GREEN NATURE COMPANY LIMITED

"Building stronger community with urban lifestyle"

Strategic Business plan April 2022

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Contents

1 Abbreviation

i. SBP: Strategic Business Plan
ii. GNC: Green Nature Company Limited
iii. TZS : Tanzanian Shillings
iv. BLN: Billion
v. MLN: Million
vi. BRELA, : Business Registration and Licensing Agency – responsible for registration of the companies
vii. TBS, : Tanzania Bureau of Standard- Responsible for setting and controlling the minimum quality standards of goods and services on Tanzania
viii. NEMC: National Environmental Management Commission
ix. OSHA: Occupational Safety and Health at work places
x. TRA : Tanzania Revenue Authority
xi. CRB : Contractors Registration Board
xii. PBT : Profit Before Tax
xiii. CAGR: Compound annual growth rate

2 Confidentiality Statement

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3 Objective of SBP

The purpose of this SBP is primarily for guidance and implementation of all strategic initiatives towards attaining the company objective as well as meeting requirements of Tanzania Investment Center. This will cover industrial investment in manufacturing of batteries for solar use, automotive and other appliances, manufacturing Battery Acid, and TelevisionAppliance assembly

4 Executive Summary

4.1 What are we doing?

We are a full registered company intending to invest around $ 10Mln in manufacturing Batteries, Battery acid, and Television appliances in Tanzania.

Investment	Battery acid	Battery plant	Television assembly plant
Cost $ **(10m)**	**$1mln**	**$7mln**	**$2mln**
Product			

4.2 Situational analysis (Batteries, battery acid and Television)

4.1.1 Solar Batteries

- Have become a very important source and storage of energy and integral part of our lives in powering several machines, cars and portable devices like transistor radios etc.
- The use of Batteries have been growing fast in East, Central and Southern Africa region (1.8W-New installation),due to high demand of solar power (Reference 11.5)
- This high increase of demand for solar power is greatly contributed by low connectivity of national grid in relation to high population size in the region.
- The analysis of 7 countries: Tanzania, Kenya, Uganda, Rwanda, Burundi, Democratic Republic of Congo and Zambia shows that overall, less than 25% are connected to electricity from National Grid. (Attachment: analysis data per country)
- Fluctuation of power supply to the connected population has fueled the demand of solar power both in rural and urban areas.
- Currently high number of batteries of different size are demanded to serve the regional market given the growth,
- *The Automotive Batteries*; Africa automotive battery market stood at $ 1.7 billion in 2017 and is projected to reach $ 2.3 billion by 2023, exhibiting a CAGR of more than 5% during the forecast period, on account of rising demand for automobiles from growing urban population in the region, improved living standard and the necessity of transportation.

4.1.2 The battery acid

- Is important content in batteries functionality, without which batteries can't function. All batteries supplied must be recharged through refilling of battery acid.
- The demand of the battery acid goes in line with demand for the batteries

4.1.3 Electronic equipment (Television):

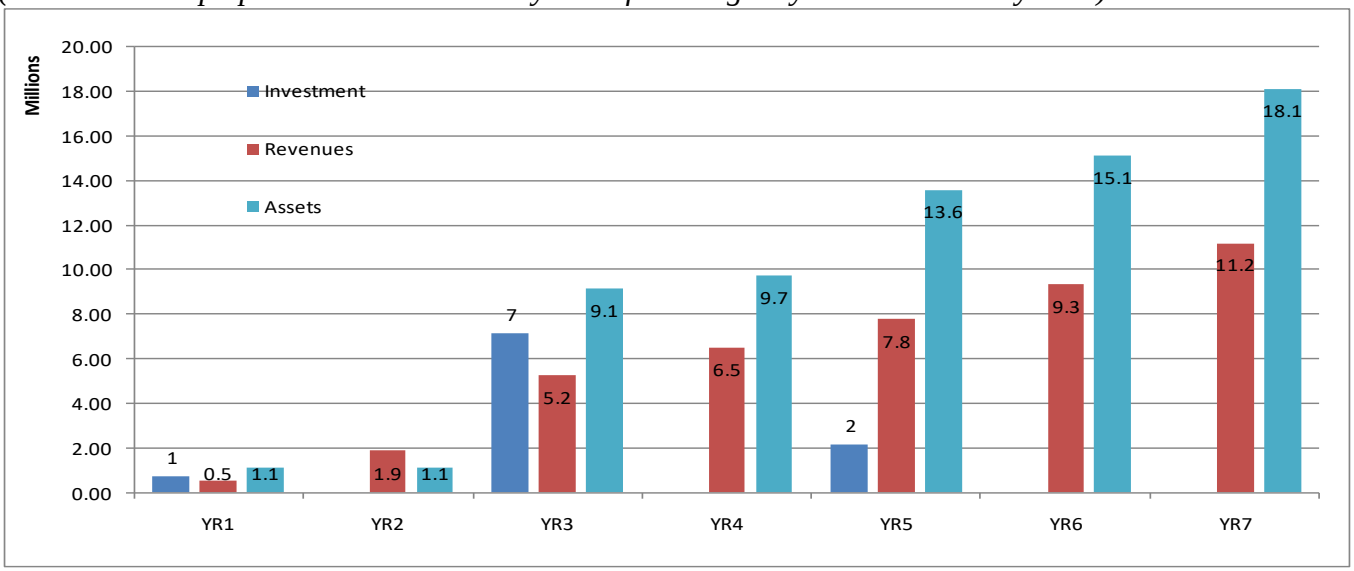
- An average of more than $45 Mln is spent for Television importation in Tanzania annually. (Ref 11.7)The supply of televisions in Tanzania has been growing to reach $47mln worth in 2020.
- All television are imported from China, United Kingdom, and other Arab countries that have been the major exporting countries. There is no manufacturer or assembler in the whole East and Central African Region.
- *Tanzania is encouraging industrialization through industustrial initiatives aiming at making the country industrialized by 2025(Reference 11.4))*
- The COVID-19 situation has exposed the over-dependency of the region, to other countries especially Asian, for imported Batteries and Television Appliances. This situations expose the opportunities in the Industry for the region and potential investors

4.3 GNC and Founders

- GNC has been established to minimize importation and boost supply of batteries, battery acid and Television appliances in Tanzania as well as the other parts of East, Central and Southern African Region. This company will focus on manufacturing through use of local and imported raw materials.
- The founders Ms Violet Jacob and Mr. Iqualiptus Rasiel Malle have been in business for more than 16 years with full understanding of the industry.
- The manufacturing plant will be located in Bagamoyo, Coast region which is one of the country's strategic industrial zone

4.4 Key financial objective

(need to scale up operation to start battery manufacturing on year 2 and Tv on year 4)



Yr0-Yr2 Revenues will depend on water battery acid plant, while growth of Revenues from Yr 3 will be attributed by additional Battery and Television assembly in Yr 3 and Yr 5 respectively.

