2023

# ELECTRIC TWO WHEELERS ASSEMBLING PLANT (TANZANIA).
# The Project Proposal



T & B GROUPEMENT LIMITED

Contact Information:

T & B Groupement Limited,
Mlimani City Mall, Block 4
DAR ES SALAAM,
TANZANIA.
Tel: +255 758 222897.
Email Address: 'info@tandbgroupement.com'

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## 1.0 PROJECT BACKGROUND

The idea to set up the proposed project is a result of global trend to reduce carbon dioxide emission, which is the main drive of climate change. It is now a reality that human activities are the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases.

As greenhouse gas emissions blanket the Earth, they trap the sun's heat. This leads to global warming and climate change. Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature. This poses many risks to human beings and all other forms of life on Earth.

### 1.1 Project Shareholders

The shareholders of the proposed project are:

| S/no | Name | Address | % Share holding |
|---|---|---|---|
| 1 | Paul Abdul Athuman | P O Box 2324<br>Dar es Salaam<br>Tanzania | 98% |
| 2 | Irene Andochius Batanyita | P O Box 12116<br>Dar es Salaam<br>Tanzania | 2% |

**1.1.1** Mr. Paul A Athiman is local investor with more than 15 years in various business venture both within and outside the country. Currently he is involved in cereal trading business where he is also exporting the same to neighbouring countries in particular Burundi.

**1.1.2** Ms. Irene A Bitanyita is Tanzanian national with more than 5 years' experience in various business operations. Currently she is working in aviation sector

## 2.0 MARKET, PLANT CAPACITY AND REGISTRATION PROCEDURES

### 2.1 Market Overview

According to World Bank report, Tanzania's motorcycle market was projected to grow at an annual compounded annual growth (CAGR) rate of 4% from 2018 to 2023. On the other hand Tanzania's total population was 66.46 million in January 2023 and is growing at the rate of 3% per annum. Therefore, by 2030 Tanzania's populations is anticipated to reach 84.2 million. As the populations continues to grow, the government is feeling obligated to create and fortify transportation systems.

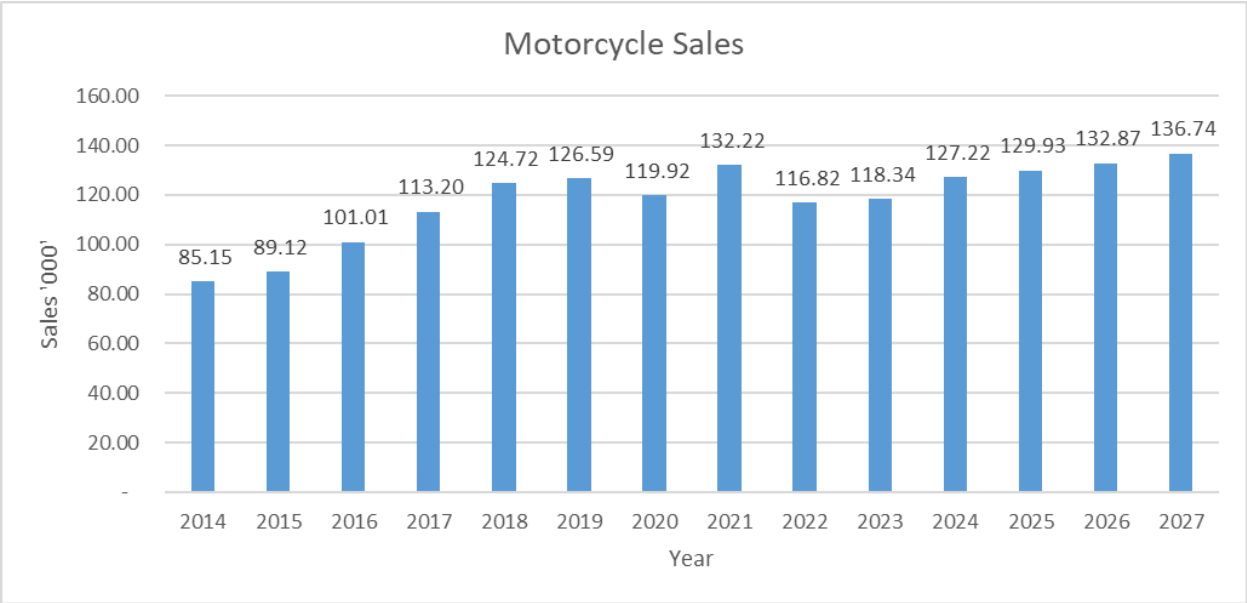
Public transportation framework in Tanzania is inadequate and thus the motorcycles are turning into a key medium of transportation. Over the coming years, motorcycles are projected to continue to play a critical role owing to advantages like quicker acceleration, better engine capacity, large wheelbase and easy maintenance. Furthermore Tanzania's demand for motorcycles id booming owing to population growth, growing urbanization and inadequate means of transport.

That said, as the transition to electric mobility accelerates around the world, several companies are working hard to ensure that Tanzania is not left behind. With hundreds of thousands of internal combustion engine (ICE) motorcycles already on the road in the country, attention is now focussed on switching to electric motorcycles as witnessed in various parts of the world. The local assembly and manufacturing of these electric motorcycles will be critical to help unlock the full benefits from this transition.

