DETAILED PROJECT REPORT

EV Cargo Bike

By

2023

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1. OVERVIEW OF THE JLG MEMBERS

Name of the JLG:

Number of the members.

Name of Gram Panchayat/Taluk:

Name of the District:

Account details of JLG:

Details of JLG members with Hierarchy;

1.
2.
3.
4.
5.
6.

KYC:

Aadhar/PAN/Photo:

2. OBJECTIVES OF SVSY

Under Yuva Niti 2022, the new Swami Vivekananda Yuva Shakti Yojana is proposed on the following grounds to achieve holistic development of 2.1 crore youth of the state and to bring about constructive social change by the youth in keeping with the India@2047 vision of the Hon'ble Prime Minister.

The current scenario of the state on various parameters is as follows:

i. **Political Representation:** Out of total 1,01,308 members in rural local bodies, 12,411 (12.25 per cent) youths and 360 youths (5.36 per cent) out of 6713 municipal councillors are political representatives.

ii. **Education:** Out of a total of 2.1 crore youth, 21.55 lakh (10.37 per cent) students are in high school, 11.75 lakh (5.65 per cent), 6.45 lakh (3.10 per cent) in general degree colleges, 1.51 lakh (2.72 per cent), 1.11 lakh in polytechnics. (0.53 per cent), 0.74 lakh (0.36 per cent) The total number of students studying in medical courses is 43.12 lakh, which is per cent of the total youth. 21 percent will be. Remaining 157.88 lakh youth have below 10th standard education.

iii. **Employment:** According to the National Skill Development Corporation report, out of the total 2.1 crore youth in the state, 82 lakh (41 per cent) youth are in the labour force. As the remaining 119 lakh youth (59 per cent) are not in the professional labour force, they need to be given skill training to make them self-reliant.

iv. **Skill Development:** Out of the total 82 lakh youth in the workforce, 16 lakh youth (20 per cent) have received skill vocational training. The remaining 66 lakh (80 percent) youth need to be given skill development training. Out of this, only one

lakh youth are being trained by the NLRM department every year. Therefore 65 lakh untrained rural youth need skill training. To achieve this every school needs to provide vocational education from class 6 onwards.

v. **Internship:** According to the 6th Economic Census, there are a total of 28.80 lakh enterprises in the state, out of which 78,022 enterprises employ more than 8 people. About 30 lakh youths can be trained in skills by undertaking the internship program for a period of three months in local industries related to agriculture and agri-based/MSME/self-employment/service sector.

vi. **Migration Control:** Rural people have migrated from various districts to urban areas for job opportunities, of which 40 lakh (20 percent) youth are in Bangalore city. Therefore, there is a need to provide more employment opportunities at the village level.

vii. **Consolidation of programs for rural employment:** In total there are 27,395 revenue villages in the state and it is proposed to form Swami Vivekananda Self Help Groups, one in each village, on the model of Women's Self-Help Groups to provide self-employment to the unorganized workers in these. There are about 15 to 20 youth in each group, and 5.50 lakh youth in 27,395 self-help groups have received Rs. 1.5 lakh to provide margin money estimated at Rs. 410 crores will be required.

viii. **Bank Linked Schemes:** Coordination and inclusion of Yuva Shakti schemes with schemes linked to 25 banks. There are 35000 shelves of projects under the Mudra loan scheme, and steps will be taken to select the financial activities of the self-help societies based on these models.

ix. **Training:** Skill development training will be imparted to the youth under the National Entrepreneurship Mission under the 18 programs being implemented by various departments under this scheme. Training for agriculture and other activities will be provided through the Rural Development Self Employment Training Institute (RUDSETI).

x. **Formation of State Level Committee:** It is proposed to constitute a committee under the chairmanship of the Minister of Youth Empowerment and Sports at the State level for implementation and monitoring of the programme. RDPR, Commerce and Industry, Labour, Skill Development and Bank representatives will be members of this committee.

xi. **District Level Committee:** It is proposed to constitute a District Level Committee under the Chairmanship of the Chief Executive Officer of the Zilla Panchayat for the implementation and supervision of the program at the district level. The members of this committee are the officers of Rural Development and Panchayat Raj, Commerce and Industry, Labour, Skill Development Departments and District Lead Bank Managers.

xii. **Village level stewardship:** The village level stewardship of this program will be handled by Rural Development and Panchayat Raj Departments and Youth Empowerment and Sports Departments.