4.5 Investment

- The total investment cost of the industry is expected to be $ 10million inclusive of land, building machines and other establishment expenses.
- The capital structure will include both equity contribution from founders and external finances.
- The investment will be done in phases starting with battery acid (phase1), Batteries (phase2) and Television assembly (phase3)

  Production plants capacity per annum will be: 88kLts/month of battery acid, 6k units/month of battery and 291 units of Television sets.

4.6 Sales Projection

- Given the market price, the sales are projected to grow from $0.5mln in yr1 to 11.2mln in yr7 7% battery acid, 71% batteries, and 22% Television in year 1, with growth rate of 20% per annum. Given demand in Tanzania and other regional countries, sales will both be local and export.

4.7 Contribution to the economy

The company will contribute in various ways including:

- Employment more than 150 staff (expect to impact 1200 Tanzanians given dependency ratio of 8 per person) and other small scale traders in neighboring surrounding
- Tax: Corporate tax, employment tax, VAT
- Environment preservation via Solar use and electrical mobility initiatives
- Reduction of importation and increase of export of manufactured goods hence improves both balance of payment and strengthening of currency

5 About the company

GNC goal is to transform the industry of solar power and Television equipment usage in to more accessible affordable means to the livelihood of people within East Africa and sub-Saharan region. This will be made possible through investment in manufacturing of battery acid, batteries, and Television appliances in Tanzania. Nearly 100% of these products are currently being imported from oversee. The demand of the same is high due to low electricity connectivity (which gives rise to demand of solar power). The company's overall strategy is to serve the regional market including Tanzania, DRC, Burundi, Zambia, Malawi, and Uganda, where the overall electricity connectivity is less than 25%. With principle office located in Bagamoyo, the company expects to enjoy industrial service attached to the area since it is part of the government strategic industrial zone. The founders, who will lead management team, have each accumulated over sixteen years of experience in the renewable energy business.

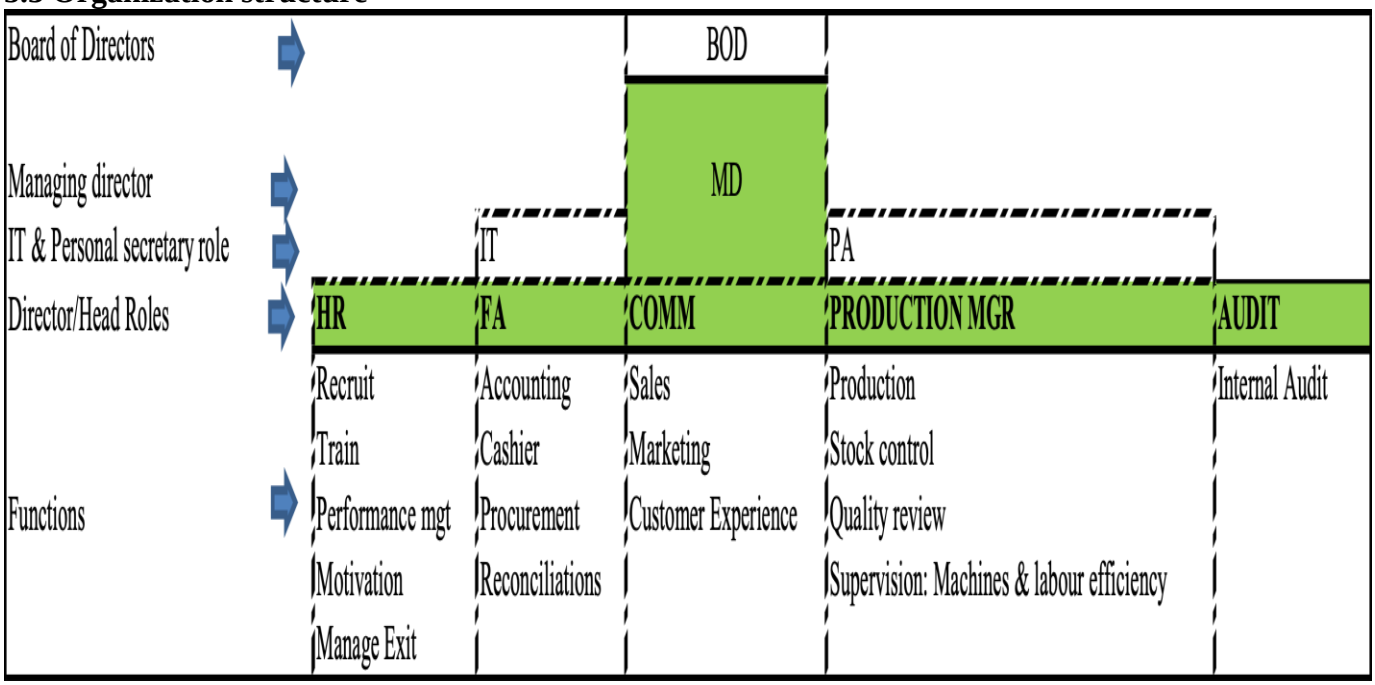
5.1 Vision

Ambitious to become a powerful leader in battery & television appliances manufacturing for livelihood improvement in East and sub-Saharan region.

5.2 Mission

We are more committed to continuously create more concrete values for shareholders, customers, employees as well as the whole society by means of providing quality energy batteries and Television at most accessible and affordable way for the improvement of the livelihood of society in Tanzania and sub-Saharan region

5.3 Organization structure



The right structure designed is expected to drive the strategy to achieve the organizational goal. Adjustment will be done in line with the growth and complexity.

