates for electricity supply has already been worked out and official application will due course be done to Tanzania Electricity Supply Company (TANESCO).
- The project has, also, incurred pre-operating expenses for project design and initial project logistics works.

Project Rationale

10.1 General Perspective

- The deficiencies that prevail throughout the cashew value chain in Tanzania, has resulted in low levels of value addition that impede the economic development of agricultural sector while, also, inhibiting the generation of social benefits.
- Rationale for the proposed project can be best acknowledged counting on the potential benefits to be accrued from the PPP project.

10.2 Project Potential Outcomes

(a) Industrial Development –

- High-quality of CNK is largely influenced by modern high technology cashew processing machineries. The project will invest in a modern processing plant in the country that will develop the country's cashew industry.

(b) Human Skills Development –

- Through the project, Tanzania can use its wide expertise, coupled with the availability of cashews in the country, to conduct research and development (R&D) work towards the different use of RCN.

(c) Employment And Community Development –

- Currently, cashew industry provides employment to about 500,000 people in the country. The proposed manufacturing facility will provide employment to local Tanzanians both skilled and semi-skilled workforce.

(d) Increased National Outputs –

- The reliance on export of RCN rather than beneficiation has left the country stuck at the beginning, or bottom, of the cashew industry value chain. RCN could be exported as kernel at a higher price than the raw cashew.
- The project will increase the national output through value-addition to the cashew industry.

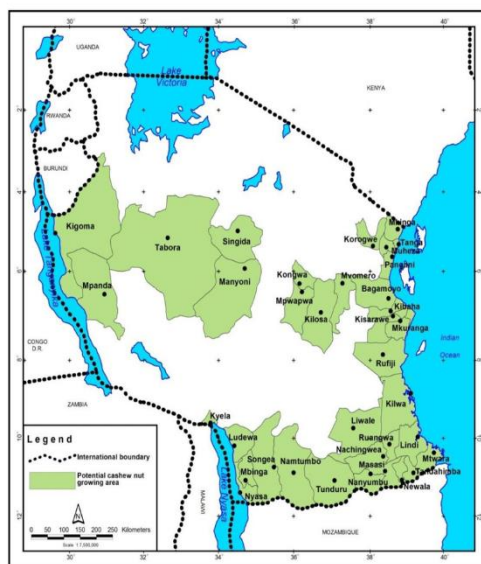
Tanzania's Cashew Sub-Sector

11.1 Cashew Origin

- Cashew is a native of South America with a likely Centre of origin in Brazil. Cashew was brought to East Africa and India by the Portuguese in the 16th C.
- In Tanzania, the first export of nuts occurred in 1938 when 210MT of RCN were shipped to India and widespread planting of cashew was carried out after 1945.

11.2 Position of Tanzania Cashew

- Tanzania is the largest cashew producer in the Southern Hemisphere, which harvests between October-February. This is advantageous as the majority of cashews are produced in the Northern hemisphere.
- Tanzania's harvest occurs at a time that allows the country to take advantage of the limited supply that is available globally at that time.
- This becomes an even bigger advantage as Tanzania continues to increase its share of global cashew production. The prospect of further value addition creates an even greater influence on the market during that time.



11.3 Cashew Breeding

- In Tanzania, cashew breeding started in 1958 with germplasm collection from various countries in Asia and Africa. In a relatively short-time it established itself as an important cash crop for small-holders and by 1960, 37,000 of nuts were being exported.
- An active cashew breeding program took place in the mid-1980s when a number of cashew clones were selected. Between 1991 and 2006 cashew hybrids were developed. In the recent years, the government has increased emphasis on cashew breeding purposely to introduce the crop to other regions of the country.

Tanzania's Cashew Nut Supply Chain

12.1 Introduction

- Currently, cashew nut is the leading traditional export crop in Tanzania followed by tobacco, coffee, cotton, tea, cloves and sisal. In Tanzania, all agricultural crops are under the Ministry of Agriculture which essentially formulates, coordinates, monitors and evaluates the implementation of relevant policies and programmes/projects in the agricultural sector and monitors all crops regulating institutions.
- The Cashew nut Board of Tanzania (CBT) is the main cashew nut crop regulating institution in Tanzania which is under the Ministry of Agriculture.

12.2 Cashew-nut Board of Tanzania

- CBT is a corporate body established by the Act No. 18 of 2009. It is entrusted with the responsibility of regulating the development of the Cashew Industry.
- CBT has several functions including advising the government on policies and strategies related to cashew industry, promoting cashew-nut production, processing and marketing as well as engage stakeholders on issues of cashew auctioning, finance, research, product quality, licences, cashew pricing, input supply and other logistical issues related to cashew industry.

12.3 Cashew Nut Flow (Farm to Market)

- Raw cashew nuts are channeled through the warehouse receipt system regardless whether they become locally processed or exported. An exception is the nuts that get processed for the domestic market in small backyard operations.
- Raw nuts are sold through auctioning to end-buyer markets. Two main marketing channels must be distinguished, the export and the domestic market.

12.4 Main Actors in the Cashew Industry

- The primary actors in cashew value chain (those who produce, transfer and own products) are farmers, Primary Cooperative Societies (PCSs), regional cooperative unions, processors, exporters, roasters and retailers (including shops as well as roadside and street vendors).

- The position and roles of the main actors are as summarized below:
 - (i) Farmers –
 - Production of cashew-nuts in Tanzania is characterized by smallholders' farmers operating at subsistence level.
 - Currently, most of the production is concentrated in the southern coastal regions of Pwani, Lindi and Mtwara which account for over 80% of total area and production. Mtwara accounts for about 54%.
 - (ii) Primary Cooperative Societies (PCS) –
 - These, on behalf of the member farmers, provide inputs (mainly pesticides) and procure supplies in bulk (e.g. farm equipment, fertilizers, sprayers, and gunny bags). The cooperative buys raw cashew-nuts from its members who in return receive a first payment; the cooperatives usually require a credit to lay out these payments.
 - The primary cooperatives sell the raw cashew nuts to buyers via the warehouse system. In return they receive a cess (deducted at the product level).
 - They use part of the fees earned for service from the cess to construct storage facilities at farm level and provide other services such as savings and revolving credit products for cashew inputs, and even investment in common assets such as irrigation schemes, to their members.
 - (iii) Cooperative Unions –
 - These assist Primary Cooperative Societies to procure materials in larger quantities, such as gunny bags and sisal ropes, loan acquisition and transfer of money to primary society offices, identification and registration of authorized transporters of raw nuts to the warehouse and also interact with the warehouse marketing system. They, also, prepare the sale catalogue for every consignment in the warehouse based on the information provided by the warehouse operator to the union.
 - (iv) Processing groups –
 - Some few farmers groups have ventured into the processing of cashew nuts locally. There are, also, farmers groups which work with certain individuals that process cashew nuts locally.

(v) Warehouses –

- All raw cashew nuts, by law, have to be transported to certified warehouses where they will be stocked in designated lots separated for each cooperative. The warehouses provide a receipt for the reception of the goods. The lots then will be auctioned to buyers. The buyer pays the amount to a bank which will apportion payment to the various parties engaged.

(vi) First level processors –

- These only engage in processing of cashew nuts up to the level of deshelling before peeling. This type of processing can be outsourced to certain operators.

(vii) Second level processors –

- This starts with the peeling of cashew nuts reaching out till sorting and packing. Second level processors, when they do not outsource engage, also, in first level processing. Processors are categorized into three groups:
 - (a) Small-scale processors - for local market
 - (b) Medium-scale processors - for local, regional & international markets
 - (c) Large-scale processors - for local, regional & international markets.

(viii) Exporters –

- Exporters and also large-scale processors, their main markets are Europe, India, Middle East and USA for CNK; and China, India and Viet Nam for RCN

(ix) Street vendors –

- These are hawkers that sell cashew nuts on the roadside and at traffic lights. Often, they operate on an individual basis. Sometimes, also, they work for middlemen that send them out and get paid after the products have been sold in exchange for small commission for selling the product.

(x) Shops, minimarkets and supermarkets –

- Cashew nuts are available throughout the country at shop outlets, roadside stands, mini markets and larger supermarkets.

(xi) Cottage processors –

- These de-shell, peel, and roast cashew nuts manually in backyards. Often these operations are run by agents that engage in selling the product at small stands at the roadside.

Cashew Processing & Processors in Tanzania

13.1 Introduction

- Currently, with increased Raw Cashew production less than 20% of Tanzanian cashew nuts are processed locally, forfeiting the sector from realizing increased benefits from value addition such as increased income and employment generation.
- Reasons for the prevailing low processing capacity are manifold and include a lack of technical and managerial experience.



13.2 Cashew Processors

- In 2018, Tanzania banned the trading of RCN as the prevailing market price was considered too low. The Government bought the entire yield of over 200,000 tons and deployed military personnel to collect RCN in rural areas.
- However, the domestic shelling industry did not have the capacity to process the full volume.
- The Government faced difficulties in finding buyers for the excess RCN and private traders were reallocated into the market for the 2019/2020 season.
- Since then, Tanzania has increased its focus on local cashew nut processing where the processing capacity has been on the increase. Presently, Tanzania provides incentives to cashew processors to promote local processing. For instance, Cashew processors are, currently, exempt from import duties for machinery and spare parts.
- The list of Cashew-nut processing factories in Mtwara, Lindi, Coast and Ruvuma regions of Tanzania is as follows:

Tanzania: Cashew Nut Process Capacity, 2019				
Regions	# of Factories	MT/Year	%	
1 Mtwara	10	22,910	54%	
2 Lindi	5	7,935	19%	
3 Coast	5	6,168	15%	
4 Ruvuma	1	5,060	12%	
Total	21	42,073	100%	

Tanzania: Cashew Nut Processing Factories, 2019:

Region	S/n	Company Name	MT/Year	Location
Mtwara	1	Mtwara Cashewnut Company (2005)	2,500	Mtwara TC
	2	Micronix System Ltd (Korosho Africa Ltd)	2,000	Mtwara TC
	3	Hawte Investment Ltd	1,500	Mtwara TC
	4	Naliendele Agricultural Research Institute	250	Mtwara TC
	5	Yalin Cashewnut Company	6,000	Mtwara TC
	6	AMAMA Farm	4,000	Tandahimba
	7	Kitama Farmers' Group	2,160	Tandahimba
	8	Kiwanda Kidogo Cha Kubangua Korosho	75	Tandahimba
	9	Micronix System Ltd (Korosho Africa Ltd)	3,500	Newala TC
	10	Perfect Kernels Tanzania Ltd	925	Masasi TC
Lindi	1	Al-Handalus Company Ltd	6,000	Lindi - Mnazi Mmoja
	2	WAIGERO ltd	1,750	Lindi- SIDO
	3	WAKORU Cashewnut Processors	80	Ruangwa
	4	UWABAKONA	25	Nachingwea
	5	Nangowe Cashew Processing Small Scale	80	Nachingwea
Coast	1	Mkemi Agrix Co Ltd	400	Mkuranga
	2	Fuzzy International General Trading	2,000	Mkuranga
	3	Boon Ltd	120	Kisiju
	4	Terra Cashew (TANITA)	3,600	Kibaha
	5	UVUKI Cashewnut Factory	48	Visiga
Ruvuma	1	Micronix System Ltd (Korosho Africa Ltd)	5,060	Tunduru
Total			42,073	

- The above list of cashew processors usually change year after year as new entrants come into the sector and others leave the industry. Apparently, small-scale processors groups are increasing in number every year.
- According to TACP, in August 2022, there were 24 registered cashew processors with processing capacity of 56,750MT of RCN per annum. The processors are expected to process up to 30,000MT in 2022/2023 from only 8,000 MT in 2021/2022 season.
- There are also small-scale cashew processors. In 2021/2022, there were 250 registered small-scale processors with total processing capacity of up to 15,000 MT per annum.