### 2.2 Demand and market

Currently Tanzania import all motorcycles on the road, most of them are imported in various stages of knockdown and assembled locally by various players mainly from China and India. The following table shows the number of motorcycles sold locally between 2014 and 2022 and projected to be sold between 2023 to 2027.

| Year | Sales (000" |
|---|---|
| 2014 | 85.15 |
| 2015 | 89.12 |
| 2016 | 101.01 |
| 2017 | 113.20 |
| 2018 | 124.72 |
| 2019 | 126.59 |
| 2020 | 119.92 |
| 2021 | 132.22 |
| 2022 | 116.82 |
| 2023 | 118.34 |
| 2024 | 127.22 |
| 2025 | 129.93 |
| 2026 | 132.87 |
| 2027 | 136.74 |




It is apparent from the above table and graph that demand for motorcycle in Tanzania is increasing year after year and the trend is expected to be maintained over the coming years due to factors outlined above.

### 2.3 Production programme

The proposed project will have an annual capacity of assempling 3,120 motorcucles per year working on 8 hours shift per day. Depending on demand for motorcycles, the company can increase the number of shifts per day, thus increasing the number of motorcycles assembled per day/year.

In the context of the above paragraph, the planned capacity utilization of the proposed project over the eight year projected period is as indicated in the table.

Planned capacity utilization of the motorcycle assembling plant

| YEAR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Installed capacity | 9,360 | 9,360 | 9,360 | 9,360 | 9,360 | 9,360 | 9,360 | 9,360 |
| Projected Capacity Utilisation | 60% | 70% | 80% | 80% | 80% | 80% | 80% | 80% |
| Total production | 5,616 | 6,552 | 7,488 | 7,488 | 7,488 | 7,488 | 7,488 | 7,488 |

### 2.4 Products

The proposed project will import components in a complete knock down (CKD) arrangement from an Indian company called XIDAA MOTO PRIVATE LIMITED (XIDAA). Under

the partnership arrangement signed with the company, XIDAA will supply the proposed project with CKD for the assembly of two wheelers motorcycles in Tanzania. XIDAA will also provide the list of parts which can be procured locally. The proposed project will be the sole distributor of the motorcycles to trade under the local brand name of WIGO in Tanzania and East African countries.

## 2.5 Competition

The main competition for this project will be from petrol-powered motorcycles most of which are assembled locally. Key assemblers of the petrol powered motorcycles business in Tanzania are:

- MeTL Group assembling plant with the installed capacity of assembling up to 6,000 motorcycles per month under the brand name of Boxer
- KingLion Investment Company Ltd. The company is importing motorcycle parts from China for its assembly plant in Tanzania trading under the brand name of Kinglion.
- Guangzhou Fekon Motorcycle Co. Ltd C/O Tanzania China Trade Dev. Ltd assembling motorcycles under the brand name of Fekon.

## 2.6 Competitive Advantage

Electric motorcycle vs. petrol motorcycle is a debate that few could have foreseen ten years ago. Back then, despite electric motorcycles being more beneficial to the environment than their petrol counterparts, there were no other obvious benefits to speak of.

However, fast forward to today, and the narrative has turned upside down. The environmental benefits are still there, but there are now many more aspects to consider. Modern brands, have developed groundbreaking motorcycle technology to push what electric motorcycles are capable of. As a result, electric motorcycles are beginning to overtake petrol motorcycles in terms of power, looks, & technology.

The following is a list of advantages of electric motorcycles compared to petrol motorcycles.

### 1. Instant Rotation and Power

Electric motorcycles have a clear advantage over internal combustion engine (ICE) motorcycles. At a lower RPM, ICE engines produce less rotation (torque). Therefore, they can only achieve peak power and maximum rotation when their engine is spinning at a high RPM rate. This takes some time. However, electric engines can reach their peak power and torque instantly at 0 RPM. As a result, no matter what a ICE motorcycle's cc is, it simply can't match the instant rotation provided by an electric engine. Having instant torque and power can make all the difference when needing to get out of a sticky situation quickly or moving out of the way to prevent being hit.

**2. Less Maintenance**

ICE motorcycles are fiddly and frequently require tinkering and maintenance to keep them humming along without problems. On the other hand electric motorcycles are a different story. They don't feature pistons, valves, oil, carburetors – or any other component that may need regular attention – and are extremely low maintenance. Keep it charged, keep tires pumped, make sure brakes are working, check chain, and enjoys the ride!

**3. Saves Money**

A myth that surrounds electric motorbikes is that they're more expensive than ICE motorcycles. However, charging electric motorcycle is far more cheaper than fueling up. Further, less maintenance does not only save time, it also saves money.

While the initial outlay on electric motorcycles may look high compared to a ICE equivalent, it does not reflect the money saved during ownership.

**4. More Comfortable**

Electric motorcycles are undeniably more comfortable than ICE motorcycles. There are no vibrations, while ICE bikes vibrate while riding and while waiting at the traffic lights, EV motorcycles don't vibrate.