5.4 Shareholders

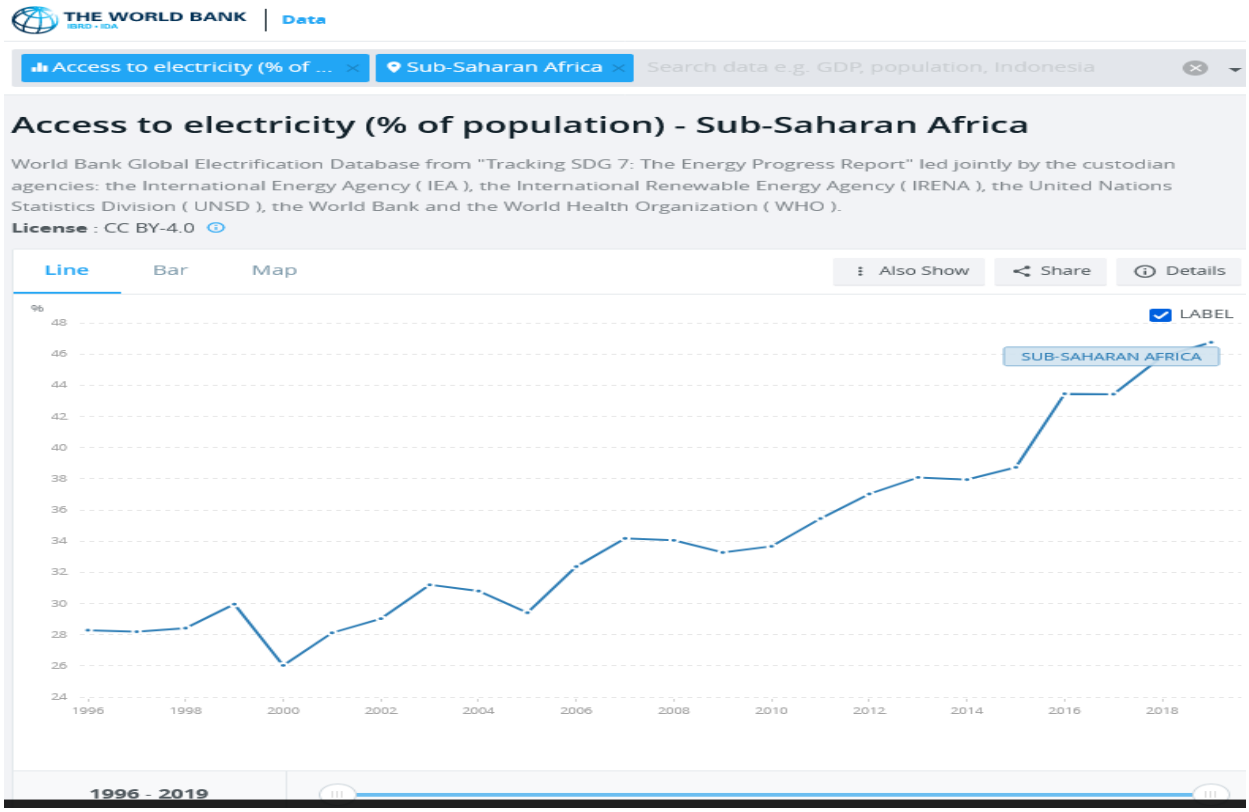
S/n	Shareholders name	%	Profile
1	Ms Violet Jacob	60%	• Founder &Director Macron Solar Ltd • Founder and Managing director Green Nature Company Ltd • Prominent business entrepreneur over 16yrs • Background of medical studies • Highly networked from malt sectoral partners
2	Mr Iqualiptus Rasiel Malle	20%	• Founder and company secretary Green nature Ltd • Expert in Renewable energy design and construction for 20 yrs • Expert in technology related to Organic waste management, Biogas, Waste water and affluent treatment systems
3	Un allotted	20%	
	Total	**100%**	

6 Industry

6.1 Solar Batteries, Automotive Batteries and Battery Acid

More than 52% of sub-Saharan Africa's population today does not have access to electricity. And those who do have electricity pay on average nearly twice as much as consumers elsewhere in the world. Power shortages is still rampant in the continent and there is an urgent need of an alternative solution.

On the other hand, the population in sub-Saharan Africa is expected to grow from 1 billion in 2018 to more than 2 billion in 2050, the demand for electricity is projected to expand 3 percent a year. This takes into account a steady increase in access to electricity as well as greater energy efficiency.



Tanzania being one of the sub-Saharan countries is on the same challenge as her neighbors. Despite tremendous effort of the government and stake holders the accessibly electricity thoroughly various agencies and projects, the demand for solar will keep increasing as per the below facts;

a) Accessibility of National grid in rural areas. The population structure of most rural areas in Tanzania is scattered one. Although REA is succeeding in connecting village centers to the nation grid the true story from the field is that it's only a fraction of a village population that resides at the village centre (Nuclear pattern) and most are scattered for their various economic activities. This has a more positive stimulus on the rest of village community to find alternative source of energy (**preferable solar**) to match with those inviolate centers. Hence the increased demand

b) **Potential market from neighboring countries**. Tanzania is surrounded with six land locked countries DRC, Burundi, Rwanda, Zambia Malawi and Uganda. With an exception of Rwanda and Uganda the

electrification status of the rest of our neighbors is still very low creating a potential untouched market. From world bank data, DRC's national electrification access rate was just 9%, with 1% in rural areas and 19% in urban areas up to 2016 and Burundi had 7% overall, with 49% of the urban and only 1% of the rural population connected to electricity's on 2020. The story is not very different in Malawi, and Zambia and Uganda.

c) **An increased global concern on the green Technology** as a solution not global warming and Environmental degradation (Multinational companies, institutes and organisation are now focusing one green sources of energy with Ann example of Vodacom ~South Africa. -Vodacom says the new solar panels will help generate more than 50 000kWh of energy on an annual basis to power the Randburg base station controller. This will help reduce the telco's carbon footprint, lower its electricity usage and reduce the base station controller's reliance on batteries, in the event of load-shedding.

d) **Emergence of urban market** which was not a primary target 10 years ago. This is more driven with the need of stable uninterrupted power, cutting cost and security reasons (*avoiding risks of fire in case of generator and kerosene use).* Now days even bank branches and ATMs are migrating to solar battery and backups to insure power when the national grid is off.

e) **Improvement of Technology and the falling costs of solar appliances** make it universal and not a luxury as perceived earlier

f) Lessons from developed countries as Europe and USA are the world's largest markets of solar power. This shows that the more we keep advancing as a nation, the more the need of solar power.