3. ABOUT VKF

VKF is a Think Tank of Community Change Champions who are from various walks of Social Spaces with diverse backgrounds and specialists from their domains.

VKF is a platform that enables as a think tank to evolve an aggregation of the social impact service providers and entrepreneurs for bringing about a transformational movement of social Change that is measurable on the lines of the Strategic Sustainable Development Goals (SSDG) of United Nation (UN).

VKF's strong focus is on enhancing the rural mass entrepreneurship development clubbed with rural livelihood options. In this direction, VKF team is working with the rural livelihood SHGs members and handholding them to elevate themselves to newer socio-economic status and uplifting the whole geography of the cluster by setting up of Common Facility Centres.

VKF's experience spans across conceptualizing cluster mapping, conducting baseline surveys, awareness creation, trust building activities, capacity building, design thinking activities etc., to enhance capabilities of the artisans and livelihood SHGs in the clusters.

VKF also indulges in working with MSME, ESTC, IDEMI, Tribes India, NRLM and WCD to support rural masses in terms upgrading their livelihood opportunities. It also facilitates in preparation of DPR, Govt. liaising, market linkage activities, brand awareness, branding initiatives, value addition of the products produced by clusters etc.

4. NAME OF PRODUCT AND TECHNOLOGY

EV Cargo Bike

An EV cargo bike, also known as an electric cargo bike, is a type of bicycle that is designed to carry heavy loads and cargo, typically for commercial or industrial

purposes. It is equipped with an electric motor and a battery, which assist the rider in pedaling and provide additional power for hauling heavy loads.

EV cargo bikes come in various designs and configurations, but they typically have a large, sturdy frame and a cargo platform or box located in the front, back, or in between the two wheels. The cargo platform can be customized to suit different types of cargo, such as packages, groceries, or tools.

The use of EV cargo bikes has become increasingly popular in urban areas, as they offer a more sustainable and efficient alternative to traditional delivery vehicles such as vans or trucks. They are also able to navigate through traffic more easily and can access areas that are inaccessible to motor vehicles.

5. DELIVERABLES AND MARKET OF THE PRODUCT

EV Cargo Bike

- **Cost-effectiveness**: The EV cargo bike is an affordable mode of transportation that requires minimal maintenance compared to traditional delivery vehicles. Its electric motor eliminates the need for fuel, making it cost-effective and environmentally friendly.
- **Efficient delivery**: The cargo bike can navigate through narrow streets and busy urban areas, making it easier to deliver packages and goods to customers. This

makes it an efficient and reliable mode of transportation for small business owners, couriers, and delivery companies.

- **Increased productivity:** The EV cargo bike can carry heavy loads of up to 250 kg, allowing for multiple deliveries in a single trip. This increases the productivity of the delivery personnel, allowing them to cover more ground in a shorter amount of time.
- **Sustainability:** The EV cargo bike is a sustainable mode of transportation that reduces carbon emissions and noise pollution. It is a great alternative to traditional delivery vehicles that contribute to air pollution and traffic congestion.
- **Flexibility**: The cargo bike can be customized to meet the specific needs of different businesses. For example, it can be fitted with a refrigerated box for food delivery or a secure box for courier services.

Project Assumptions:

This model DPR for EV Cargo Bike is basically on certain assumptions that may vary with capacity, location, raw materials availability etc. An entrepreneur can use this model DPR format and modify as per requirement and suitability. The assumptions made in preparation of this particular DPR are given in Table below. Therefore, land and civil infrastructures are assumed as already available with the entrepreneur.