**5. Limits Noise Pollution**

Another great aspect of electric motorcycles when compared to ICE motorcycles is how quiet they are i.e. a reduction in noise pollution. Electric motorcycles not only prevent one from disturbing others, but they also allow the rider to experience the sounds of surroundings and generally lead to a happier and more peaceful riding experience.

**6. More Convenient**

Electric motorcycles are now much more convenient than ICE motorcycles. The previous limitations of short-range have now been eradicated. Furthermore, instead of having to make an early morning trip to the petrol station when your bike is in the red zone, electric motorcycles allow you to simply plug in and charge up from the comfort of your own home. Furthermore, the growth of fast charging capabilities means one can charge up in a matter of minutes.

**7. Much Better for the Planet**

The unwavering and undeniable plus of electric motorcycles is their positive impact on the environment. While this has been a benefit since EVs came on the market, it's more poignant now than ever before. The cry all over the world now is to reverse the impact that CO2 emissions have had on climate change. The report, published by the UN in 2018, stated that in order to prevent worldwide temperatures from increasing by 1.5° C by 2100, we need to cut CO2 emissions by 45% by 2030 and hit a net zero by 2050.

ICE motorcycles and cars do not help us meet this goal or reduce worldwide pollution. The shift towards green vehicles is already in the works – from public entities moving towards electric fleets to governments around the world offering financial incentives to switch to electric vehicles.

## 2.7 SWOT Analysis in Tanzania

SWOT – Strengths, Weaknesses, Opportunities and Threats – analysis of electric motorcycle are as listed in the matrix below.

| | |
|---|---|
| **Strengths**<br>• Electric motorcycles are more friendly environmentally.<br>• Electric motorcycles conversion more efficient<br>• Electric motorcycles conversion less maintenance<br>• Cheap to run<br>• Simpler mechanism | **Weaknesses**<br>• Need public charging infrastructure set up<br>• Need socialization about electric motorcycles conversion as a new product.<br>• Initial price is a relative high.<br>• Battery change is expensive |
| **Opportunities**<br>• Environment public awareness<br>• Open new job opportunities<br>• Supported by government regulations<br>• Increasing fossil fuel costs | **Threat**<br>• Competition with electric motorcycles<br>• Inadequate public charging infrastructure<br>• Public perception is still low<br>• Electricity demand id increasing with electric motorcycle conversion<br>• Rise in cost of electricity |

From the SWOT analysis described above, the proposed project should capitalise on the opportunities available in the electric motorcycle sector and implement the proposed project as the market is enormous provided that the proposed project manufacture good quality product at competitive prices.

## 2.8 Marketing Strategies

The idea of operating a vehicle using electricity was conceived way back in the 19th century, but the concept did not progress fast. However, with environmental concerns and rising fuel prices over the last few years, the automobile industry has witnessed rapid return of electric vehicles with their high-performance EVs that use advanced technology.

Bearing in mind that electric vehicles/motorcycles are new technology in the market, the proposed project will employ the following strategies to penetrate the market dominated by ICE motorcycles: -

1. **Social Media**

The proposed project will extensively use social media which is a great way to reach potential customers as well as engage existing ones and is also a great place to build trust and credibility with potential customers who are sceptical about buying an electric motorcycles.

Social media offers yet another benefit: it's fairly inexpensive when compared with other forms of advertising and is ideal for start up proejcts with limited budget for paid ads on social media platforms like Facebook or Instagram. The company will post organic content like photos, videos, and blog posts that will attract attention from people interested in electric motorcycles.

2. **Focus on email marketing**

Emails are great at keeping brand top-of-mind with existing customers while also introducing it to potential customers who haven't heard of electric motorcycles yet. It's an easy way to inform your audience about new product updates, offers, or any related details. To be effective the company centre its email maketing campaing on personalisation.

3. **Highlight customer views**

Electric mortocycles are new in the local market; hence, most users are hesitant about buying them. One of the best ways of overcoming this is by using views from existing customers as positive views are a great way of building credibility and trust in the mind of potential customers. It's also a great way of increasing brand awareness and sales. Positive views give potential customers the required confidence and assurance about making a purchase.

4. **Use of local influencers**

Using local influencers is also the best options to explore as it is an effective way to reach potential electric motorcycles buyers. The company will partner with local influencers who have a large following and are passionate about electric motorcycles. These will help to increase awareness about the product, spread the message to a wider audience and promote brand. The best thing about getting an influencer involved is that it will gain the trust of your potential buyers as they will relate more to the influencer.

5. **Leverage an omnichannel marketing approach**

Omni channel marketing is a customer-centric approach that leverages the strengths of each channel to create a seamless experience for the customers. By using multiple channels in unison, the company will successfully reach its target audience. To effectively implement omnichannel marketing, the company will ensure its overall strategy is consistent across all channels and will use each channel for what it does best.

The electric vehicles/motorcycles market is rapidly growing, and it is incumbent upon the company to do everything in its power to take advantage of this opportunity. As highlighted above, there are many ways to get marketing right. With such diverse marketing approaches available, it's important to focus on what works best for the business and its targeted customers. The company should also explore the opportunity of collaborating with a team of digital marketing experts as the best way ahead.