Products & Services

14.1 Products

- The project will offer the market with the following main products:
 - Cashew nut kernels (CNK) which targets the export market, and
 - Cashew nut shells (CNS) which target local market.

14.2 Cashew Nut Kernels

- The project will produce high-quality CNK from well selected raw materials. CNK will be graded as per international market standards.
- The grading will involve the classification of the kernels based on:
 - Colour,
 - Shape and
 - size.

- Cashew kernels will be graded into white (W), scorched (S) and desert (D) for colour and either whole (W) kernels or broken kernels for shape.
- The Broken kernels will further be graded by shape into splits (S), butts (B), pieces (P) and baby bits (BB).

Cashews Grading		
		% of Kernels
1	W 180	0.0087
2	W 210	0.0174
3	W 240	0.1065
4	W 320	0.3152
5	W 450	0.0478
6	SW 210	0.0087
7	SW 240	0.0261
8	SW 320	0.0957
9	SW 450	0.0304
10	DW	0.0826
11	WS	0.0609
12	LWP	0.0696
13	LP	0.0478
14	SWP	0.0348
15	SSP	0.0130
16	DP	0.0130
17	BB1	0.0130
18	BB2	0.0087

14.3 Cashew Nut Shells (CNS)

- The residuals (CNS) after the extraction of the CNK will be sold to the local Cashew nut Shell Liquid (CNSL) manufacturers.
- The customers will collect the CNS from the project factory premises, and will address the potential environmental impact from the residuals.

Market Overview

15.1 Introduction

- Export trade in cashew kernels follows three main routes.
 - The bulk of primary- and secondary-processed kernels originating from producing countries (Vietnam, India and Brazil), and in much smaller quantities.
 - Cashew kernels from Eastern and Western Africa and other Asian countries are exported to Europe, USA and other consuming markets.
 - Intra-trade in cashew that takes place between European countries. CNK re-exported either directly, or after a final processing and branding.

15.2 Global CNK Market Overview

- Despite being the world's largest producer of RCN (about 60% in 2021), Africa's share of the kernel market has remained within low due to the low rate of local processing in the continent, which remains less than 10%. According to African Cashew Alliance (ACA), Africa from an export range of between 110,000 and 120,000 tons in 2020, Africa's cashew kernels export into Europe increased to between 140,000 to 170,000 tons, representing only 11% of the EU kernel market, in 2021.
- In 2021, Vietnam, the highest cashew processor in the world, had the greatest share of the EU CNK market, with 77% of the market share. Indian exports accounted for 7% of the CNK market in Europe, Brazil held 2% of the market share while Indonesia and other smaller cashew processing countries had a 1% share of the market, respectively.
- Africa's share of the USA CNK market was only 5% of CNK imported into the USA coming from Africa. Vietnam dominated the USA CNK market as well with 89% share, while 3% of CNK in the USA were imported from Brazil.
- The marginal increase in Africa's share of CNK export market in 2021 has been boosted by a general improvement in food safety, traceability, and transparency in cashew processing in Africa. This was done through consistent sensitization and technical support from organisations and projects, local processors have become more attentive to following international cashew processing guidelines.

15.3 Cashews Supply

- According to ACA, Africa remained the highest producer of global raw cashew nuts in 2021, producing over 60% of the world's cashews.
 - West Africa (1.8 million tons), 50% of global cashew;
 - East Africa produced 11 of global cashew.
- Cote d'Ivoire recorded its highest ever RCN production, producing more than 1 million tons, remaining the largest producer in the world. Nigeria's production in 2021 was estimated to be around 220,000 tons while Guinea Bissau produced around 230,000 tons of RCNs. In Ghana, cashew production in the country saw a slight increase and was around 120,000 tons while West African counterparts, Benin, produced around 130,000 tons of RCNs in 2021.
- Generally, global RCN production is expected to remain strong, between 3.8 million and 4.3 million tons in 2022. This is expected to be driven mainly by Cambodia and India, which are expected to recover from the Covid 19 impacts on production.

15.4 Global Cashew Processing

- Cashew processing remained highly concentrated in Asia in 2021, where 90% of global cashews are processed. Vietnam remains the largest cashew processing country in the world, processing over 80% of the world's cashew.
- Despite making some progress, especially in Cote d'Ivoire, cashew processing in Africa remains less than 10%. This could increase in 2022 as countries continue to put measures in place to encourage local processing, and through the support of development partners.

Country	Quantity in MT		Utilisation Rate
	Estimated Process Capacity (MT)	Processed	
1 India	2,000,000	1,675,000	83.8%
2 Viet Nam	1,800,000	1,450,000	80.6%
3 Cote d'Ivoire	140,000	68,000	48.6%
4 Mozambique	105,700	53,517	50.6%
5 Tanzania	42,073	10,000	23.8%
6 Ghana	45,750	23,300	50.9%
7 Nigeria	48,000	20,000	41.7%
8 Benin	35,000	18,750	53.6%
9 Burkina Faso	18,000	8,700	48.3%

15.5 Global Cashew Consumption

- Generally, with the positive consumer trends on the market, low level of prices and the lifting of Covid 19 restrictions, the demand for cashew is expected to remain strong and recover to the average pre- Covid rate.

- In Europe consumption increased in 2021 by 3.8% from about 170,000 tons in 2020; in USA, the largest world cashew import market, registered 8% growth in 2020 and 9.5% in 2021.
- In China, the consumption increased in 2021 by 7.5% with 85,000 tons of imports. In India, from a drop-in cashew consumption due to the impact of the pandemic, the country increased its cashew consumption by 10% in 2021, from around 275,000 tons to an estimated 290,000 tons.
- Other consumers steadily growing in importance are Russia, Thailand and Malaysia, Middle East (UAE, Saudi Arabia, Lebanon, Israel and Turkey), North Africa (Algeria, Egypt), Oceania (Australia, New Zealand) and Brazil.
- Africa consumes an insignificant percentage of global cashew. This is due to several factors, including:
 - lack of proper understanding of the health benefits of consuming cashew,
 - poor marketing strategies on the part of local processors, and
 - high prices of cashew.
- There is a need for proper media sensitisation on the health benefits of consuming cashew. Local processors should adopt strategic marketing methods to attract more local cashew consumers.

15.6 Cashews Trading

- Cashew trade is characterised by the opacity of the market, a high degree of speculation and the lack of liquidity in the market. The fact that 35% to 45% of world production of in-shell cashew is shipped over thousands of kilometres to be processed implies that minor disturbances in port handling and in shipping can have major HK International effects on cashew kernel pricing.
- Two major trade flows dominate the cashew international trade:
 - exports of in-shell cashew from West and East African producing countries towards the major processing centres in India, Vietnam and Brazil; and
 - cashew kernel trade patterns from India, Vietnam and Brazil towards Europe, USA, China and Australia.
- The bulk of the global trade in cashew is handled by a reduced number of commodity trading groups such as Olam¹⁵ (Singapore), Bond Commodities Ltd.

(UK), Valency International Trading Pte Ltd (Singapore), or Barrow, Lane & Ballard and Ballard (UK).

- These large groups trade in other commodities in addition to cashew, and are usually involved at several levels in the entire cashew value chain.
- Agents and brokers play a significant role in the cashew trade. They are the direct link between producers/exporters and the end use market segment and well aware of cashew availabilities, prices and market trends. Their willingness to share market information contributes to increasing market transparency and easing speculation.

15.7 Cashew Prices

- Trends and dynamics of cashew trade and prices of both RCN and CNK are responding primarily to the tightness of the supply - demand balance influenced by unpredictable factors such as weather, economic and social crisis and small farmers' behaviour.
- This renders the market highly speculative, with long term price evolution hard to predict and short-term prices volatile. Frequent misbalances between the availability of cashew supplies and the demand may lead to strong price swings, market volatility and stimulate speculation and cartel trading.
- Cashew price volatility undermines buyers' confidence in the market and dissuades the commitments to forward buying. Banks and indigenous African traders and entrepreneurs are reluctant to invest in domestic cashew processing because of the volatility of prices.
- The renewed interest to invest in cashew processing in Africa is driven by large Asian and Brazilian cashew processors who are seeking to diversify and secure their supplies and insulate at least partly their businesses from the market volatility.

Project Marketing Strategy

16.1 General Strategy

- The project target will be the export market capitalizing on HK INTERNATIONAL knowledge of the market in USA, Europe and Asia.
- The project will implement the following general strategies to achieve its goals of becoming a large-scale Agri-enterprise:
 - Create a compelling value proposition for its products and services for both the CNK in the export market.
 - Build strong brand recognition and leverage brand equities affiliated with Tanzania cashew to large retailers and distributors in the export markets.
 - Develop key industry relationships with private investors, technology suppliers of machineries and equipment, cashew sub-sector regulators, workers, and other stakeholders within the value chain.
 - Create and provide reliable investment and marketing information that will lead to HK International efficient and profitable operations.

16.2 Specific Strategies

The Project will focus on the following market strategic issues:

(i) Products Quality -

- The project will invest in the best technology machineries for use in the manufacturing process.
- The project, with assistance from the associate company, has identified best technology machineries for CNSL and briquettes manufacturing.
- The project will outsource Production Experts for CNK from India and other countries specifically for quality supervision.