Table: Detailed Project Assumptions		
Parameter	Value	
Average Output Capacity of the EV Cargo Bike per day in kms	240 Kms	
Utilization of capacity:	Year 1	65%

	Year 2	70%
	Year 3	75%
	Year 4	80%
	Year 5	85%
Working days per year:	300 days	
Rate per km	Rs.10/km	

Details of Machinery

HCD India NPS Cargo
Power: 250
Location: J-9,Udyog nagar industrial area,peera garhi, Delhi, Delhi, 110041

Suppliers are available in Bengaluru and Coimbatore

Market Output:

VKF will hand hold them to facilitating better market linkage.

Market Linkage ❖ **Automobile Company** ❖ **Ecommerce** ❖ **Local Vendor**	❖ **Transportation**

6. ROLE OF EACH OF THE JLG MEMBERS

How JLG will participate:

- 2 persons for Servicing
- 2 persons for logistics & sales
- 1 person for maintenance
- 1 person for marketing

7. SOFT INTERVENTION

The following are the soft interventions to be arranged:

- Awareness on financial inclusion will help in getting the assistance from Government and other sources.
- Export promotional orientation for the JLG members.
- Awareness/ training programme on product quality, handling practices.
- Capacity Building activity
- Trust Building activities
- Programmes on technical skill enhancement to unit owners.

- Programmes on Business and entrepreneurship skill enhancement to unit owners
- Mass entrepreneurship development program in the JLG eco system.

8. BREAK UP COST AND MARGIN OF THE PROJECT AND THE IMPLEMENTATION SCHEDULE

The proposed cost of the project is as follows:

Sl. No.	Details	Cost in Rs.	Percentage
1.	Bank Loan	2,25,000	90%
2.	JLG contribution	25,000	10%
3.	**Total**	**2,50,000**	**100%**

Sl. No.	Details	Cost in Rs
1.	Machine cost	1,50,000
2.	Furniture	20,000
3.	Working capital (Shed deposit, electric connection deposit, Miscellaneous and preoperative expenses)	80,000
	Total	**2,50,000**

The proposed project implementation schedule is as follows:

Sl. No.	Project Component	Schedule
1	Shed for the project on rental basis	Identified
2	Electricity and Water facility Installation	Present

3	Arrival of Machinery	Within 1 months of Order
4	Erection of Machinery	Within 5 days of arrival
5	Commissioning	Within 2-4 days of erection
6	Commercial Usage	Within 2 months from approval

9. LAND/SHED STATUS:

The JLG has already identified the shed required for the project within the project area.

10. SWOT ANALYSIS OF THE PROJECT

I. Strength

- The EV cargo bike project is a sustainable transportation option that emits zero pollution, making it an eco-friendly solution.
- The electric cargo bike is significantly cheaper to operate than traditional delivery vehicles, as it is powered by electricity and requires minimal maintenance.
- The cargo bike can navigate through congested areas and narrow lanes, making it easier to deliver goods to urban areas where it might be challenging for large delivery trucks.
- The Karnataka government has been promoting electric vehicles and is offering incentives to companies that use electric vehicles in their operations, which is an advantage for the EV cargo bike project.

- The JLG members are having good coordination and co-operation among themselves and their friends. From this process they can support lot of their friends.

II. Weakness

- Electric cargo bikes have a limited range due to battery limitations, which could be an issue for longer delivery routes or when delivering large quantities of goods.
- The success of the EV cargo bike project will be dependent on the availability of charging infrastructure, which may not be sufficient in some areas of Karnataka.
- The JLG members lack insufficient place for working/processing in their units. All the process was being carried at one small area.
- The JLG members are unable to purchase modern machineries due to financial limitations.
- The JLG members have poor access to national and international markets. This will affect initially the profitability of the JLG members.
- Inclement weather conditions such as heavy rain or extreme heat could impact the operations of the EV cargo bike.

III. Opportunities

- JLG members are still very young if they start performing well in business and in future modern process machinery with better productivity and quality as well as special features for the final products also can be done within JLG members.