## 2.9 Potential and Order at Hand

The proposed project has received firm order for the supply of electric motorcycles from the following companies: -

- Patmo Tanzania Ltd for supply of 3,000 electric motorcycles worth Tzs 12.9 billion
- Karibu Dukani Ltd for the supply of 2,800 motorcycles worth Tzs 12.04 billion

The promoters of the project are also in discussion with various government institutions e.g. military which have indicated strong interest for electric motorcycles for their employees.

# 3.0 MATERIAL INPUTS

## 3.1 Assembling Components

The proposed project will import electric motorcycles assembling components in a complete knock down (CKD) from an Indian company called XIDAA MOTO PRIVATE LIMITED (XIDAA). Under the partnership agreement, XIDAA will supply the proposed project with CKD for the assembly of two wheelers motorcycles in Tanzania. XIDAA will also provide the list of parts, which can be sourced locally.

## 3.2 Factory supplies

As expected of any manufacturing establishment, plant and machinery require appropriate maintenance to continue operating smoothly. To this end, the project will require various supplies – the majority of these being machinery spare parts - to enable it continue to assemble motorcycles smoothly. As motorcycle-assembling technology is common in all

the industrialized countries, availability of machinery spare parts will not be a problem to the proposed project.

### 3.3 Utilities, especially power

Tanzania's situation regarding electricity power has improved significantly over the past few years following reduction of over reliance on hydroelectricity. As of now, there are major power generating projects – mainly those of using natural gas – that are supplying power to the national grid thus ensuring that the country not only gets adequate and reliable power but also stable.

### 3.4 Labour

Tanzania currently has manpower with the necessary education to man and run the proposed project upon on job training of local technical team by technicians from the technical partner.

## 4.0 LOCATION AND SITE

The proposed project will be located at Plot No. 4, Block No. "A" Mikocheni light industrial area. The factory building to be rented measures 864m2 and is adequate for the proposed project activities. The location is easily accessible for transportation and distribution of the intended production activities.

The site is connected to all facilities required of an industrial manufacturing site. The national electricity power grid lines and water are already connected to the site. In the current age of electronic digital communication, the site has good reception of communication from all major cellular phone networks in the country.

## 5.0 PRODUCTION PROCESS

An electric motorcycle is made up of several components to be imported from the technical partner from India i.e. XIDAA XIDAA.

**5.1** Assembling process

Key process in assembling electric motorcycles are the following: -

**Frame Construction**

The frame construction is a critical step in the manufacturing process of electric motorcycles. The frame must be durable, and able to support the weight of the rider (s). The frame is typically made from aluminum, steel, or carbon fiber, and is constructed using welding or bonding techniques.

**Battery Installation**

After the frame is constructed, the next step is to install the battery. The battery is typically

located under the footrest or in the stem of the electric motorcycle. The battery type and capacity will depend on the size and intended use of the motorcycle.

**Motor Installation**
Once the battery is installed, the motor is mounted onto the frame. The motor is typically located in the rear wheel hub or the front wheel hub. The motor specifications will depend on the desired top speed and torque of the motorcycle.

**Wiring**
The wiring of the electric motorcycle is a critical component of the manufacturing process. The wiring connects the battery, motor, and other components of the motorcycle. The wiring must be properly installed to ensure the safety and performance of the motorcycle.

**Assembly**
Once all of the components are installed, the electric motorcycle is assembled. This includes attaching the handlebars, wheels, and brakes. The motorcycle is then tested to ensure that all components are functioning correctly.

**Quality Control**
Before the electric motorcycle is released to the market, it must undergo rigorous quality control testing. The motorcycle is tested for safety, durability, and overall performance. Any issues or defects are addressed before the motorcycle is released for sale.

### 5.2 Plant Capacity
The project proposes the establishment of motorcycle assembling plant with annual capacity of producing 3,120 motorcycles per year**.**

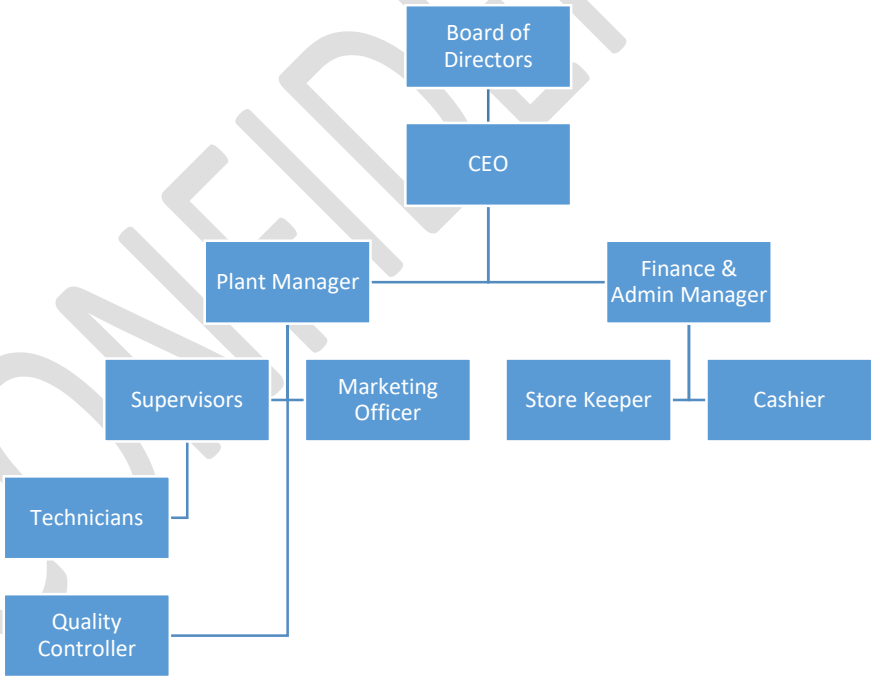
### (1) Cost of Machinery & Equipment
The total estimated cost of the machinery and equipment including freight and installation is about Tzs 418 million. Table 5 below presents the list of machinery / equipment: -