(ii) Pricing and prices -

- The project will base on cost plus margins pricing strategy. The company is projecting to offer the best prices for its products owing to expected high production.

- As presented below, the projected selling prices for all the products are as summarised below:
- All the above prices are CIF prices, though delivery costs to specific market destinations will determine price differential among towns and cities.
- The project has assumed average selling price of USD 7.411/kg.

Products Prices/Grade				
			CIF/Kg	
1	W 180		USD/Kg	10.72
2	W 210		USD/Kg	10.57
3	W 240		USD/Kg	10.42
4	W 320		USD/Kg	9.52
5	W 450		USD/Kg	8.18
6	SW 210		USD/Kg	9.22
7	SW 240		USD/Kg	9.22
8	SW 320		USD/Kg	8.18
9	SW 450		USD/Kg	7.74
10	DW		USD/Kg	6.70
11	WS		USD/Kg	4.62
12	LWP		USD/Kg	3.73
13	LP		USD/Kg	3.43
14	SWP		USD/Kg	2.97
15	SSP		USD/Kg	2.08
16	DP		USD/Kg	1.78
17	BB1		USD/Kg	1.78
18	BB2		USD/Kg	1.19

(iii) Products Promotion -

- The project will focus on direct marketing strategies for its products where the directors and marketing manager will focus on corporate customers.
- Initially, the project will not use mass media in its marketing campaign.
- The project will capitalise on its present customer-base and work to serve new customers with high-level customer service.

Technical Aspects of the Project

17.1 Introduction

- The project will be developed on own-premises.
- The project will construct new buildings with the view to produce quality products to meet the international standards.



17.2 Project Land

- The first cashew processing plant will be located in Mtoni Mtongani, Temeke Municipality. The land is on plot no. 8, Kilwa Road. The project land is registered in the names of the shareholders.
- The land is adequate for the proposed project.

17.3 Buildings and Civil Works

- The project will construct factory building which will have floor area of 4,000 square meters.
- The building will accommodate the processing machineries and warehouse and the support facilities.
- The industrial buildings comprise of the following:

- Shell cooking section
- Shell cutting section
- Cashew kernel drying
- Cashew kernel peeling
- Cashew kernel grading and packing
- Warehousing for raw cashews and cashew kernels

Newala Processing Plant

S/N	Particulars	Cost Item
1	Floor Repair	Ceramic tiles
2	All Sections - Electrical	Wiring, lightings, cables &
3	Canteen	Renovation
4	Bird Mesh Doors / Covering for Ventilators	Renovation
5	Toilet - Cutting / Peeling / Grading / Staff / Guest	Renovation
6	Baby Care for Childrens	New Work
7	Changing Rooms - All Sections	Renovation
8	Grading Section Aluminum Fabrications	Ceeling, closure, AC
9	CCTV	New Work
10	Office / Lab	Renovation
11	Painting work	Renovation
12	Road Repair	Bitumen application
13	Drinking Water	Pipes & water purifires
14	Fire Equipiments	Renovation
15	Medical Dispensary	Renovation
16	Workshop	Renovation
17	Chain Link Fence - Factory Boundaries	Renovation
	Contingency	

- External works:
 - The external works include motor vehicles parking yard, pavements and inner roads and other external works.

17.4 Machinery Specifications

- The project will invest in cashew nuts processing plant with capacity to process 10.5MT of raw cashews per day. The cashew processing plant will include the following components:

- Cashew cooking system (boiler and cooker)
- Cashew shell cutting – manual cashew shell cutting machines
- Cashew drying system
- Cashew humidifier – heavy duty
- Cashew kernel peeling machine
- Cashew kernel dust cleaner
- Cashew kernel grading machine
- Cashew kernel separator
- Vacuum filling machine
- Cashew peeling and grading tables

- The processing plant will have the following technical specifications:

(i) Projected Plant Productions Capacities

- Hours per Day 12 hours /day
- CNS Processing Capacity..... 10.5 tons /day

(ii) CNK manufacturing capacity based on Processing target:

- Working days/year..... 300-days
- Working Hours/day..... 10 to 20-hour/day
- RCN Processing /Day 10.5-MT per day

Production Processes and Environ Management

18.1 Introduction

- The cashew processing plant will use semi-automatic processing technology. The general processing steps involved in cashew processing are drying of freshly harvested raw seed for storage, soaking of seed, steam cooking or roasting, shelling, separation, kernel drying, peeling and packaging.

18.2 The Steps

- Drying of raw nuts –
 - This is the first step in cashew processing after purchase of RCN from the warehouse. Sun dried in yards, weight loss may vary from 3% to over 10% depending on time of harvesting and area of origin. The raw nuts after harvest are sun dried for 2-3 days to reduce the moisture from 25% to 8-9% and stored in gunny bag.
 - The raw cashew nut contains the kernel and papery seed coat (testa); these account for 20-30 percent and 2-3 percent, respectively, of the raw nut weight; the remaining 70-75 percent is the shell.
- Steaming –
 - The dried nuts are steam cooked. Well dried raw nuts are subjected for steam boiling which is commonly adopted method of nut conditioning. The raw nuts are steamed conditioned about 90-100 lb pressure for 25 -30 minutes and then allowed for 24 cooling.
- Cutting –
 - Steamed nuts are cut with blades mounted on wooden tables. Raw nuts after conditioning and cooling are to be shelled to remove kernels with the help of hand cum pedal operated shell cutter.
 - After shelling the kernels and shell pieces are separated manually. The kernel after shelling will have moisture content more than 10%.
- Drying of the kernels –
 - The kernels are dried to moisture content about 3.5-4.5 %. Drying the kernel in hot chamber at 65-70 degree centigrade in perforated tray for 6-8 hours does this.

- After drying, the kernels are kept in moist chamber for 4- 6 hours for easy removal of testa and minimum broken kernel.
- Peeling –
 - The testa is peeled off and initial grading by wholes, pieces and colour takes place. The peeling process involved removal of testa from the kernel with the help of sharp knife.
- Grading and filling –
 - The kernels are graded by hand/sieve. International standards/specifications for cashews grading are usually adopted for grading of cashew kernels.
- Packaging and labelling –
 - The final stage in the process is the packaging and labelling of the final product. The project will pack and label its CNK according to the requirements in the country of exports and customer.

18.3 Raw and Auxiliary Materials

- Materials requirement of the plant comprise of raw cashew nuts and packaging materials. Raw cashews will be brought into the warehouses from Lindi and Mtwara regions where there is adequate supply of quality RCN.
- The company will import packaging materials from China and India.

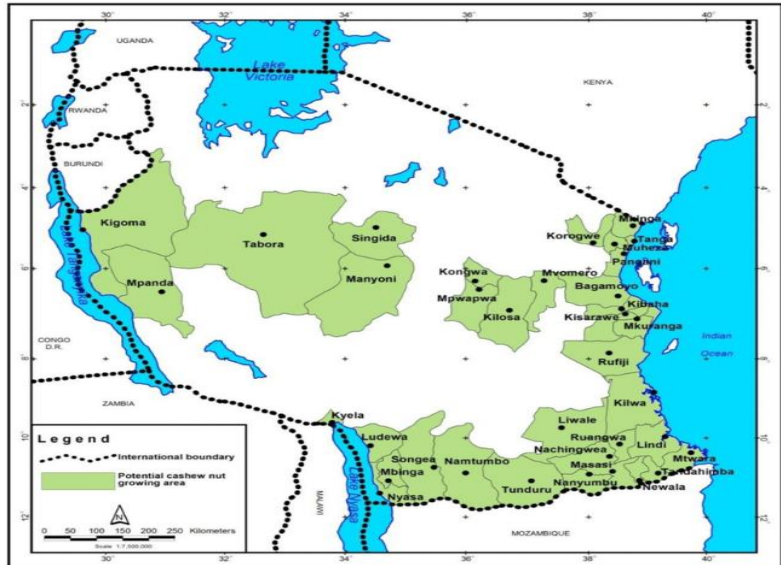
18.4 Solid Waste Disposal

- The project will produce two major solid waste that is of concern to the environment: cashew nut shells (CNS) and waste water.
- CNS –
 - The project will sell the CNS to cashew nut shell liquid (CNSL) manufacturing plant available in Tanzania.
- Waste water
 - The wastewater generation from cashew nut cooking is of batch type (4 to 6 hours per day). It is a very small quantity to produce a change in ground water, if landfilled. The project will invest in treatment plant that will pre-treat the waste water before discharging in the sewer.

RCN Sourcing and Stocking

19.1 RCN Sourcing

- The project will be located in Dar-es-salaam, cashew nut exporting region.
- The project will procure RCN from warehouses in the district of Lindi, Mtwara, Masasi, Newala, Nanyumba and Tanadahimba.



19.2 RCN Availability

- The cashew processing plant will require a total of 27,000MT of RCN per annum for processing. Initially, 9,000MT/year will be required for the Newala plant.
- Currently, Mtwara and Ruvuma regions annually produce on average of 150,000MT of RCN, which is adequate to feed the proposed operations.

Tanzania: RCN Production in Mtwara And Ruvuma Regions				
		Quantity in MT		
Region	District Council	2019/2020	2020/2021	2021/20222
Mtwara	Mtwara	25,626	20,482	22,838
	Masasi	32,424	33,809	30,662
	Nanyumbu	15,961	13,588	15,422
	Newala	21,999	21,093	21,300
	Tandahimba	37,920	29,603	35,597
	Sub-total		133,930	118,575
Ruvuma	Tunduru	23,751	14,815	24,617
	Namtumbo	723	472	533
	Mbinga DC	69	28	34
	Nyasa	74	20	34
	Madaba	10	7	14
	Songea DC	-	-	11
Sub-Total		24,627	15,341	25,243
Total		158,557	133,916	151,062