- The EV cargo bike project has the potential to expand into new markets, such as e-commerce and food delivery.
- The project could partner with local businesses to provide delivery services, increasing its customer base and revenue.
- The government of Karnataka is offering incentives to companies that use electric vehicles in their operations, which could help the project to grow and expand.
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IV. Threats

- Due to poor market access the profitability of the JLG members may fall bit low level. This may discourage initially to JLG members.
- The project could face competition from other delivery companies that also use electric vehicles or other modes of transportation.
- A decline in the economy could result in reduced demand for delivery services, negatively impacting the project's revenue.
- Major player in the industry will sell it for lower price at the beginning and JLG members need to work hard.

11. YOUTH EMPOWERMENT IMPACT OF THE PROJECT ON ECOSYSTEM

We have surplus youths in the state, graduate, undergraduate etc. supporting them to create self-employment will motivate to become entrepreneurs, they will live independent life**.**

Entrepreneurship will greatly impact the lifestyle of the youths, if businesses work along with their involvement of all the members towards creating awareness and promoting positive impacts on others.

Ecosystem Support from Project-

- **Environmental Benefits**: One of the main benefits of EV cargo bike projects is that they can significantly reduce carbon emissions and air pollution compared to traditional delivery vehicles that run on fossil fuels. This can have a positive impact on the local ecosystem by reducing the carbon footprint and improving air quality.

- **Reduced Traffic Congestion**: EV cargo bike projects can help reduce traffic congestion in urban areas by replacing larger delivery vehicles with smaller cargo bikes. This can result in less traffic and noise pollution, making urban environments more pleasant for both people and wildlife.

- **Community Engagement**: EV cargo bike projects can engage local communities and businesses by providing more personalized and sustainable delivery services. This can help build stronger relationships between businesses and their customers, as well as provide opportunities for education and outreach about sustainable transportation and eco-friendly practices.

- **Waste Reduction**: Trophy making projects can implement waste reduction measures to minimize their environmental impact. This can include reducing energy consumption, reducing water usage, and implementing recycling programs.

- **Innovative Solutions**: EV cargo bike projects represent an innovative solution to the challenges of sustainable transportation and eco-friendly delivery. They can serve as an example for other businesses and organizations looking to reduce their carbon footprint and create more sustainable practices.