| |
|---|
| Conveyor belt |
| Racks for battery storage |
| Multilevel racks for chassis storage |
| Steel railing for assembling tools |
| Conveyor Line Motorized 100 feet Long |
| Child Parts assembly Station |
| Tyre Machine |
| Air Compressor 5 Hp |
| VRLA Battery Tester Machine |
| Hand Grinders Cutting Machine |

| |
|---|
| Welding Machine Small |
| Multi meter |
| Common Tool Kit Sets |
| Rachet Sets with Box Spanners size 15 – 40 mm |
| Rachet Sets with Box Spanners Size 6 -14mm |
| Battery Operated Tools |
| Blue Colour bins for Small Parts 24” size |
| Red Colour bins for parts 24” Size |
| Motor / Controller testing bench |
| Lithium Battery Testing bench |
| Variable Power Supply 0-80V – 100A |

## 6.0 PLANT ORGANIZATION

The basic organogram of the company following completion of the physical implementation of the proposed project is expected to be as indicated below.




## 6.1 Management

As shown in the organisation chart (oganogram) above, management of the proposed project will be under the Board of Directors of which will be responsible for policy issues. Key members of the

board include Mr. Paul Abdul Athuman the managing Director of T & B Groupment Limited, who has more than 15 years experience in the national and international business management.

The day-to-day management of the company will be under the Chief Executive Officer (CEO) appointed by the board. Team of four key staff, namely, plant manager, marketing officer, finance and administration manager and quality controller, will assist the CEO reporting to the board. Highly skilled and experienced staffs will be employed in the company's operations after careful screening.

The technical partner will bring in experts to train local counterparts to master the entire process of electric motorcycle assembling. The company is expected to create about 26 direct employments in the first year of its operation of these; administrative staff will be 8 and production staff 18.

The plant will be run in one shift starting with capacity utilisation of 60%. The low capacity utilization level during the initial period of project operation is due to the fact that electric motorcycle assembling is relatively new in Tanzania, and therefore it would take some time to develop operational skill.

## 7.0 IMPLEMENTATION SCHEDULING

The physical implementation of the project after financing arrangement is firmed up to the time of the project becoming operational is approximately six (6) months. The promoters of the project have already identified the building where the proposed project will be located. The building will only require minor alterations and partitioning before installation of the machinery and equipment to allow commencement of the operations.

## 8.0 FINANCIAL AND ECONOMIC EVALUATION

This chapter is dealing with five aspects of the project. These are (a) the total capital investment items cost estimates for establishing the plant to assemble two electric two wheelers, (b) the proposed financing plan of the said capital investment items cost estimates and working capitl, (c) an analysis of the financial viability of the project and (d) an analysis of the economic impact of the project to the country.

Each of the five aspects is elaborated hereunder.

### 8.1 Total capital investment items costs estimates

The capital investment items of the proposed project comprise two distinct categories, namely (a) investment capital items and (b) working capital items. The cost estimates for the investment capital items and the initial working capital items are discussed below: -

### (1) Investment capital items

Investment capital items comprise two types, namely, fixed/tangible and intangible ones. Tangible investment capital items represent the fixed assets, such as *"buildings"* and

*"factory equipment"* that will be either constructed or procured by the company in the course of setting up the project. Intangible investment capital items represent costs incurred prior to start-up of operations of the project – generally known as *"pre-operating expenses"*. Pre-operating expenses are cost incurred for items like *"project preparation costs"* that may be paid to project consultants and *"funds mobilization costs"*.

### (a) Investment capital items Cost Estimates

For the project under discussion, the cost estimates for both the fixed and intangible investment capital items are Tzs 665.5 million. The breakdown of these cost estimates is as indicated in the table here below.

**Investment capital items cost estimates**

| S.No | Investment Capital Items | Tzs '000' |
|---|---|---|
| 1 | Land | - |
| 2 | Buildings | 36,370 |
| 3 | Factory Equipment | 417,945 |
| 4 | Office equipment | 46,515 |
| 5 | Motor vehicles | 78,750 |
| 6 | Furniture and fittings | 25,410 |
| 7 | Preoperational expenses | 213,315 |
| | **TOTAL - INVESTMENT CAPITAL ITEMS** | **818,305** |

### (b) Basis of the cost estimates of the Investment Capital items

The basis of the cost estimates for each of the investment capital items is as described here below.