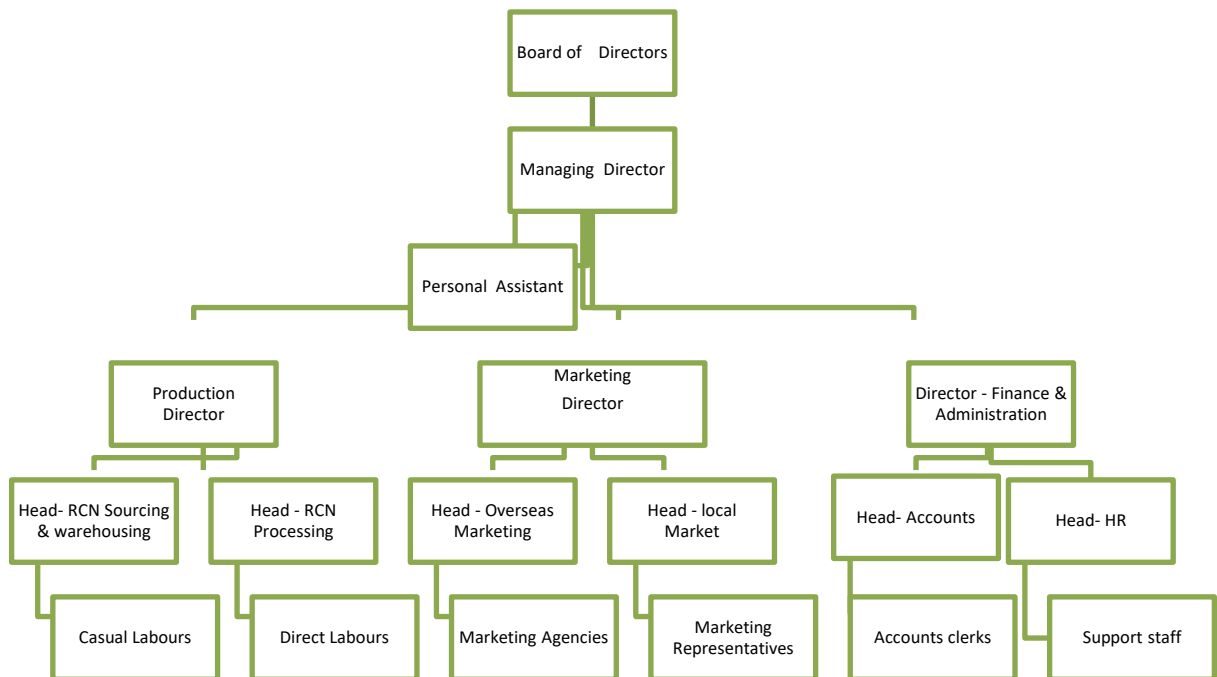
19.3 RCN Inventory

- Owing to the current procurement policies in the country, the project will purchase and stock adequate RCN to meet its annual requirements. The project will establish warehouse to store up to 8-months stocks to cushion for the months of no harvest.
- The project is expected to incur weight loss estimated at 5% of the RCN collected.

Organisation And Management

20.1 Organisation Structure

- The project will be under the general management of HK INTERNATIONAL. The company will have Board of Directors responsible for the major policy and strategic issues. The Board is comprised of selected individuals with expertise in the agri-industry, export marketing, industrial production and general business management.
- The daily management issues will be under the Managing Director of HK INTERNATIONAL who is in-charge of all matters of the project. The Managing Director will report to the Board.
- The project Organisation Chart will be as follows:



20.2 Staff Contingent

- The project will employ services of permanent staff as well as casual workers due to the nature of the operations in materials sourcing, cashew-nut processing, cashew-nut shells selling, environmental management as well as logistical works.
- HK INTERNATIONAL is projecting to have the following permanent staff contingent as presented in Annex 11 (i):

Cashewnuts Processing & Export Project									
Projected Number of Staff									
	Staff/Plant	Year-1			Year-1	Year-2	Year-3	Year-4	Year-5
		Month1	Month11	Month12					
Direct Labour									
Number of Factories		-	1	1	1	1	1	1	1
Months of Operation		-	1	1	1	1	1	1	1
Number of Staff	Staff/Plant								
Operations Department									
Factory Top Management									
Production Manager	1	-	1	1	1	1	1	1	1
Asst. Production Manager	1	-	1	1	1	1	1	1	1
Laboratory									
Quality Analysts	1	-	1	1	1	1	1	1	1
Laboratory Incharge	-	-	-	-	-	-	-	-	-
Laboratory Assistants	1	-	1	1	1	1	1	1	1
Utilities									
Utility Manager	1	-	1	1	1	1	1	1	1
Electrical Supervisor	1	-	1	1	1	1	1	1	1
Boiler Operators	2	-	2	2	2	2	2	2	2
Boiler Assistants	8	-	8	8	8	8	8	8	8
Plant Operations									
Tank farm Operators	4	-	4	4	4	4	4	4	4
Shift Incharges	2	-	2	2	2	2	2	2	2
Machine Operators	4	-	4	4	4	4	4	4	4
Production Lines Attendants	200	-	200	200	200	200	200	200	200
Packing Unit									
Packing Hall Supervisors	2	-	2	2	2	2	2	2	2
Packing Machine Operators	3	-	3	3	3	3	3	3	3
Packing Line Attendants	50	-	50	50	50	50	50	50	50
Storage Unit									
Godown Supervisors	1	-	1	1	1	1	1	1	1
Stores Personnel - raw materials	2	-	2	2	2	2	2	2	2
Stores Personnel - Finished Goods	2	-	2	2	2	2	2	2	2
Maintenance Unit									
Maintenance Supervisor	1	-	1	1	1	1	1	1	1
Electrical Engineer	1	-	1	1	1	1	1	1	1
Welder	1	-	1	1	1	1	1	1	1
Mechanical Fitter	1	-	1	1	1	1	1	1	1
Number of Direct Labour		-	290	290	290	290	290	290	290
Indirect Labour									
Finance & Administration Unit									
Head - Finance & Admin.	1	-	1	1	1	1	1	1	1
HR Officer	1	-	1	1	1	1	1	1	1
Accounts Assistants	2	-	2	2	2	2	2	2	2
Office Attendants	3	-	3	3	3	3	3	3	3
Logistics Unit									
Procurement Manager	1	-	1	1	1	1	1	1	1
Procurement Officers	1	-	1	1	1	1	1	1	1
Transport Incharge	1	-	1	1	1	1	1	1	1
Drivers - for deliveries and forklifts	3	-	3	3	3	3	3	3	3
Drivers	1	-	1	1	1	1	1	1	1
Helpers	4	-	4	4	4	4	4	4	4
Weighbridge Operators	2	-	2	2	2	2	2	2	2
Security Unit									
Head Security Guards	1	-	1	1	1	1	1	1	1
Security Guards	4	-	4	4	4	4	4	4	4
Number of Indirect Labour		-	25	25	25	25	25	25	25
Number of Staff		-	315	315	315	315	315	315	315

- The projected incremental number of permanent staff from the initial 315 people and will provide casual employment to about 200 people making a total of around 500 people.

Implementation Framework

21.1 Implementing Agency

- The project implementation will be under HK INTERNATIONAL, through its Dar-es-salaam Office. The implementing agency will undertake to source and provide technical and logistics services for the buildings and civil works, machinery and equipment, machinery supply, installation up to commissioning.

21.2 Activity Planning and Deliverables

The project implementation will take 8-months and involve various stages as follows:

Stage 1: this will include the following activities

- Introduction and seeking approval from government departments and agencies including Tanzania Investment Centre (TIC)
- Identification and engagement of appropriate consultants
- Refining of the Conceptual Master Planning for the project components.

Stage 2: this will include the following activities

- Preparation of a Master Project Report which will contain
 - Environmental impact assessment (EIA)
 - Detailed Drawings and structural details
 - Detailed costs estimate
 - Formation of tender committees
 - Preparation of tender documents
 - Undertake bid process for selection of implementation agents

Stage 3 –this stage has the following activities

- Infrastructure development for the cashew processing industry including buildings infrastructure; transport infrastructure; utilities facilities such as water systems, power systems, sewerage systems, communication systems, etc.

Stage 4 – this involves Operation and management of the processing factory including:

- Procurement and warehousing of RCN
- Production of exportable CNK
- Marketing and selling of CNK in the export markets

21.3 Project Schedule

The project implementation schedule is as summarised below:

Cashewnuts Processing & Export Project									
Project Implementation Schedule									
Implementation Period	Year 0	Year 1				Year 2			
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Stage 1 Preliminary Preparation									
Company Registration		■							
Identification and Procurement of Land		■							
Identification of machinery suppliers		■							
Feasibility Study Preparation		■							
Stage 2 Funds Mobilisation									
Loan Application and Processing		■							
Internal Resources Mobilisation		■							
Loans Approval		■							
Stage 3 Procurement of Plant & Machinery									
Selection of Machinery Supplier		■							
Application for TIC Incentives	30 Days		■						
Plant Design	90 Days		■						
Plant Manufacturing	180 Days		■						
Plant Delivery on Site	60 Days			■					
Stage 4 Buildings & Civil Works									
Environmental Impact Assessment (EIA) Study	90 Days		■						
Buildings Design				■					
Application for building permit				■					
Application for Ground water drilling permit				■					
Selecting and Contracting Contractors				■					
Construction works - Buildings & civil works				■	■				
Ground water extraction works				■					
Stage 5 Plant Installation & Commissioning									
Plant Installation works				■	■				
Procurement of support facilities				■	■				
Staff Recruitment & Training					■				
Application for Manufacturing Licence					■				
Production of the First Batch						■			
Plant Commissioning							■		

Risks And Uncertainties

22.1 Delays or Cost Overruns in Project Implementation

- A number of factors may lead to delays in project implementation including funds mobilisation and timely disbursement and machinery delivery for installation and commissioning.
- The promoters will ensure all conditions with the financing partners are timely addressed.

22.2 Inflation risks

- There is a potential risk that inflation might rise at higher rates than projected which may lead to increased production costs. This may increase the cost of the final products hence reduce the project profitability.
- While inflation risk usually prevails in Developing Countries like Tanzania, the government appears committed to continue maintaining the macroeconomic stability and bring inflation further down.

22.3 Political risks

- The government may from time-to-time issue new directives (on issues such as regulations for cashew nut processing and marketing, export permits, etc.) which may negatively impact on the project implementation and operations.
- This risk is addressed by the fact that Tanzania government has maintained long-term commitment of involving the private sector in policy decisions.

22.4 Managerial risks

- The management of cashew-nut processing and marketing requires close supervision and expertise in materials selection and handling, production and marketing.
- The business will employ personnel with experience in the cashew-nut processing and marketing in the export market. Additionally, the HK INTERNATIONAL will be part of the management team to drive the production, logistics, finance and marketing departments.

22.5 Low Crops Harvest

- Seasonality of cashews crops due to weather changes including drought may affect the annual yield of the crop. This would, therefore, affect the quantities of the raw materials for processing.
- The project is investing in transport logistics and warehouses to ensure raw materials accessibility and availability of adequate feedstock to support the operation without shortage. This would ensure the constant supply of raw materials to the factory.
- Tanzania government has invested in the development of high yield cashew seedlings over the years. In 2017, Tanzania became the first country in Africa to release commercial cashew varieties and cashew hybrids, which are widely available to growers.