6.2 Television Appliances

Consumer electronics spend is expected to rise to $5.1Bn across East Africa region1 by 2030, driven by an annual population growth of 3% and income growth of 7%.TVs have the highest potential for manufacturing scale-up given their relative market sizes.

While global business is affected by an increase in cost of doing business and some complications on transportation of goods globally, there is a big spark in the TVs market and media at large as people quench for information and social refreshments. We have witnessed the following from 2019 - 2021

- A strong increase of need and curiosity of getting news, which busted the demand for television sets.
- Improved life standard and interest on social networks and media making a order Television set a basic need for the middle and upper class has busted the Television appliances market
- Media industry is growing with multiple TVs channels which inherence the market for TV sets.
- The move do digital transmission and more accessibility especially in rural areas.

7 Market

7.1 Customers and demand analysis

The demand of the batteries was estimated at USD 708.6 million in 2014, growing at a CAGR of 5.3% from 2015 to 2021 where Tanzania being part of the growing the demand market. Separately for Television in Tanzania is estimated to be $45 Million p.a. so far much both goods are imported largely from Asia, and Europe.

7.2 Channels

The company will supply the manufactured products suppliers through the following channels

- Local suppliers and wholesalers
- Foreign suppliers
- Through sister company Macron Solar Ltd
- Direct sale to high net worth consumers
- Use of regional agency

7.3 Products/Services

Battery acid	Batteries	Television
❖ Production and sales of 1mln lts p.a ❖ Production will be done in phase 1 ❖ Materials source local/imported ❖ Used to refill batteries ❖ Currently, 95% is imported ❖ Sales will be local and export	❖ Production and sales of 67k pc p.a ❖ Production will be done in phase 2 ❖ Materials source from local/imported ❖ Used as energy storage. ❖ Currently, 98% is imported ❖ Sales will be local and export	❖ Assembly and sales of 3,400 pc p.a ❖ Production will be done in phase 3 ❖ Materials source local and imported ❖ Currently, 100% is imported ❖ Sales will be local and export

Through experience, owners intend to supply quality product which will meet the market needs.

7.4 Marketing tools

s/n	Tools	Details
1	Advertisement	Media and social media
2	Sales Promotion	Discounts on sales, quantity discounts on bulky purchases
3	Distribution Channels	Penetration via Agency
4	Publicity & CSR	Publicity through helping the disadvantageous with solar power
5	Personal selling	Direct engagements

7.5 Competitors

In Tanzania, this will be the first Batteries manufacturing industries to be established focused in renewable energy. However regional wise, there are two companies in Kenya producing the product. The barrier to entry in the industry is caused by lack of adequate expertise and awareness of solar potentials.

7.6 SWOT

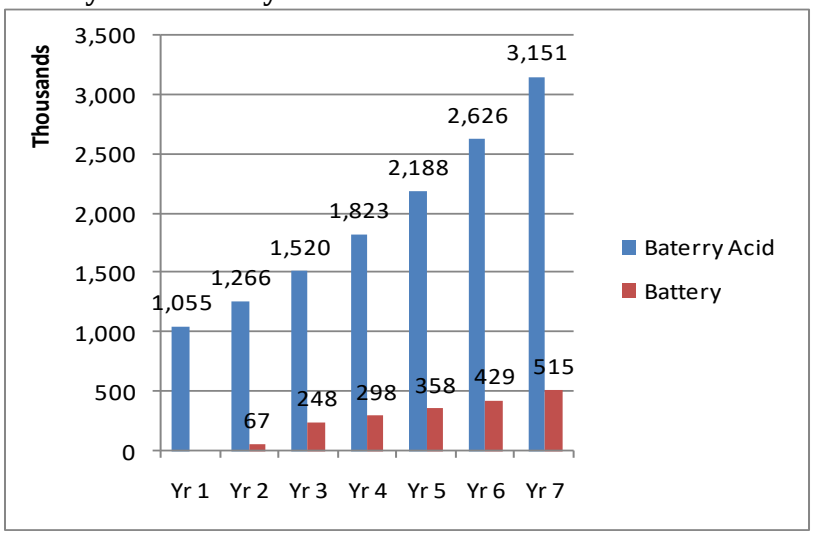
s/n	Strength	Weakness	Opportunity	Threat
1	Strong shareholders 20 yrs Experience in business	Capital adequacy	Regional demand is high and growing – seven countries low electricity connectivity	Bureaucracy – much establishment requirements
2	Land secured in industrial area.		Support from government - Investment initiatives	Development of Nyerere dam, Gas discovery, and Wind for energy source
3			Cheapest source of energy	Depreciation of local currency –high cost of Raw materials

8 PRODUCTION

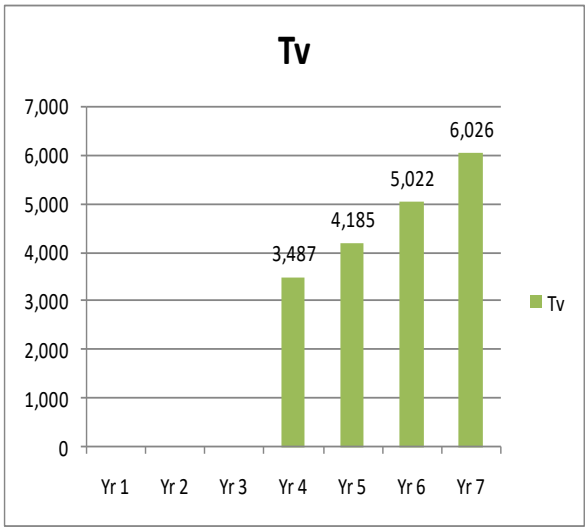
Total of 3.1mlnLts/p.a (lts battery acid), 515k/p.a (units of batteries), and 6k-pc/p.a (Tv sets) with growth rate of 20% p.a

8.1. Production targets

Battery And Battery Acid



Television



Volumes: Battery acid (Lts), Battery (Pcs of different sizes), Television (Pcs of different sizes)

The current average selling prices is $ 0.51/lts; $ 18/pc and $ 53/Pc for battery acid, battery and Television respectively.