#### (i) Buildings

The estimates for the buildings are based on the cost of partitioning, workshop zone making and construction of the foundation for machinery installation. The costa are based on quotation received from a civil engineering firm.

#### (ii) Factory machinery – factory and all other associated machinery

Plant and machinery cost estimates are based on a proforma invoice received from the machinery and equipment suppliers from India as well as local suppliers.

#### (iii) Office equipment

Cost estimates for office equipment are based on local proforma invoices obtained from local dealers of such equipment.

**(iv) Motor vehicles**

Cost estimates for motor vehicles are based on local proforma invoices obtained from local dealers of such motor vehicles.

**(v) Furniture and fittings**

Cost estimates for furniture and fittings are based on local proforma invoices obtained from local dealers of such furniture and fittings.

**(vi) Pre-operating expenses**

Pre-operating expenses cost estimates are based project management fees estimated at 10% of the total project investment capital costs.

**(2) Initial working capital cost estimates**

Initial working capital cost estimates of Tzs 10.6 billion has been arrived taking into account the lead time required for assembling components to arrive from abroad, being cleared from the port and assembling ready for distribution to the market.

**(3) Total Capital Investment Items cost estimates**

In light of sections 8.1 (1) and (2) above, the total capital investment items cost of the proposed electric two wheeler assembling project is Tzs 10.83 billion.

## 8.2 Project financing plan

The proposed financing plan will entail use of borrowed funds for both capital investment and working capital financing.

Financing Plan:

| **Description** | **Tzs '000"** |
|---|---|
| Term Loans | 604,990 |
| Working Capital | 10,021,220 |
| **Total borrowings** | **10,626,210** |
| Equity: | |
| **Total equity** | **213,315** |
| | |
| **Total financing** | **10,839,525** |

Implementation of the project has already started, the godown located at Mikocheni where the machinery and equipment will be installed has been identified and rental

terms agreed with the owner. Also the company has already rented an office and showroom at Mlimani city in Dar es Salaam

### 8.3 Production cost

The proposed electric two wheeler assembling plant will have the capacity of assembling 9,360 motorcycle per year when operating on three shifts per day. Production costs of the proposed project have been arrived at based on various operating assumptions. Details of these assumptions are contained in annexes III. Some of the major operating assumptions are listed hereunder:-

- Projected production period is eight (8) years;
- Annual rated plant production capacity of 9,320 electric motorcycles per year;
- Planned annual plant capacity utilization starts at 60% in first year and grows steadily annually to reach 80% in the third year whereby it remains constant at that rate for the remaining projected period of eight years;

### 8.4 Financial evaluation based on above estimated values

Based on the production assumptions stated above, financial projections on the operations of the project have been prepared over an eight year period. Projected financial results show that the project is commercially and financially viable as stated below.

#### (1) Profitability

The project is expected to show positive profit before tax from year 1 to year 8, the end of its projected period.

#### (2) Break-even sales

Based on operations of the third year of the proposed project, the break-even sales of the project is Tzs 4.9 billion which is equivalent to 20% of the rated production capacity of the project.

#### (3) Internal rate of return (IRR)

The proposed project is expected to have an IRR of 27.74% over its projected operational period of eight years. This IRR is much higher than the expected cost of the borrowed funds. This implies that the project is an attractive investment proposition.

#### (4) Sensitivity analysis

During operations of any business entity, various factors do impact differently on its profitability. The most common factors whose changes have impact on almost every business entity are three, namely, (a) selling prices of its products or services , (b) capacity

utilization – for a manufacturing enterprise, this is the rate at which its machinery are put into production and (c) operating costs.

Accordingly, a sensitivity analysis has been carried out to find out which changes of the three factors above have the most impact on the profitability of the proposed project. Since changes in any of the above stated factors may happen simultaneously, the sensitivity analysis carried out has been done on the assumption that changes in any one of the above stated factors happen mutually exclusive of changes in any of the other two factors.

The analysis has shown that the profitability of the proposed project is expected to be most sensitive to decrease in selling prices followed by increase in operating costs. Changes in decrease in production capacity appear to have the least impact on profitability.

A summary of the resultant IRR arising from changes of 10% in each of the above stated factors is as indicated hereunder.

Sensitivity analysis results

| **SENSITIVITY ANALYSIS SUMMARY** | | |
|---|---|---|
| **Factors considered** | **Percentage change** | **IRR** |
| **Base case** | **0%** | **27.74%** |
| Decrease in production capacity utilisation by | 10% | 27.17% |
| Decrease in selling price by | 10% | 11.38% |
| Increase in operating costs by | 10% | 12.97% |

**(5) Overall key performance indicators (KPIs) of the project**

Details of the expected financial results of the proposed project are in appendices I to III. A summary of these expected results is shown below.