22.6 Market Competition

- Competition from other major cashew-nuts exporting countries could affect the penetration of the projects' products in the targeted market.
- Tanzania is the largest cashew producer in the Southern Hemisphere, which harvests between October-February. This is advantageous as the majority of cashews are produced in the Northern hemisphere are during the months of April to August; Tanzania's harvest occurs at a time that allows the country to take advantage of the limited supply that is available at that time.

22.7 Government Incentives

- The project has been developed on the bases that production and export incentives will be granted by the government of Tanzania. these include the export tax and other incentives.
- The project is optimistic that the government of Tanzania will positively consider the development of the cashew subsector for sustainable development of the agriculture sector.

Investment & Production Assumptions

23.1 Introduction

- This section presents the projections related to the capital expenditure and financing of the proposed investment as well as the production assumptions of the cashew-nut kernels and Cashew-nut shells as projected for the 10-years of the project.
- Investment and production assumptions are presented in the Annexes as follows:
 - (i) Projected Investment Plan Annex 5
 - (ii) Projected Financing Plan Annex 7
 - (iii) Detailed Investment Plan..... Annex 6 (i)
 - (iv) Detailed Investment Plan – Buildings & Civil Works..... Annex 6 (ii)
 - (v) Detailed Investment Plan – Plant & Machinery Annex 6 (iii)
 - (vi) Projected Depreciation & Amortisation Annex 8
 - (vii) Projected Production – Quantities Annex 10 (i)
 - (viii) Projected Production – Grading Annex 10 (ii)

23.2 General Financial Assumptions

- The currency of accounting is United States Dollars (USD)
- The exchange rate of TZS to USD is assumed at TZS 2,750 to 1 USD.
- Financial projections for first 10-years of operation have been worked out.

23.3 Investment Assumptions

(a) Investment Plan –

- The Plan presents the summary of the capital expenditure and working capital requirements of the project as summarised below:

INVESTMENT PLAN	Amount in USD		Total Investment
	Year-1	Year-2	
Land	109,091	-	109,091
Buildings & Civil works	189,000	-	189,000
Machinery & Equipment	320,390	-	320,390
Motor Vehicles	60,000	-	60,000
Office Furniture and equipment	20,000	-	20,000
Total Physical Assets	698,481	-	698,481
Pre-Operating costs	84,063	-	84,063
Capital Expenditure	782,543	-	782,543
Working Capital	894,544	30,480	925,024
Total Investment	1,677,087	30,480	1,707,567

(b) Financing Plan-

- The project will be financed through funds from HK INTERNATIONAL and borrowed funds from potential lenders.
- The Plan presents the sources and uses of the HK INTERNATIONAL fund which is regarded as equity; and the external funds to the project as summarised below:

FINANCING PLAN	Amount in USD		
	Year-1	Year-2	Total Financing
Equity Financing			
Shareholders' Funds (CAPEX)	332,543	-	332,543
Shareholders' Funds (W/Capital)	-	-	-
Total Equity	332,543	-	332,543
External Financing			
Long-Term loans			
Cashew Processing Plant 1	450,000	-	450,000
Long-Term loans	450,000	-	450,000
Short-term Loans	894,544	30,480	925,024
Total external financing	1,344,544	30,480	1,375,024
Total Financing	1,677,087	30,480	1,707,567
Equity Financing	20%	0%	19%
External Financing	80%	100%	81%
Total	100%	100%	100%

(c) Detailed Investment Plan –

- The detailed capital expenditure for the buildings and civil works are presented in Annex 6 (i) and for machinery and equipment is presented in Annex 6 (ii).
- Annex 6 (i) presents the capital expenditure of the buildings and civile works, machinery and equipment and the details of the support facilities that include motor vehicles and office facilities.

(a) Depreciation & Amortisation –

- The Depreciation and Amortisation Schedule provides the provisions on the wear and tear of the fixed assets as well as amortisation of the Pre-Operating expenses.
- The different rates have been used in depreciating the assets as follows:

i. Land	0%
ii. Buildings and Civil works	4%
iii. Machinery and equipment	12.50%
iv. Motor vehicles	20%
v. Office equipment and furniture	12.50%
vi. Amortisation of Pre-Operating expenses	3-years

23.4 Production Assumptions

- The production assumptions provide details of the plant production capacities, plant capacity utilisation, production efficiency, the raw cashew-nuts consumed and the final production.
- The production assumptions are as follows:

(a) Production Assumptions (Quantities) –

- The processing plant is assumed to have annual cashew-nut processing capacity of 13 MT of raw cashew-nuts.
- The plant is assumed to start operating at 55% capacity utilisation in the first year of operation increasing to 95% in the third year of operation.
- The processing plant is assumed to process 358-MT/year of raw cashew-nuts in Year 1; increasing to 2,925MT/year in Year 2; reaching a maximum processing of 3,705MT/year in the third year continuously.
- Year-1 is assumed to have two months of operation (November and December) as the auction season starts in October of each year.

		Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
Plants Production Capacity							
Cashew Processing Plant 1	MT/Year	3,900	3,900	3,900	3,900	3,900	3,900
Cashew Processing Plant 2	MT/Year	-	-	-	3,900	3,900	3,900
Cashew Processing Plant 3	MT/Year	-	-	-	-	-	3,900
Plant Capacity Utilisation							
Cashew Processing Plant 1	%	55%	75%	95%	95%	95%	95%
Cashew Processing Plant 2	%	-	-	-	-	-	-
Cashew Processing Plant 3	%	-	-	-	-	-	-
RCN Processing							
Cashew Processing Plant 1	MT/Year	358	2,925	3,705	3,705	3,705	3,705
Cashew Processing Plant 2	MT/Year	-	-	-	-	-	-
Cashew Processing Plant 3	MT/Year	-	-	-	-	-	-
RCN Processing	MT/Year	358	2,925	3,705	3,705	3,705	3,705

- The project is assumed to produce 852-MT/year of cashew-nut Kernel.
- Besides the cashew-nut kernels, the residuals (cashew-nut shells - CNS) from the production process will be for sale as well to local cashew-nut shell liquid manufacturing plant.
- The projected kernel and CNS production quantities are as summarised below:

		Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
Production Coeffiency							
Provision for Weight Loss & Impurities	%	5%	5%	5%	5%	5%	5%
Kernels Recovery Ratio	%	23%	23%	23%	23%	23%	23%
CNS Recovered	%	77%	77%	77%	77%	77%	77%
Kernels Recovered	MT/Year	82	673	852	852	852	852
CNS Produced	MT/Year	275	2,252	2,853	2,853	2,853	2,853
Containers (20ft of Kernels)	MT/Year	9	75	95	95	95	95

- **Production Assumptions (Grading) –**

- The project is set for the export market. Grading of cashew-nut kernels will be done to suite the export market which is different from the domestic market.
- The export market requires kernel grading to about 18 to 20 grades. The project will grade the kernels to 18 different grades as the international quality standards as summarised below:

Cashews Grading		% of Kernels	
1	W 180	0.0087	Kg
2	W 210	0.0174	Kg
3	W 240	0.1065	Kg
4	W 320	0.3152	Kg
5	W 450	0.0478	Kg
6	SW 210	0.0087	Kg
7	SW 240	0.0261	Kg
8	SW 320	0.0957	Kg
9	SW 450	0.0304	Kg
10	DW	0.0826	Kg
11	WS	0.0609	Kg
12	LWP	0.0696	Kg
13	LP	0.0478	Kg
14	SWP	0.0348	Kg
15	SSP	0.0130	Kg
16	DP	0.0130	Kg
17	BB1	0.0130	Kg
18	BB2	0.0087	Kg
Total Cashew Kernel		1.0000	Kg

- The grading helps to determine pricing of the final products.
- The CNS will not be graded.

Projected Revenues Assumptions

24.1 Introduction

- This section presents the projections related to the revenues as projected for the 10-years of the project.
- The projected revenues have factored the product prices for each kernel grade as per the ruling export prices in the importing country.
- The revenues assumptions are presented in Annex 9.

24.2 Products Pricing and Prices

- The prices for CNS will be ex-factory prices as the buyers will collect the residuals from the factory premises.
- The selling prices have considered the export costs of the final products to the export market and domestic market for the CNS.
- The project has conservatively assumed CIF prices and further are assumed to annually increase by 2%. The product prices per kernel grade are as follows:

Products Prices/Grade				
1	W 180	USD/Kg	✓	10.72
2	W 210	USD/Kg	✓	10.57
3	W 240	USD/Kg	✓	10.42
4	W 320	USD/Kg	✓	9.52
5	W 450	USD/Kg	✓	8.18
6	SW 210	USD/Kg	✓	9.22
7	SW 240	USD/Kg	✓	9.22
8	SW 320	USD/Kg	✓	8.18
9	SW 450	USD/Kg	✓	7.74
10	DW	USD/Kg	✓	6.70
11	WS	USD/Kg	✓	4.62
12	LWP	USD/Kg	✓	3.73
13	LP	USD/Kg	✓	3.43
14	SWP	USD/Kg	✓	2.97
15	SSP	USD/Kg	✓	2.08
16	DP	USD/Kg	✓	1.78
17	BB1	USD/Kg	✓	1.78
18	BB2	USD/Kg	✓	1.19

- The average prices of the kernels and CNS are as summarised below:

		Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8
Revenues Coefficiency									
Agents Commission	%	2%	2%	2%	2%	2%	2%	2%	2%
Cashew Kernel Prices	USD/MT	7,411	7,411	7,411	7,559	7,710	7,864	8,021	8,182
CNS Sold	%	80%	80%	80%	85%	90%	90%	90%	90%
CNS Prices	USD/Kg	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07

24.3 Project Revenues

- The projected revenues for the cashew-nut kernels and CNS have been worked out. The revenues are projected to increase with the increases in quantities produced resulting from changes in capacity utilisation and additional plant as well as projected price increases.
- In the first year, the project will produce and sell for 2-months and the other stock will be sold in the subsequent months of the second year.
- Revenues from CNS are projected to account for 3% to the total revenues and the balance will come from cashew-nut kernels. The summary of the Projected Gross Revenues are as follows:

Projected Revenues Assumptions				Amount in USD					
	Year-1			Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
	Month1	Month11	Month12						
Kernels Revenues									
Gross Revenues		282,622	339,146	621,768	5,188,935	6,704,104	6,838,186	6,974,950	7,114,449
Less: Agents Commission	%	2%	2%	2%	2%	2%	2%	2%	2%
	USD	5,652	6,783	12,435	103,779	134,082	136,764	139,499	142,289
Kernels Revenues	USD	276,969	332,363	609,332	5,085,156	6,570,022	6,701,422	6,835,451	6,972,160
	USD/Kg	7.4	7.4	7.4	7.6	7.7	7.9	8.0	8.2
Rev/MT of RCN	USD/MT	1,704	1,704	1,704	1,739	1,773	1,809	1,845	1,882
Rev/MT of Kernel	USD/MT	7,411	7,411	7,411	7,559	7,710	7,864	8,021	8,182
Revenues Growth				-	735%	29%	2%	2%	2%
CNS Revenues									
CNS Prices	TZS/Kg	150	150	150	153	156	159	162	166
	USD/Kg	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06
CNS Sold	%	80%	80%	80%	85%	90%	90%	90%	90%
	MT	100	120	220	1,914	2,568	2,568	2,568	2,568
CNS Revenues	USD	5,460	6,552	12,012	106,511	145,707	148,621	151,594	154,625
% of total Revenues		2%	2%	2%	2%	2%	2%	2%	2%
Total Project revenues	USD	282,429	338,915	621,344	5,191,667	6,715,729	6,850,044	6,987,044	7,126,785

- The project has assumed 2% of the Kernel revenues as Agent Commission and that 80% of CNS will be locally sold while the other 20% will be consumed by the factory in the boilers.