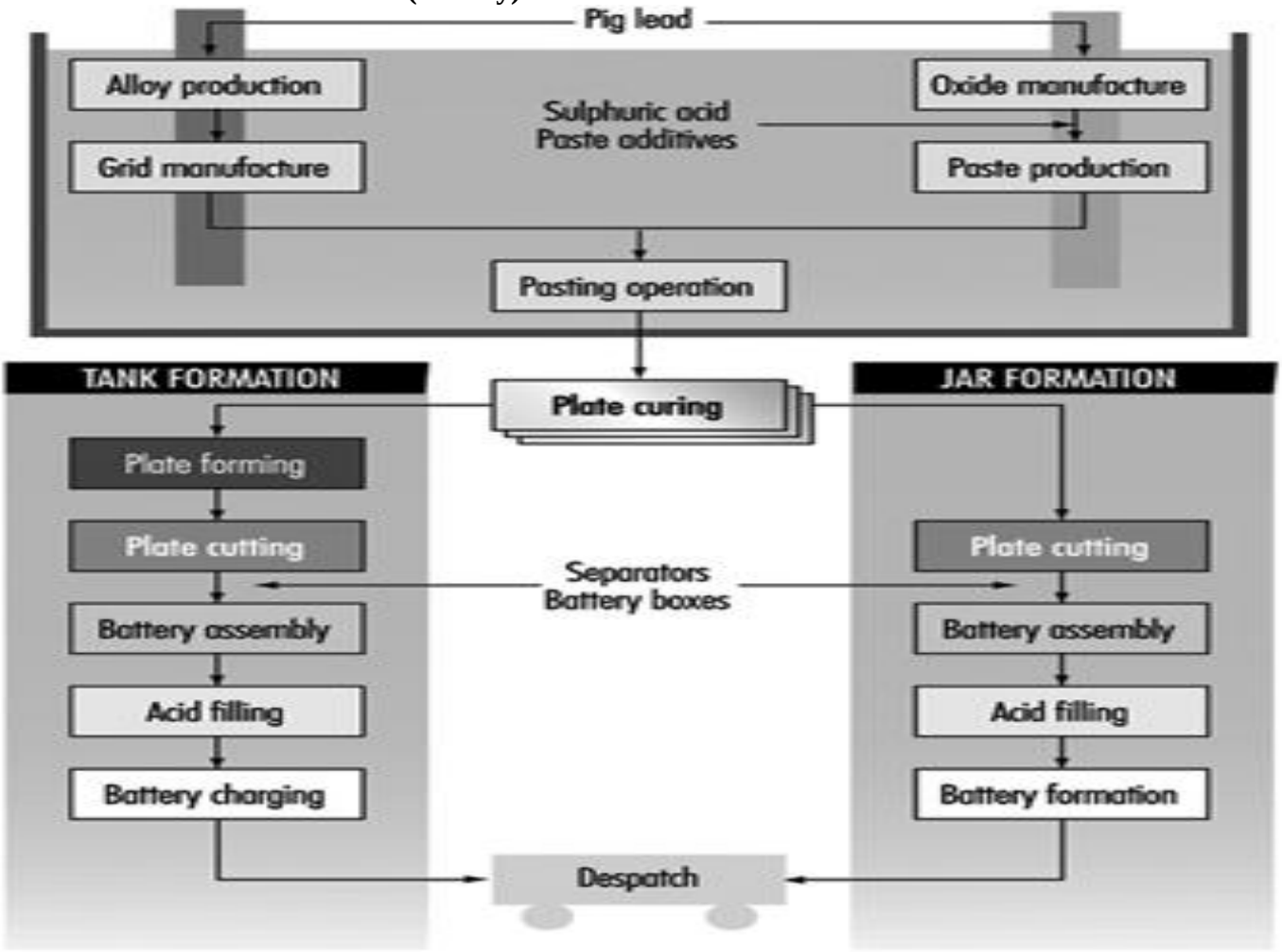
8.2 Machines and technology

The technology used will be semi auto with partly automation and partly labour.

8.3 Photo1. battery plant

Photo 2: LCD TV conveyor belt assembly line transporter transmission production line factory

8.5 Photo 3: Production Process (battery)



9 Financial Considerations

9.1 Financial requirements and source

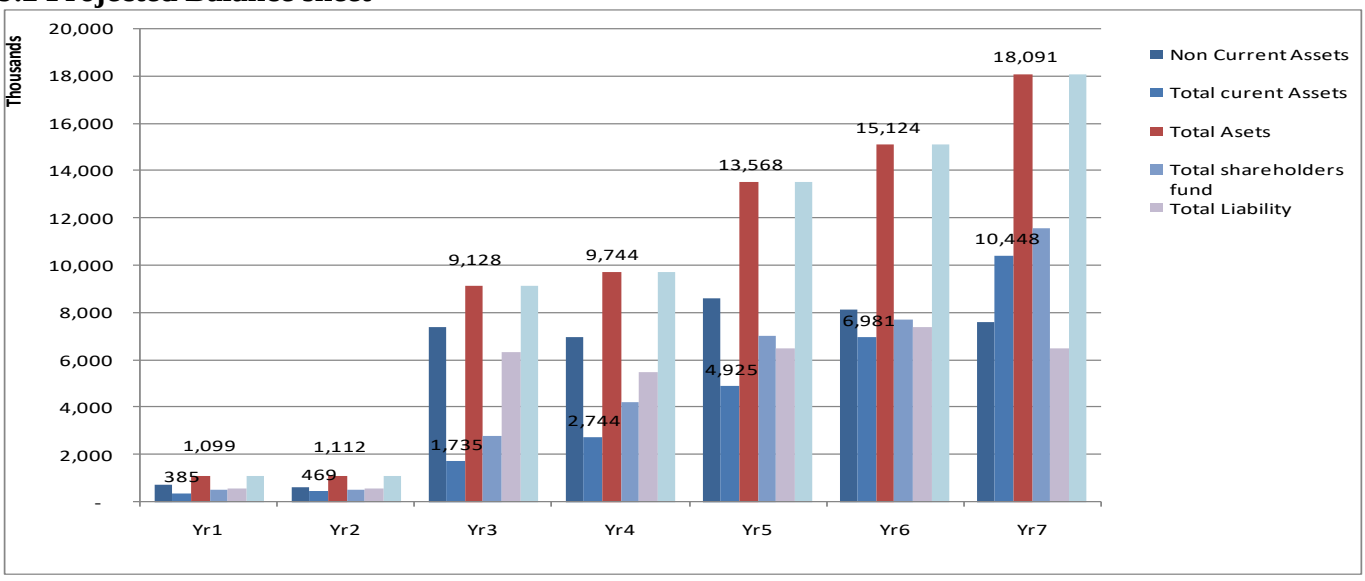
Investment cost	$	TZS	Battery Acid	Battery	TV
Land and building	2,850,000	6,700,350,000	469,024,500	4,757,248,500	1,407,073,500
Plant	6,300,000	14,811,300,000	1,036,791,000	10,516,023,000	3,110,373,000
Vehicles	300,000	705,300,000	49,371,000	500,763,000	148,113,000
Pre Workings	100,000	235,100,000	16,457,000	166,921,000	49,371,000
Furniture & Fittings	20,000	47,020,000	3,291,400	33,384,200	9,874,200
Others	30,000	70,530,000	4,937,100	50,076,300	14,811,300
Working Capital	400,000	940,400,000	65,828,000	667,684,000	197,484,000
Total	**10,000,000**	**23,510,000,000**	**1,645,700,000**	**16,692,100,000**	**4,937,100,000**