12.THE END PRODUCTS PRODUCED WITH THE MACHINE

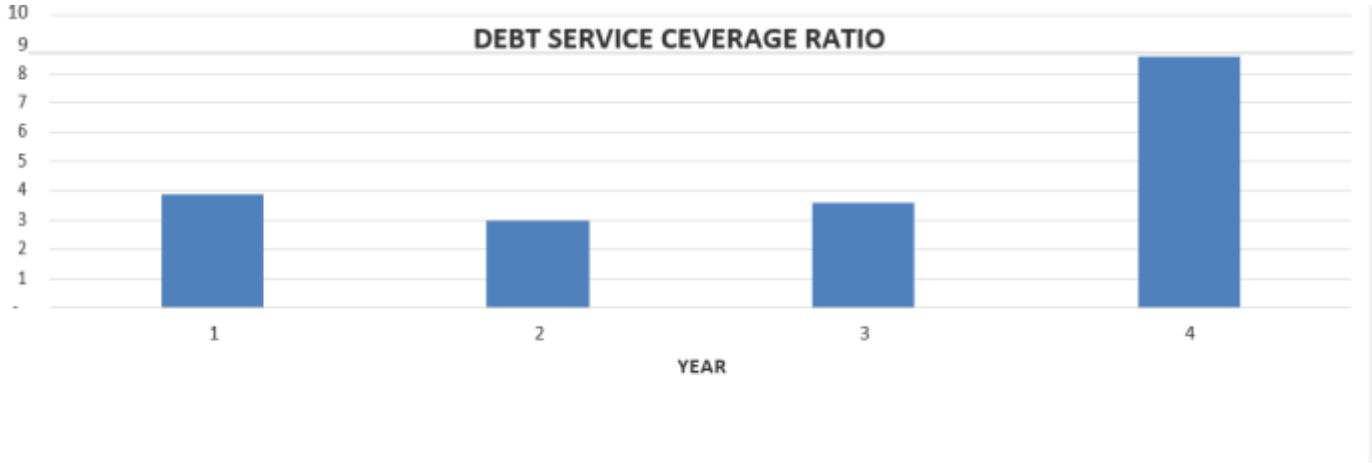
12. FINANCIALS

CASH FLOW STATEMENT

Particulars / Year	Year 1	Year 2	Year 3	Year 4	Year 5
REVENUE FROM SALE OF EV CARGO BIKE					
No. of working days in a Year	300	300	300	300	300
Capacity of the Bike per Day in Kms	240	240	240	240	240
Utilisation of the Capacity (%)	65%	70%	75%	80%	85%
Number of kilo meters in a year	46,800	50,400	54,000	57,600	61,200
Rate per Kilo meter	10	11	12	13	15
Gross Revenue earned per annum - A	**4,68,000**	**5,54,400**	**6,53,400**	**7,66,656**	**8,96,029**
EXPENDITURE					
Electricity Charges	1,63,800	1,94,040	2,28,690	2,68,330	3,13,610
Repairs and Maintenance	40,000	44,000	48,400	53,240	58,564
Miscellaneous Expenses	55,000	60,500	66,550	73,205	80,526
Total Expenditure - B	**2,58,800**	**2,98,540**	**3,43,640**	**3,94,775**	**4,52,700**
Net Profit before Interest /Cash Flow (A-B)	**2,09,200**	**2,55,860**	**3,09,760**	**3,71,881**	**4,43,329**

DSCR STATEMENT

	Year 1	Year 2	Year 3	Year 4
	Projected	**Projected**	**Projected**	**Projected**
Profit available to service the debt	**2,09,200**	**2,55,860**	**3,09,760**	**3,71,881**
Loan Repayment	33,208	71,321	78,400	42,07
Interest on term Loan	20,724	15,168	8,089	1,173
Debt to be Served	**53,932**	**86,489**	**86,489**	**43,244**
Debt Service Coverage Ratio	4	3	4	9
AVERAGE DSCR	**5**			



BREAKEVEN ANALYSIS
Investment Value Including Margin Rs. 250000

Year ended	Year 1 Projected	Year 2 Projected	Year 3 Projected	Year 4 Projected	Year 5 Projected
Cash Flow as per Statement of Income	2,09,200	2,55,860	3,09,760	3,71,881	4,43,329
Less : Interest on Loan	20,724	15,168	8,089	1,173	-
Less : Estimated Drawings/Personal Expenses	1,04,600	1,27,930	1,54,880	1,85,941	2,21,665
Net Cash Flow	**83,876**	**1,12,762**	**1,46,791**	**1,84,767**	**2,21,665**
Cumulative Cash Flow	**83,876**	**1,96,638**	**3,43,429**	**5,28,196**	**7,49,861**
Break Even Investment (in years)	**2 Year and 4.4 Months**				


REPAYEMENT SCHEDULE

Year	Quarter	Loan Installment	Principal Payment	Loan Outstanding	Interest at 9.5%	Cumulative Interest
1	1	5,344	-	2,25,000	5,344	
	2	5,344	-	2,25,000	5,344	
	3	21,622	16,408	2,08,592	5,215	
	4	21,622	16,800	1,91,792	4,822	20,724
2	1	21,622	17,203	1,74,589	4,420	
	2	21,622	17,614	1,56,975	4,008	
	3	21,622	18,036	1,38,939	3,586	
	4	21,622	18,468	1,20,471	3,154	15,168
3	1	21,622	18,910	1,01,561	2,712	
	2	21,622	19,363	82,198	2,260	
	3	21,622	19,826	62,372	1,796	
	4	21,622	20,301	42,071	1,321	8,089
4	1	21,622	20,787	21,284	835	
	2	21,622	21,284	-	338	1,173
Total		**2,70,154**	**2,25,000**		**45,154**	**45,154**


GOVERNMENT OF
KARNATAKA


VISION
KARNATAKA FOUNDATION

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