Project Operating Costs

25.1 Introduction

- This section presents the projections related to the operational costs: direct and indirect operating costs and working capital requirements of the project.
- The assumptions are presented in the Annexes as follows:

(i)	Direct Operating Costs – RCN Purchases	Annex 12 (i)
(ii)	Direct Operating Costs – Processing & Export Costs	Annex 12 (ii)
(iii)	Projected Indirect Operating Costs	Annex 12 (iii)
(iv)	Projected Number of Staff	Annex 13 (i)
(v)	Projected Salaries & Staff Benefits	Annex 13 (ii)
(vi)	Working Capital Schedule	Annex 14

25.2 Operating Costs Assumptions

- The projected operating costs assumptions include direct and indirect operating costs.
- The projected direct operating costs have considered raw cashew-nut purchases costs, cashew-nuts processing costs and the costs associated with the export of the final products.

(a) RCN Purchases Costs

- The main raw material of the project is raw cashew-nut which will be locally procured around the project area.
- The project will purchase RCN from warehouses owned by the Cooperative Unions through the Auction process as per the government regulations on purchase of RCN in Tanzania. The project has assumed average auction price of TZS 2,200/kg of RCN.
- The project will procure adequate stock of RCN during the Auction period which lasts for about 4-months starting mid-October to February of the following year. The stock would cover for the entire selling year.
- The purchase costs include the purchases cost, statutory fees and taxes and packages and logistics costs.

- The RCN purchase cost is the amount payable to cashew-nut sellers. The statutory fees and taxes and other costs are as summarised below:

Fees And Charges on RCN		
Rates		
Warehouse Operation	38	TZS/Kg
Jute Bags	65.07	TZS/Kg
Cashew Inputs Contribution	110	TZS/Kg
Transport - to factory	50	TZS/Kg
Loading & off-loading	25	TZS/Kg
Other Costs	5	TZS/Kg

- The raw cashew-nut purchase costs are projected to account for about 56% of the project revenues. The fees and logistics costs will account for about 8% of the project revenues.
- The purchases costs are projected to increase by 2% annually.

(b) Processing and Export Costs

- **Cashews Processing Costs**
 - The project will use machines and human labour for cashew-nuts processing.
 - Human labour will entail wages and salaries and staff benefits. the staff benefits include payment of pension schemes, food allowances and other staff welfare costs.
 - The use of machinery will entail the following costs-
 - Utilities costs
 - Maintenance and repair
 - Spare parts of the processing plant
 - Shortages and brokerages.
 - The processing costs are assumed to account for 6% to 8% of the project revenues.
 - Utilities costs include the costs related to electricity bills, diesel fuel costs, firewood costs, castor oil and water bills. These costs are projected to account for about 0.7% of the project revenues.
 - Maintenance and repair costs include repair and maintenance works for the processing plant, factory buildings and equipment. The maintenance and repair costs are projected to account for 0.6% of the project revenues.
 - Below is the summary of the processing costs:

		Amount in USD								
		Year-1			Year-1	Year-2	Year-3	Year-4	Year-5	
		Month1	Month11	Month12						
Exchange Rate (USD/TZS)	2,750									
RCN Processing Costs										
Direct Labour Costs										
Basic Salary	USD	-	36,559	36,559	73,118	438,708	438,708	438,708	438,708	438,708
Add: Pension Schemes	USD	-	3,656	3,656	7,312	43,871	43,871	43,871	43,871	43,871
Other staff costs	USD	-	1,828	1,828	3,656	21,935	21,935	21,935	21,935	21,935
Inflation Adjustment	USD	-	-	-	-	10,090	20,181	30,271	40,361	40,361
Sub-total	USD	-	42,043	42,043	84,086	514,604	524,695	534,785	544,875	544,875
% of Revenues	%	-	15%	12%	13.5%	9.9%	7.8%	7.8%	7.8%	7.8%
Utilities										
Electricity	0.50% On RCN	USD	-	878	1,053	1,931	16,116	20,822	21,239	21,664
Diesel fuel	0.15% On RCN	USD	-	263	316	579	4,835	6,247	6,372	6,499
Firewood	0.30% On RCN	USD	-	527	632	1,159	9,670	12,493	12,743	12,998
Castor Oil	0.20% On RCN	USD	-	351	421	772	6,447	8,329	8,496	8,665
Water	0.10% On RCN	USD	-	176	211	386	3,223	4,164	4,248	4,333
Sub-total	USD	-	2,194	2,633	4,828	40,291	52,056	53,097	54,159	54,159
% of Revenues	%	-	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Plant Maintenance & repairs										
Repairs & Maintenance Machinery	0.40% On Revenues	USD	-	1,108	1,329	2,437	20,341	26,280	26,806	27,342
Repairs & Maintenance F/ Building	0.05% On Revenues	USD	-	138	166	305	2,543	3,285	3,351	3,418
Repairs & Maintenance F/ Equipment	0.15% On Revenues	USD	-	415	499	914	7,628	9,855	10,052	10,253
Sub-total	USD	-	1,662	1,994	3,656	30,511	39,420	40,209	41,013	41,013
% of Revenues	%	-	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
Other Direct Costs										
Spares Consumed	0.50% On RCN	USD	-	878	1,053	1,931	16,116	20,822	21,239	21,664
Shortages & Breakages	0.60% On Revenues	USD	-	1,662	1,994	3,656	30,511	39,420	40,209	41,013
Sub-total	USD	-	2,540	3,048	5,587	46,627	60,243	61,447	62,676	62,676
% of Revenues	%	-	1%	1%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
RCN Processing Costs	USD	-	48,439	49,718	98,157	632,034	676,413	689,538	702,723	702,723
Processing Cost/MT of RCN	USD/MT	-	298	255	275	216	183	186	190	190
Processing Cost/MT of Kernel	USD/MT	-	1,296	1,109	1,194	939	794	809	825	825
% of Revenues	%	-	17%	15%	16%	12%	10%	10%	10%	10%

- **Kernels Export Costs**

- The project has assumed 100% of the cashew-nut kernels produced by the project is for export.
- The export costs are associated with the following costs:
 - TPA costs
 - Plant quarantine and phytosanitary services
 - Logistics and statutory fees
- The TPA costs include:
 - Container handling charges
 - Stuffing charges
 - Temporary storage costs
 - Verified Gross Mass (VGM) Certificate, and
 - Port wharfage charges
- The plant quarantine and phytosanitary costs include:
 - Phytosanitary certificate
 - Treatment supervision, and
 - Consignment inspection

- Logistics and statutory fees
 - The logistics and statutory fees include export levy, fumigation of containers, certificate of Origin, atomic certificate, packaging materials, shipping line charges and loading and off-loading charges.
 - Other costs are clearing and forwarding charges, freight charges, clearing agency fees, container demurrage charges, transportation costs and other expenses.
 - The logistics and statutory costs are projected to account for up to 14% of the revenues.
 - The major export cost is the export levy tagged at 15% of the revenues.
- The summary of the kernels export costs is as presented below:

		Amount in USD								
		Year-1			Year-1	Year-2	Year-3	Year-4	Year-5	
		Month1	Month11	Month12						
Exchange Rate (USD/TZS)	2,750									
Kernels Export Costs										
No. of Containers (20ft)	Containers	-	4	5	9	75	95	95	95	
Exported Containers	75.0% Containers	-	3	4	7	56	71	71	71	
TPA Charges										
Container Handling Charges (Full)	160 USD/20ft Cont.	USD	-	498	598	1,096	8,970	11,362	11,362	11,362
Stuffing charges- 20ft Container	70 USD/20ft Cont.	USD	-	218	262	480	3,924	4,971	4,971	4,971
Storage Charges	50 USD/20ft Cont.	USD	-	156	187	343	2,803	3,551	3,551	3,551
Verified Gross Mass (VGM) Certifica	60 USD/20ft Cont.	USD	-	187	224	411	3,364	4,261	4,261	4,261
Port Wharfage	0.5% On Expt Revenue	USD	-	1,039	1,246	2,285	19,069	24,638	25,130	25,633
Plant Quarantine & Phytosanitary Service										
Phytosanitary Certificate	15 USD/3-Container	USD	-	16	19	34	280	355	355	355
Treatment Supervision	100 USD/3-Container	USD	-	104	125	228	1,869	2,367	2,367	2,367
Consignment Inspection	26 USD/3-Container	USD	-	27	33	60	493	625	625	625
Export Levy	15% On Expt Revenue	USD	-	31,159	37,391	68,550	572,080	739,127	753,910	768,988
Fumigation of Containers	40,000 TZS/Container	USD	-	45	54	100	815	1,033	1,033	1,033
Certificate of Origin	200,000 TZS/Container	USD	-	227	272	498	4,077	5,165	5,165	5,165
Atomic Certificate	0.15% On Expt Revenue	USD	-	312	374	685	5,721	7,391	7,539	7,690
Packaging materials	1.40% On RCN	USD	-	2,458	2,949	5,407	45,126	58,303	59,469	60,658
Shipping line charges	0.10% On Expt Revenue	USD	-	208	249	457	3,814	4,928	5,026	5,127
Loading & offloading charges	0.25% On Expt Revenue	USD	-	519	623	1,142	9,535	12,319	12,565	12,816
Clearing & Forwarding Charges	0.15% On Expt Revenue	USD	-	312	374	685	5,721	7,391	7,539	7,690
Freight Charges	0.25% On Expt Revenue	USD	-	519	623	1,142	9,535	12,319	12,565	12,816
Clearing Agency fees	0.06% On Expt Revenue	USD	-	125	150	274	2,288	2,957	3,016	3,076
Container Demurrage Charges	0.0% On Expt Revenue	USD	-	-	-	-	-	-	-	-
Transportation charges	0.20% On Expt Revenue	USD	-	415	499	914	7,628	9,855	10,052	10,253
Other expenses	0.10% On Expt Revenue	USD	-	208	249	457	3,814	4,928	5,026	5,127
Sub-total		USD	-	38,750	46,501	85,251	710,926	917,843	935,526	953,563
Export Cost/MT of Kernel	USD/MT		-	1,037	1,037	1,037	1,057	1,077	1,098	1,119
% of Revenues	%		-	14%	14%	14%	14%	14%	14%	14%
Direct Operating Costs		USD	-	262,749	306,890	569,640	4,566,241	5,758,736	5,872,833	5,989,011
Direct Operating Cost/MT of RCN	USD/MT		-	1,617	1,574	1,593	1,561	1,554	1,585	1,616
Direct Operating Cost/MT of Kernel	USD/MT		-	7,030	6,843	6,928	6,787	6,758	6,892	7,028
% of Revenues			-	93%	91%	92%	88%	86%	86%	86%

- Total Direct Operating Costs
 - The project total direct Revenue operating costs include RCN purchases costs, cashews processing costs and kernels export costs.
 - The direct operating costs are projected to account for up to 80% of the project revenues.