Financing Source & Contribution	Amount TZS	%
Equity	4,702,000,000	20%
Bank	18,808,000,000	80%
Total	**23,510,000,000**	**100%**

9.2 Key Assumptions

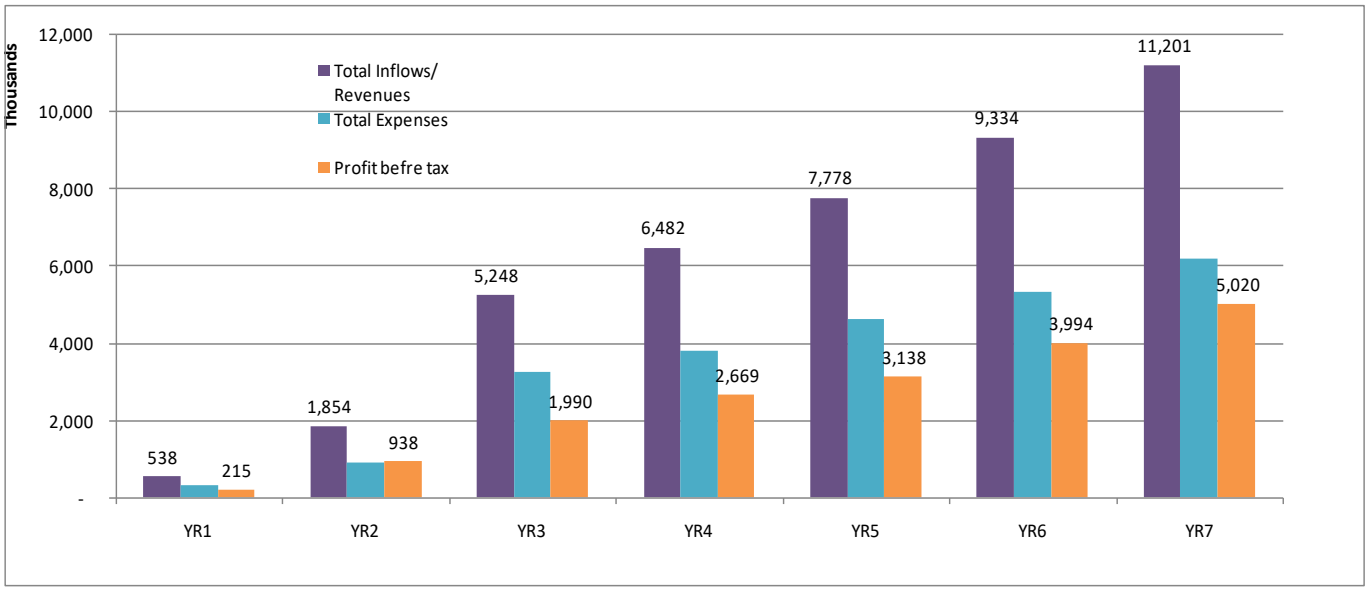
	Assumptions	
1	Debtors	90 days
2	interst rate ($8, TZS 12%)	12%p.a
3	Loan	80% of investment
4	Repayments period	7 yrs
5	cost of sales	50%
6	ops expeses	10%
7	Depreciation (30 yrs plant Life span)	5% flat rate
8	Sales start	one year after investment
9	Opening Cash YR0	20% Equity Contribution
10	Inventory is maintainance	50% of direct cost
11	Loan balance	Amortised by 7 yrs anualised
12	Creditors	10% of direct cost
14	Production target: battery acid 40% of market share in year 1 followed by CAGR 20% (25% in yr6-7)	
15	Production target: battery 10% of market share in year 1 followed by CAGR 20% (25% in yr6-7)	
16	Production target: television 15% of market share in year 1 followed by CAGR 20% (25% in yr6-7)	

9.2 Projected Balance sheet



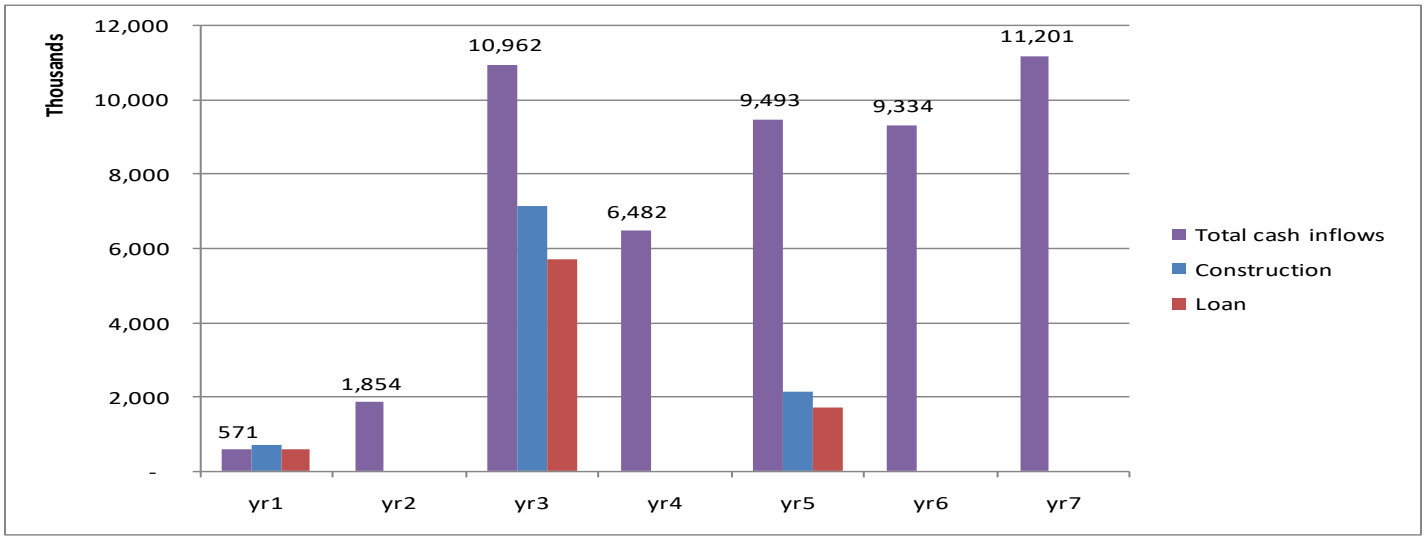
The projected balance sheet indicates growth due to impact of performance from initial investment. Assets growth will be caused by growth in investments of the plants in three phase's yr 1, yr 3 and yr 5. Shareholders' funds growth will be much contributed by growth of retained earning die to profitability and less impact on dividend payments.