## Projected Key Performance Indicators (KPIs) of the proposed project

| YEAR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| TOTAL PROJECT COST (Investment & Wkg capital) | | | | | | | | |
| Total Assets | 11,931,972 | 13,192,688 | 14,860,799 | 16,339,271 | 17,813,760 | 19,326,149 | 20,820,046 | 22,459,722 |
| Equity Funds | 925,020 | 2,053,408 | 3,599,752 | 5,155,390 | 6,722,140 | 8,332,039 | 9,957,824 | 11,593,332 |
| Long term loan | 557,510 | 500,743 | 432,871 | 351,722 | 254,698 | 138,695 | - | - |
| Closing cash balance | 1,093,735 | 811,567 | 936,795 | 2,539,761 | 4,059,993 | 5,654,213 | 7,229,940 | 8,951,446 |
| | | | | | | | | |
| Revenue | 18,288,504 | 21,336,588 | 24,384,672 | 24,384,672 | 24,384,672 | 24,384,672 | 24,384,672 | 24,384,672 |
| Gross profit | 2,955,188 | 3,541,163 | 4,127,138 | 4,127,138 | 4,127,138 | 4,127,138 | 4,127,138 | 4,127,138 |
| Earnings before interest, tax, deprn and amortn (EBITDA) | 2,448,868 | 3,034,843 | 3,620,818 | 3,620,818 | 3,620,818 | 3,620,818 | 3,620,818 | 3,620,818 |
| Earnings before interest and tax (EBIT) | 2,324,375 | 2,910,349 | 3,496,324 | 3,496,324 | 3,496,324 | 3,538,987 | 3,538,987 | 3,538,987 |
| Earnings before tax (EBT) | 1,016,721 | 1,611,983 | 2,209,063 | 2,222,340 | 2,238,214 | 2,299,857 | 2,322,549 | 2,336,441 |
| Earnings after tax (EAT) | 711,705 | 1,128,388 | 1,546,344 | 1,555,638 | 1,566,750 | 1,609,900 | 1,625,784 | 1,635,508 |
| | | | | | | | | |
| Gross profit margin | 16% | 17% | 17% | 17% | 17% | 17% | 17% | 17% |
| Earnings before interest, tax, deprn and amortn (EBITDA) margin | 13% | 14% | 15% | 15% | 15% | 15% | 15% | 15% |
| Earnings before interest and tax (EBIT) margin | 13% | 14% | 14% | 14% | 14% | 15% | 15% | 15% |
| Earnings before tax (EBT) margin | 6% | 8% | 9% | 9% | 9% | 9% | 10% | 10% |
| Earnings after tax (EAT) margin | 6% | 9% | 10% | 10% | 9% | 8% | 8% | 7% |
| | | | | | | | | |
| Return on Capital employed (ROCE) | 19% | 22% | 24% | 21% | 20% | 18% | 17% | 16% |
| Return on equity (shareholders funds) - ROE | 77% | 55% | 43% | 30% | 23% | 19% | 16% | 14% |
| | | | | | | | | |
| Simple rate of return | 19.5% | 22.1% | 23.5% | 21.4% | 19.6% | 18.3% | 17.0% | 15.8% |
| | | | | | | | | |
| Internal rate of return (IRR) | 27.74% | | | | | | | |

## 8.5 National economic and social evaluation

The economic and social impact of establishing the proposed electric motorcycle-assembling project to Tanzania is expected to be positive. This positive impact is expected to be direct and indirect as stated hereunder.

### (i) Direct economic impact

Direct positive economic impact is expected to come from three factors, namely, (a) tax payments to the government (b) foreign currency savings, (c) employment opportunities generation and (d) technology transfer. Each of these factors is briefly discussed hereunder.

### (a) Tax payments to government

As per appendix I, the proposed project is expected to be a profitable undertaking from its first year. Accordingly, as indicated in appendix I, it is expected that corporate tax payments to government will be made from the first year of its operations. Under the circumstances, corporate tax payments to the government are expected to be Tzs 4.9 billion from year 1 to 8.

### (b) Foreign currency savings/generation

Currently Tanzania imports all petroleum products, therefore if the proposed project is established and is successfully operational, the country's savings in terms of foreign currency per year will be significant as less petroleum products will be imported. Much as the project will mainly target the local market, there is potential for the project to export part of its production to countries within the East African Community (EAC) and the Southern Africa Development Community (SADC). The potential for exports notwithstanding, this potential for export has not been taken into account in the evaluation of the project.

On the other hand, the project will also require foreign currency to import various components required for the assembly of the said electric motorcycles as well as spare parts for the maintenance of its factory equipment. The foreign currency requirements of the project for this purpose is, however, expected to be much less than that is expected to be saved from imports of ready-made electric motorcycles.

### (c) Employment generation

As indicated in annex III, the project on becoming operational, is expected to employ a total of 60 employees in various capacities when operating at three shifts per day. Out of this number, administrative staff will be 8 and production staff 52.

### (d) Transfer of Technology

The proposed electric motorcycle assembling project will be among the first of its kind in Tanzania. Under the circumstances it will involve application of technology that is currently not

readily available in the country. The project is therefore expected to add additional new technology in the country.

**(ii) Indirect economic impact**

Indirect positive economic and social impact is expected to come from its multiplier effects. These are also expected to be of two types as mentioned here below.

**(a) Indirect job creation**

In addition to the direct employment opportunities that the proposed project is expected to generate, its operations are expected to boost operations of their distributers and suppliers of goods/services that the project will need to sustain its operations. With the increase in the activities of these suppliers, there is great likelihood that the increase will create additional employment opportunities in their businesses.