(c) Indirect Operating Costs

- The projected Indirect Operating costs of the project include six cost items which are:
 - Indirect labour costs
 - Statutory costs,
 - Office expenses
 - Maintenance and repair of support facilities,
 - Marketing costs, and
 - Administration expenses.

- The projected indirect operating costs account for about 4% to 5% of the project revenues; and the Total Operating Costs are projected to account for 98.8% to 88% of the revenues as summarized below:

Projected Indirect Operating Costs						
Amount in USD						
	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
Indirect Labour Cost	84,086	514,604	524,695	534,785	544,875	554,966
Statutory Costs	3,200	19,584	19,968	20,352	20,736	21,120
Office Expenses	2,220	13,586	13,853	14,119	14,386	14,652
Maintenance & repairs	1,400	8,568	8,736	8,904	9,072	9,240
Marketing Costs	1,457	2,915	4,372	5,830	7,287	8,744
Administration costs	12,145	74,327	75,785	77,242	78,700	80,157
Other Expenses	3,000	18,000	18,000	18,000	18,000	18,000
Total Indirect Operating Costs	107,508	651,585	665,409	679,232	693,056	706,879
% of Revenues	18%	13%	10%	10%	10%	10%
Projected Operating Costs						
Direct Operating Costs	569,640	4,566,241	5,758,736	5,872,833	5,989,011	6,107,310
Indirect Operating Costs	107,508	651,585	665,409	679,232	693,056	706,879
Projected Operating Costs	677,148	5,217,827	6,424,144	6,552,065	6,682,066	6,814,189
% of Revenues	109%	101%	95.7%	95.6%	95.6%	95.6%

25.3 Staff Salaries and Benefits

- The project has assumed direct and indirect labour costs. The Direct labour costs are those workers who are directly involved in the production process. The indirect labour comprises of the support staff contingent.
- The project is set to employ a total of 315 staff in the cashew processing plant as follows:

Employment Creation		Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8
Direct Labour	Workers	290	290	290	580	580	870	870	870
Indirect Labour	Workers	25	25	25	50	50	75	75	75
Total Permanent Staff	Workers	315	315	315	630	630	945	945	945

- The labour costs – direct and indirect – are projected to account for about 5% of the project revenues.

25.4 Working Capital Assumptions

- The working capital schedule presents the current assets and current liabilities of the project. The current assets include Trade Debtors, advance payments, inventories of raw materials, finished products and other consumables.
- The schedule shows that the project will require about USD 780 million at the commissioning of the project to cover for the initial operating costs which will largely be earmarked for the purchase of raw cashew-nuts.
- The working capital assumptions in terms of the current assets and current liabilities are as presented below:

Projected Working Capital Schedule												
					Amount in USD							
					Year-1		Year-1	Year-2	Year-3	Year-4	Year-5	
					Month1	Month11	Month12					
Exchange Rate (USD/TZS)												
Current Assets:												
Trade Debtors												
Debtors	30	Days	On Revenues	USD	-	276,969	332,363	332,363	423,763	547,502	558,452	569,621
Trade debtors				USD	-	276,969	332,363	332,363	423,763	547,502	558,452	569,621
Prepayments												
Advance Payments	15	Days	On Direct costs	USD	-	131,375	153,445	153,445	190,260	239,947	244,701	249,542
Prepayments				USD	-	131,375	153,445	153,445	190,260	239,947	244,701	249,542
Inventories												
RCN	120	Days	On RCN Purchase	USD	-	702,240	842,688	842,688	859,542	1,110,528	1,132,738	1,155,393
Packaging materials	30	Days	On Packing materials	USD	-	2,194	2,633	2,633	3,358	4,338	4,425	4,513
Utilities	30	Days	On Utilities	USD	-	208	249	249	318	411	419	427
Spares & Consumables	30	Days	On Spares	USD	-	878	1,053	1,053	1,343	1,735	1,770	1,805
Cashew Kernels	15	Days	On Operating Costs	USD	-	158,137	180,208	180,208	217,543	267,751	273,025	278,386
Other stocks	10	Days	On Indirect Costs	USD	-	17,842	17,842	17,842	18,189	18,535	18,882	19,229
Stocks				USD	-	881,499	1,044,674	1,044,674	1,100,292	1,403,298	1,431,259	1,459,754
Other Current Assets												
Other assets	5	Days	On Salaries	USD	-	8,921	8,921	8,921	9,094	9,268	9,441	9,615
Other Current Assets				USD	-	8,921	8,921	8,921	9,094	9,268	9,441	9,615
Total current assets				USD	-	1,298,764	1,539,403	1,539,403	1,723,409	2,200,014	2,243,853	2,288,531
Current Liabilities:												
Trade creditors												
Trade Creditors	30	Days	On Direct costs	USD	-	262,749	306,890	306,890	380,520	479,895	489,403	499,084
Trade Creditors				USD	-	262,749	306,890	306,890	380,520	479,895	489,403	499,084
Payables												
Payables	30	Days	On Mkt & Distribution	USD	-	262,749	306,890	306,890	380,520	479,895	489,403	499,084
Payables				USD	-	262,749	306,890	306,890	380,520	479,895	489,403	499,084
Unearned Revenues												
Unearned Revenues	2	Days	On Revenues	USD	-	18,465	22,158	22,158	28,251	36,500	37,230	37,975
Unearned Revenues				USD	-	18,465	22,158	22,158	28,251	36,500	37,230	37,975
Other current Liabilities												
Other liabilities	5	Days	On Indirect cost	USD	-	8,921	8,921	8,921	9,094	9,268	9,441	9,615
Other liabilities				USD	-	8,921	8,921	8,921	9,094	9,268	9,441	9,615
Total Current liabilities				USD	-	552,884	644,859	644,859	798,385	1,005,557	1,025,477	1,045,758
Net Working Capital				USD	-	745,880	894,544	894,544	925,024	1,194,457	1,218,377	1,242,774
Change in Net Working Capital				USD	-	745,880	148,664	894,544	30,480	269,434	23,919	24,397

Financial & Economic Analysis

26.1 Introduction

- The financial and economic results include the projected profit and loss statements, cash flows statements, balance sheets statements, Internal Rate of Return and other economic parameters as annexed
 - Profit & Loss Statements – Annex 1
 - Cashflows Statements – Annex 2
 - Balance Sheets Statements – Annex 3
 - Economic Viability Analysis – Annex 4 (i)

26.2 Projected Profit & Loss Statements –

- The analysis of the profitability indicates that the project is a profitable undertaking with long-term-term returns to the investors.

ANNEX 1				Amount in USD '000'								
Cashewnuts Processing & Export Project				Year-1	Year-2	Year-3	Year-4	Year-5	Year-6			
Projected Profit & Loss Statements				Month1	Month11	Month12	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
Sales Revenues												
Cashew Kernels	-	277	332	609	5,085	6,570	6,701	6,835	6,972			
Cashew Nut Shells	-	5	7	12	107	146	149	152	155			
Sub-total	-	282	339	621	5,192	6,716	6,850	6,987	7,127			
Add: Export Incentives	10%	28	33	61	509	657	670	684	697			
Total revenues	-	310	372	682	5,700	7,373	7,520	7,671	7,824			
% Revenues Growth	-	-	-	-	88%	23%	2%	2%	2%			
Direct Operating Costs												
RCN from Warehouse	-	160	192	351	2,933	3,789	3,865	3,942	4,021			
Fees And Charges on RCN	-	16	19	35	291	375	383	391	398			
Direct Labour Costs	-	42	42	84	515	525	535	545	555			
Utilities	-	2	3	5	40	52	53	54	55			
Plant Maintenance & repairs	-	2	2	4	31	39	40	41	42			
Other Direct Costs	-	3	3	6	47	60	61	63	64			
Kernels Export Costs	-	39	47	85	711	918	936	954	972			
Total Direct Costs	-	263	307	570	4,566	5,759	5,873	5,989	6,107			
Gross Profit	-	47	65	113	1,134	1,614	1,647	1,682	1,717			
↳GROSS Margins	-	15%	18%	17%	20%	22%	22%	22%	22%			
Indirect Operating Costs												
Indirect Labour Cost	-	7	7	15	90	91	93	95	97			
Statutory Costs	-	2	2	3	20	20	20	21	21			
Office Expenses	-	1	1	2	14	14	14	14	15			
Maintenance & repairs	-	1	1	1	9	9	9	9	9			
Marketing Costs	-	1	1	1	6	6	6	6	7			
Administration costs	-	6	6	12	74	76	77	79	80			
Other Expenses	-	2	2	3	18	18	18	18	18			
Total Indirect Costs	-	19	19	38	230	234	238	242	247			
EBITDA	-	29	46	75	904	1,380	1,409	1,439	1,470			
EBITDA Margins	-	9%	12%	11%	16%	19%	19%	19%	19%			
Less: Depreciation	0	7	7	17	81	70	61	53	46			
↳ Amortisation	-	-	-	-	28	19	12	8	8			
Profit Before Int. & Tax	-	0	22	40	58	795	1,291	1,336	1,378	1,416		
Loss/Profit on disposal of Property	-	-	-	-	-	-	-	-	-			
Less: Interest on Loans:												
Cashew Processing Plant 1	-	-	-	-	23	20	17	13	10			
Cashew Processing Plant 2	-	-	-	-	-	-	-	-	-			
Cashew Processing Plant 3	-	-	-	-	-	-	-	-	-			
Short-term Loans	9%	6	7	7	7	9	9	9	10			
Interest expenses	-	6	7	7	29	29	26	23	19			
Profit Before Tax	-	0.36	16	33	51	766	1,263	1,310	1,355	1,396		
Taxable Incomes	-	0.36	15	33	51	766	1,263	1,310	1,355	1,396		
Corporation Tax	30%	-	0%	0%	0%	0%	0%	0%	0%			30%
Profit/(loss) after tax	-	0.36	16	33	51	766	1,263	1,310	1,355	977		
NET Margin	-	5%	9%	8%	13%	17%	17%	18%	12%			
Dividends	-	-	-	-	-	-	-	-	-			
Retained Income	-	0.36	16	33	51	766	1,263	1,310	1,355	977		
Cumulative Retained Income	-	0.36	13	46	46	812	2,074	3,384	4,740	5,717		