9.3 Projected income statement (amount in $)



Revenues growth (from $0.54m in yr1- $11.2m yr7) will highly be contributed by sales of main products. Income from by-products hasn't been established due to the fact that the choice of technology of

9.4 Projected cash flow (amount in $)



Inflows include revenues and loan proceeds. The loan will be received in Yr 1 ($0.57m), Yr 3($7.1m) and Yr 5 ($2.1m) which has indicated abnormal growth.

9.5 Sensitivity analysis

9.5.1 Net present value

NPV COMPUTATION		1	2	3	4	5	6	7
Cash flow		185,909	692,462	1,786,177	2,261,395	2,696,657	3,295,589	4,014,307
Discounted c/f (8% rate)=cf/(r+1)n+1		**172,138**	**593,674**	**1,417,925**	**1,662,193**	**1,835,300**	**2,076,780**	**2,342,309**
Total PV	10,100,319							
Less Investment cost	10,000,000							
Net Present Value (7 yrs)	100,319							

The NPV is positive greater than 1, which indicates viability of the project.

9.5.2 Pay back

Pay back	yr1	yr2	yr3	yr4	yr5	yr6	yr7	
Discounted cash flow	172,138	593,674	1,417,925	1,662,193	1,835,300	2,076,780	2,342,309	
Less Investment 1	(714,286)	(542,148)		-	-	-		
Balannce after investment 1	(542,148)	51,527						
Less investent 2		(7,142,857)	(7,091,330)	(5,673,405)	(4,011,213)			
balance after investment 2		**(7,091,330)**	**(5,673,405)**	**(4,011,213)**	**(2,175,913)**	-	-	
less investment 3					(2,142,857)	(4,318,770)	(2,241,990)	
balance after investment 3					**(4,318,770)**	**(2,241,990)**	**100,319**	
						Months		83.49
						Yrs		6yrs, 11 months

Given the cumulative discounted cash flow with assumption of non withdrawal from business, phase one investment will meet its payback in 3 yrs while the rest of the projects will meet its payback after 6yrs and 11 months.. This is due to investment gap given amongst each projects and performance of each project in the market.

10 Conclusion and Recommendation

10.1 Recommendation

- Market for battery acid and batteries is growing fast now at $708Mln (*Africa Volume- with Tanzania having much stake)* worth with growth rate of 5.4%p.a
- Market for television in Tanzania is worth $ 47Mln p.a
- Both goods are currently imported from Asia and Europe
- Tanzania (through Tanzania investment center initiatives) is encouraging establishment of industries in line with industrialization agenda 2025
- Financial viability indicates profitability with positive Net present value of the project establishment with reasonable payback period

10.2 Conclusion

Given aforementioned, establishment of Battery acid, Battery, and Television Plants are supported. Management is called for resource mobilization, support from Government authorities is sought, support from other stakeholders including financial institutions and public are part of the key success factor.

11 References:

11.1 ASEAN Journal of Science and Engineering
(Journal homepage: http://ejournal.upi.edu/index.php/AJSE/

11.2 World Bank: Electricity connectivity urban rural population in Africa data 2019

11.3 STATISTA
(https://www.statista.com/statistics/1228960/age-dependency-ratio-in-tanzania/)

11.4 Tanzania 2025 Vision: Industrialization with FDI
"Tanzania aims to become a semi-industrialized country by 2025, for which the contribution of manufacturing to the national economy must reach a minimum of 40% of the GDP"
https://www.tanzaniainvest.com › industrialization

11.5 Push for renewable: How Africa is building a different energy
https://www.un.org › magazine › january-2021

11.6 Importation of Television in Tanzania
https://www.ceicdata.com/datapage/charts/ipc_tanzania_imports-television/?type=area&from=2009-12-01&to=2020-12-01&lang=en

11.7 Africa Lead Acid Battery Market Analysis 2021
https://www.transparencymarketresearch.com)

11.8 Analysis data – electricity connectivity in Africa by World bank Data

12 Appendix

12.1 Financial objectives

Financial Indicators	YR1	YR2	YR3	YR4	YR5	YR6	YR7
Investment	714,286	-	7,142,857	-	2,142,857	-	-
Revenues	538,168	1,853,890	5,247,584	6,481,916	7,778,331	9,333,997	11,200,796
PBT	214,564	938,211	1,990,457	2,669,339	3,138,082	3,993,698	5,020,438
shareholders Funds	505,872	547,845	2,784,169	4,226,835	7,036,235	7,703,885	11,603,286
Assets	1,098,828	1,111,796	9,128,184	9,743,921	13,568,348	15,123,799	18,091,221

12.2 Production and sales

Production target	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
Baterry Acid	1,055,232	1,266,278	1,519,534	1,823,441	2,188,129	2,625,755	3,150,906
Battery		67,116	248,479	298,175	357,810	429,372	515,246
Tv				3,487	4,185	5,022	6,026
Total Prod. Volume	**1,055,232**	**1,333,394**	**1,768,013**	**2,125,103**	**2,550,124**	**3,060,149**	**3,672,179**