**(b) Corporate Social Responsibility**

The project is also expected to operate as a responsible corporate citizen by fulfilling some of its corporate responsibilities such as assisting some of the disadvantage communities by way of donations.

## 9.0 ENVIRONMENTAL IMPACT

The assembling process being adopted in the project is environment friendly and no toxic & hazardous waste would be generated. However, there would be some waste of metal scrap, wooden scrap, broken bricks, stone aggregates, etc during construction phase of the project. The waste generated during construction phase is mainly used for earth filling & flooring. The waste generated during operation phase include, liquid effluent, gaseous effluent and Floor sweepings powder, will all be disposed off as normal garbage.

## 10.0 RISK AND MITIGATION FACTORS

Like any other business undertaking, the proposed project faces various risks that impact on its successful performance. As expected, the management of the company must take various mitigation measures to counter the negative impact arising from the occurrence of any of the risks faced during its operations. The risks and respective mitigation measures are discussed here below:

| RISKS | MEASURES TO MITIGATION ADVERSE IMPACT |
|---|---|
| **1. Production**<br>Unavailable or scarce electric motorcycle assembling components | The company will arrange and sign good contracts from the supply of components with a technical partner in India. |
| **2.** Technology employed may be unreliable or unproven | The company will deploy world class technologies from India through its technical partner. |
| **3. Strategic**<br>Strategic risks are those arising from changes in government measures/policies that lead to negative impact on the business prospects of commercial enterprises. For example the government may introduce fiscal measures that impinge on the capacity of a commercial enterprise to sustain its profitability– e.g. categorizing expenses that were previously tax allowable as no longer tax allowable. | (a) If an anti-business measure is introduced, with the support of industry/trade associations – e.g. the TCCIA – the affected enterprise, would have to engage the Government with a view of retracting such measure(s).<br>(b) Business entities such as the proposed project has an obligation to behave as good corporate citizens and fulfil their responsibilities to government – e.g. paying their due taxes - and within their communities, thus dissuading the government from changing its pro-business measures/policies to anti-business ones. |
| **4. Industry**<br>The major industry risk is that of competition from other industry operators/enterprises particularly in areas like that of prices and quality of services provided both of which affect customer base. | (a) Undertaking effective marketing in line with the marketing strategies mentioned in the marketing chapter;<br>(b) Management to be resourceful in how to motivate its human resources for them to raise their productivity and satisfaction of their clients at minimum cost. |
| **5. Financial**<br>The major financial risk for the proposed project is that of currency exchange rate risk as the company will be importing assembling components in hard currency and selling its products in local currency. | (a) Management devising a pricing policy of cost plus or something similar to this which enables the proposed project at all times to operate profitably.<br>(b) Instituting a practice that allows strict credit to its customers so that its liquidity is high to the extent of enabling it to reinvest part of it spare cash in short term monetary instruments to cover any exchange losses that may occur. |

Under the circumstances, management of the proposed project will have to brace itself to put in place internal capacity and mechanisms to quickly and appropriately respond to signs indicating that anyone of the above listed risks is on the eve of occurring. This will allow timely roll out of mitigation measures to either neutralize or ameliorate the negative impact of the occurrence of such risk.

## 11.0 SUCCESS FACTORS

Customer satisfaction is key for the success of every business enterprise. Customer demand and expectations are ever increasing and changing and therefore having competitive advantages and attaining high performance are imperative for the success of this business. Factors that are in place for the success of proposed project are of two categories – internal and external, each of these categories is described here below.

### 11.1 Internal success factors

Success factors that are internal to the proposed project include strong management team, availability of dedicated staff and adequate working capital to ensure un-interrupted supply of assembling components from abroad.

Existence of sound management is a sine qua non for the success of every enterprise irrespective of whether such enterprise operates with or without a profit motive. In the case of the proposed project, some of the attributes of sound management for the company include:-

(i) management ability to supervise quality production, production cost management, provision of excellent customer services; retaining competent staff as well as to develop their staff expertise; identify market opportunities and take advantages of the ever changing market requirements; use modern technology in production and delivering services; etc.
(ii) decisiveness
(iii) Fairness

### 11.2 External success factors

Success factors that are external to the proposed project include (a) market availability (b) continuous growth of the country's economy and sustenance of its stable and favourable macroeconomic policies and (c) continuous and stable availability of utilities within Tanzania's economy (d) The current Government support for local industrialization drive to be sustained.

# 12.0 CONCLUSIONS AND RECOMMENDATIONS

## 12.1 Conclusions

In conclusion, from the above it is apparent that the proposed project has sound objectives. It has a market. Its projected financial results show that it is expected to be a profitable venture.

The project is also expected to be commercially sound as it appears to be a cash cow. It is also expected to have a positive impact to the country's economy. It is also environmentally friendly and its risks are manageable.

Subject to availability of funding, implementing the project in the manner described herein above is a wise course of action to make.

## 12.2 Recommendations

In the context of section 12.1 above, it is recommended that the promoters of the project should immediately initiate steps and efforts to start the physical implementation of this project.