- The project has assumed 10% Export Incentives that will make the project become viable.
- A 30% corporate tax has been assumed to test the viability of the project in event the government insists on the payment of corporate tax on the grounds that the project is a profit-making project.
- With 10% export incentives on the Gross Revenues, the project is projected to register the following:
 - Gross margins of up to 21%
 - EBITDA margins of up to 17%
 - Net margins of up to 16%

26.3 Projected Cash Flow Statements –

- The projected cashflows statements indicate the cash inflows and cash outflows of the project. The project cash inflows include equity financing, external loans and internally generated revenues from sale of cashew kernels and CNS.
- On annual bases, the project will generate negative cash balances for the first four years of the project operation. The deficit will be covered by the proposed working capital loan facility that will be used for the purchase of raw cashew-nuts and other operating costs.

Projected Cash flows Statements						
Amount in USD						
	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
Cash Inflows						
Equity Financing	333	-	-	-	-	-
External Financing	450	23	-	-	-	-
Sales revenues	682	5,700	7,373	7,520	7,671	7,824
Cash Inflows	1,465	5,723	7,373	7,520	7,671	7,824
Cash Outflows						
Capital Expenditure	783	-	-	-	-	-
Change In Net Working Capital	895	30	269	24	24	25
Direct Operating Costs	570	4,566	5,759	5,873	5,989	6,107
Indirect Operating Costs	38	230	234	238	242	247
Loan Interest Payments	12	29	29	26	23	19
Loan Principal Payment	-	58	61	64	67	71
Corporate Taxation	-	-	-	-	-	419
Cash Outflows	2,297	4,914	6,352	6,225	6,346	6,888
Surplus (Deficit)	-832	809	1,021	1,296	1,325	936
Opening Cash Balances	-	-832	-23	998	2,294	3,619
Closing Cash Balance	-832	-23	998	2,294	3,619	4,555

26.4 Projected Balance Sheets Statements –

- The projected balance sheet statements show the assets and liabilities of the project over time. The net physical assets are decreasing overtime due to depreciation.
- The total net assets increase overtime due to increased net current assets over time. The project will have positive net current assets throughout the project life-time as presented below.

ANNEX 3						
Cashewnuts Processing & Export Project						
Projected Balance Sheets Statements						
Amount in USD '000'						
	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6
Fixed Assets						
Total Physical Assets	698	682	601	531	470	417
Less: Depreciation	17	81	70	61	53	46
Add: Unamortised Pre-Ops	84	56	37	25	17	8
Net Fixed Assets	766	657	568	495	434	379
Current Assets:						
Cash Balances	-	-	998	2,294	3,619	4,555
Trade debtors	332	424	548	558	570	581
Prepayments	153	190	240	245	250	254
Stocks	1,045	1,100	1,403	1,431	1,460	1,489
Other Current Assets	9	9	9	9	10	10
Total Current Assets	1,539	1,723	3,198	4,537	5,907	6,889
Current Liabilities:						
Trade creditors	307	381	480	489	499	509
Payables	307	381	480	489	499	509
Unearned Revenues	22	28	37	37	38	39
Other Current Liabilities	9	9	9	9	10	10
Interest Payable	-	-	-	-	-	-
Total Current Liabilities	645	798	1,006	1,025	1,046	1,066
Net Current Assets	895	925	2,192	3,512	4,861	5,823
Total Net Assets	1,660	1,582	2,761	4,007	5,295	6,202
Financed By:						
Equity Financing						
Shareholders' Funds (CAPI)	333	333	333	333	333	333
Associate Companies	0	0	0	0	0	0
Retained Earnings	0	0	0	0	0	0
Profit/Loss Account	46	812	2,074	3,384	4,740	5,717
Equity financing	378	1,144	2,407	3,717	5,072	6,050
External Financing						
Long-Term loans						
Cashew Processing Plant 1	450	415	354	290	223	152
Cashew Processing Plant 2	-	-	-	-	-	-
Cashew Processing Plant 3	-	-	-	-	-	-
Short-term Loans	832	23	-	-	-	-
External Financing	1,282	438	354	290	223	152
Total Financing	1,660	1,582	2,761	4,007	5,295	6,202
Ratios:						
Debt/Equity	339%	38%	15%	8%	4%	3%

26.5 Economic Viability Analysis –

- Based on the assumptions made on the revenue generation, capital expenditure requirements, and cash flows projections, the project is both financially feasible and economically viable.

- Three measures have been used to evaluate viability of the proposed project. They include Net Present Value (NPV), Internal Rate of Return (IRR) and the Payback Period (PP).
- The project IRR, NPV and PP are as shown in Annex 4 (i). The key indicators are as follows:

➤ Assumed Cost of fund	5.0%
➤ Net Present Value (NPV)	USD 6.082 million
➤ IRR	64.6%
➤ Payback Period	3-years

- The IRR of 64.6% is greater than the assumed cost of fund (the current average cost of funds charged by financial institutions), and
- The NPV is positive, (USD 6.082 million), suggesting a viable business venture.
- The Payback Period is 3-years period which is shorter than the financial projections period of 10-years, and thus it is a viable proposition.

26.6 Other Economic Benefits

- Tax Income –
 - The project will pay income taxes, property taxes, corporate taxes and other taxes to the government.
- Jobs Creation –
 - The project will create about 315 direct jobs and over 200 indirect employments.
- Source of foreign currency-
 - The project will produce cashew-nut kernel for the export market which will earn the country foreign currency.
- Industrial development –
 - The project will add to value of agricultural crops in the country, an important factor for the country’s economic growth and development and health of the people in line with aspects of United Nations sustainable development goals.

Financing Requirements

27.1 Introduction

- HK INTERNATIONAL is investing in cashew-nut processing and marketing project at an estimated cost of USD 1.7 million.
- The project requires financing in the form of equity and external loans.

27.2 Project Financing

- The capital investment will be financed through HK INTERNATIONAL funds and the balance will be financed through long-term loan and short-term loans.
- HK INTERNATIONAL will finance any cost overruns from the project implementation.

27.3 Sources and Uses of Funds

- The sources and uses of funds schedule are presented in Annex 2 (ii).
- The machinery components will be financed by the shareholders. The external loan will finance the plant installation and building costs as summarised below:

Sources And Uses of Funds

	Amount in USD		
	Year-1	Year-2	Total Financing
Equity Financing			
Land	109,091	-	109,091
Buildings & Civil works	39,000	-	39,000
Machinery & Equipment	70,390	-	70,390
Motor Vehicles	10,000	-	10,000
Office Furniture and equipment	20,000	-	20,000
Pre-Operating costs	84,063	-	84,063
Working Capital	1,984	-	1,984
Equity Financing	334,527	-	334,527
External Financing			
Land	-	-	-
Buildings & Civil works	150,000	-	150,000
Machinery & Equipment	250,000	-	250,000
Motor Vehicles	50,000	-	50,000
Office Furniture and equipment	-	-	-
Pre-Operating costs	-	-	-
Working Capital	892,560	30,480	923,040
External Financing	1,342,560	30,480	1,373,040
Total Financing	1,677,087	30,480	1,707,567

27.4 Proposed Loan Schedule

- The project is seeking for an external long-term loan facility. of the proposed loan will be a 96-month term loan facility including 12-months of grace on principal.
- The long-term loan will be disbursed in Year 1 for the development of the processing plant. The proposed repayment schedule is as summarised below:

Loans Schedule

		Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10
Loan Interest Rate	%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Loans Drawdowns	USD '000'	450	-	-	-	-	-	-	-	-	-
Loan Interest Payment	USD '000'	7	30	28	26	22	19	16	12	10	10
Principal Repayment	USD '000'	-	58	61	64	67	71	74	78	0	0
Closing Balance	USD '000'	450	415	354	290	223	152	78	-	0	0

27.5 Proposed Terms and Conditions

- The following are the proposed Terms and Conditions of the first long-term loan:

Type of facility	Medium-term Loan
Loan Currency	➤ United States Dollars (USD)
Loan Amount	➤ USD 450,000
Moratorium period	➤ 12-months on Principal
Mode of disbursement	➤ Direct disbursement to the account of promoters/supplier
Loan tenure	➤ 96-months
Mode of repayment	➤ Quarterly Payments from sale proceeds
Interest rate	➤ Floating rate of 5.0% p.a.

27.6 Short-term Loans

- At the commissioning, the project will seek for short-term loans to finance working capital requirements. The shareholders will provide for working capital funds for the project.

27.7 Security of the loan

- The collateral offered against the requested loan is assets of the proposed project.

Conclusion

- Tanzania, with cashew nuts production of 350,000MT and export earnings of USD 500 million in 2017/2018, the crop ranked as one of the country's top agricultural export commodities. However, about 80% of the country's raw cashew-nut crop is exported to Asia as raw cashew nuts and less than 20%, is processed domestically.
- The project entails processing of raw cashew-nut for the export market. The project is geared to contribute to the development of the agriculture sector – cashew nut crop - in Tanzania.
- The project analysis suggests that the project is financially viable and technically feasible subject to availability of proposed investment incentives from the government. The project will be in a position to meet its financial obligations from the project sales revenues. The preliminary assessment of the viability of the proposed project demonstrates the project is a short-term investment and a profitable venture.
- It is recommended that implementation of the project should observe the timeframe to capture the window of opportunity for the increased working capital requirements for the cashew-nut processing and export project.