12.3 Projected Income statement

Inflows	YR1	YR2	YR3	YR4	YR5	YR6	YR7
Revenues battery acid	538,168	645,802	774,962	929,955	1,115,946	1,339,135	1,606,962
Revenues battery	-	1,208,088	4,472,622	5,367,150	6,440,580	7,728,696	9,274,435
Revenues Television	-	-	-	184,811	221,805	266,166	319,399
Total Inflows/ Revenues	**538,168**	**1,853,890**	**5,247,584**	**6,481,916**	**7,778,331**	**9,333,997**	**11,200,796**
Outflows							
Direct conversion cost	215,267	741,556	2,099,034	2,592,766	3,111,332	3,733,599	4,480,319
Other Ops	26,908	92,694	262,379	324,096	388,917	466,700	560,040
Depreciation (5%)	35,714	35,714	392,857	392,857	500,000	500,000	500,000
Interest on Loan (8%p.a)	45,714	45,714	502,857	502,857	640,000	640,000	640,000
Total Expenses	**323,604**	**915,679**	**3,257,127**	**3,812,576**	**4,640,249**	**5,340,299**	**6,180,358**
Profit befre tax	214,564	938,211	1,990,457	2,669,339	3,138,082	3,993,698	5,020,438
Tax(30%)	64,369	281,463	597,137	800,802	941,425	1,198,110	1,506,131
Profit after tax	150,195	656,748	1,393,320	1,868,538	2,196,657	2,795,589	3,514,307

12.4 Projected balance sheet

Years	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7
Non Current Assets	714,286	642,857	7,392,857	7,000,000	8,642,857	8,142,857	7,642,857
Current assets							
Cash	250,000	5,467	423,430	1,123,442	2,980,908	4,647,443	7,648,165
Invesntory	107,634	370,778	1,049,517	1,296,383	1,555,666	1,866,799	2,240,159
Debtors	26,908	92,694	262,379	324,096	388,917	466,700	560,040
Total curent Assets	384,542	468,939	1,735,326	2,743,921	4,925,491	6,980,942	10,448,364
Total Asets	**1,098,828**	**1,111,796**	**9,128,184**	**9,743,921**	**13,568,348**	**15,123,799**	**18,091,221**
Equity and Liabiliy							
Share capital	120,000	120,000	120,000	120,000	120,000	120,000	120,000
Retained earning	385,872	427,845	2,664,169	4,106,835	6,916,235	7,583,885	11,483,286
Total shareholders fund	**505,872**	**547,845**	**2,784,169**	**4,226,835**	**7,036,235**	**7,703,885**	**11,603,286**
Non Currecnt Liability							
Loan Balance	571,429	489,796	6,134,111	5,257,809	6,220,979	7,046,554	6,039,903
Total Non Current Liabilit	**571,429**	**489,796**	**6,134,111**	**5,257,809**	**6,220,979**	**7,046,554**	**6,039,903**
Current Liability	-	-	-	-	-	-	-
Trade creditors	21,527	74,156	209,903	259,277	311,133	373,360	448,032
Total current liability	**21,527**	**74,156**	**209,903**	**259,277**	**311,133**	**373,360**	**448,032**
Total Liability	**592,955**	**563,952**	**6,344,014**	**5,517,086**	**6,532,113**	**7,419,914**	**6,487,935**
Total Equity and Liability	**1,098,828**	**1,111,796**	**9,128,184**	**9,743,921**	**13,568,348**	**15,123,799**	**18,091,221**

12.5 Projected cash flow

	yr1	yr2	yr3	yr4	yr5	yr6	yr7	Total
Revenues	-	1,483,112	4,198,068	5,185,533	6,222,665	7,467,198	8,960,637	33,517,212
Loan	571,429		5,714,286		1,714,286			8,000,000
Debtors colelction	-	370,778	1,049,517	1,296,383	1,555,666	1,866,799	2,240,159	8,379,303
Total cash inflows	**571,429**	**1,853,890**	**10,961,870**	**6,481,916**	**9,492,617**	**9,333,997**	**11,200,796**	**49,896,514**
Outflows								
Construction	714,286		7,142,857		2,142,857			10,000,000
Direct and op exp	-	1,334,250	2,911,413	4,416,862	5,200,249	5,850,299	7,190,358	26,903,431
Loan Repayments 1(7yrs)	101,676	101,676	101,676	101,676	101,676	101,676	101,676	711,732
Loan Repayments 2 (7yrs)			105,912	105,912	105,912	105,912	105,912	529,560
Loan Repayments 3 (7yrs)					275388	275388	275388	826,164
Total out flow	**815,962**	**1,435,926**	**10,261,858**	**4,624,450**	**7,826,082**	**6,333,275**	**7,673,334**	**38,970,887**
Net inflow	(244,533)	417,963	700,012	1,857,466	1,666,535	3,000,722	3,527,462	10,925,627
Balance b/d	250,000	5,467	423,430	1,123,442	2,980,908	4,647,443	7,648,165	250,000
Balance c/d	**5,467**	**423,430**	**1,123,442**	**2,980,908**	**4,647,443**	**7,648,165**	**11,175,627**	**11,175,627**

12.6 Net present value and pay back

NPV COMPUTATION	1	2	3	4	5	6	7
Cash flow	185,909	692,462	1,786,177	2,261,395	2,696,657	3,295,589	4,014,307
Discounted c/f (8% rate)=cf/(r+1)n+1	**172,138**	**593,674**	**1,417,925**	**1,662,193**	**1,835,300**	**2,076,780**	**2,342,309**
Total PV	10,100,319						
Less Investment cost	10,000,000						
Net Present Value (7 yrs)	100,319						

Pay back	yr1	yr2	yr3	yr4	yr5	yr6	yr7	
Discounted cash flow		172,138	593,674	1,417,925	1,662,193	1,835,300	2,076,780	2,342,309
Less Investment 1		(714,286)	(542,148)		-	-	-	
Balannce after investment 1		(542,148)	51,527					
Less investent 2			(7,142,857)	(7,091,330)	(5,673,405)	(4,011,213)		
balance after investment 2			**(7,091,330)**	**(5,673,405)**	**(4,011,213)**	**(2,175,913)**	-	-
less investment 3						(2,142,857)	(4,318,770)	(2,241,990)
balance after investment 3						**(4,318,770)**	**(2,241,990)**	**100,319**

Months	83.49
Yrs	6yrs, 11 months