

# **Electric Light Duty Trucks**

# Powered by Cell Propulsion





# Investment Highlights

Cell Propulsion is revolutionizing the commercial vehicle (CV) industry by accelerating its transition to electric.







- In-house developed electric light duty CV (eLCV) powertrain platform already in production with first batch of eLCVs already in market.
- Ver-1 eLCVs deployed with marquee customers since 2021 and with more than 500,000km+ of driving data acquired.
- Deploying eLCVs as part of a fully managed solution to enable seamleass transition to electric for truck fleet owners.
- Up to 20% lower total cost of ownership to fossil fuel equivalents.
- Manufacturing partnerships to enable flexible low capex production.
- Vertically integrated with proprietary technology for battery packs, BMS, Onboard computer, electric motors, motor drives, and vehicle OS.
- High gross margins and industry leading profitability enabled by proprietary hardware, and software technology stacks.
- Leadership team with a proven track record for developing safety critical, heavy engineering systems.
- Backed by leading early-stage Indian VCs.



# A Large Market Size Offering Massive Growth

### 500,000 LCVs Sold Annually

Total LCV Sales in India is expected to grow from 0.5 M to 1 M+ Units by 2030 15,000 USD

Average Unit Price for LCVs

## 200 USD

Avg Monthly Revenue per eLCV from data enabled services



Similar Markets in Africa & South-East Asia





# Why transition to eCVs is slow?

eCVs face unique problems that are not faced by e2W, e3W and eCars.







## High vehicle cost with uncertain product life

- How durable is the eCV being purchased? What will be its re-sale value?
- How long will the battery last? What will happen to battery at end-of-life?

#### No expertise to manage large eCV Fleets

- How to maximise the utilization of eCVs?
- How to extract maximum range from eCV batteries?

#### No support for eCV Maintenance

- Where can eCVs be serviced & repaired apart from the service centers of authorised dealers?
- How eCV owners/ drivers can resolve minor issues on-road by themselves?

### High Cost of charging infra for large fleets

- Where is the MW scale charging infra to charge 100s of eCVs at once?
- How shall the charging be planned to optimize energy costs and charging time?



# The Future of Trucking

# India is moving ahead towards making electric vehicles. In due course of time, we will be the number one electric vehicle (EV) maker in the world.

SHRI NITIN GADKARI - UNION MINISTER FOR ROAD TRANSPORT & HIGHWAYS



# Fully Integrated 360° Solution



ELECTRIC CVS

A general-purpose powertrain platform to develop eCVs for multiple use cases.



FLEET DEPLOYMENT SERVICES

Hassle-free servicing, parking, and maintenance services for large fleets.



DIGITAL E-MOBILITY PLATFORM

Enabling meaningful insights and analytics to better manage commercial vehicle fleets.



ENERGY MANAGEMENT SOLUTIONS

A digital platform to integrate energy sources & enable charging for large fleets.



Adoption of eCVs will be driven by the availability of integrated eco-system

# Operating Model

Asset Light & Data first model with finance risk, operational risk, and Cap-Ex shared with partners.



Only company with 25+ eLCVs deployed with customers







# Mobility Platform & Support Ecosystem already operational



Vehicle Driving Management

#### Energy & Vehicle Management

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![](_page_8_Picture_5.jpeg)

# Ancillary Revenue

Data unlocks ~1 Billion USD incremental revenue opportunity

Description
Current: • eLCV Charging Services at strategic locations Future: • Energy Management & Energy Cost Optimization • Vehicle-2-Vehicle (V2V) Charging Services
Current: • Annual Maintence Contract per vehicle for servic • Paid repairing and accident support services. Future: • Subscription based OTA updates for improved p • Fleet Management and Fleet Ops Optimization (

Future recurring revenue streams - Embedded FinTech (Vehicle Financing, Insurance, etc), Carbon Offsets, etc.

Revenue Potential

INR 12,000 per vehicle per month (Current)

Gross Margin of 30%

on

icing & maintenance.

INR 3,000 per vehicle per month (Current)

Gross Margin of 30%

performance.

(Relay Model, etc)

# Fragmented Market Strengthens our Value Proposition

Highly Fragmented Market of Fleet Owners (>80% own less than 5 LCVs) who will need holistic support to adopt eCVs.

**VRL LOGISTICS LTD** Fleet Owners TRL

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Medium & Heavy Duty CV (eM&HCV) (GVW>5T)

![](_page_11_Picture_3.jpeg)

# CP is leading the development of eLCVs

Most Players focused on e3Ws.

Market Segment Light Duty CV (eLC∨) (2.5T<GVW<5T)

> Small CV (eSC∨) (GVW<2.5T)

> > e3W

Maturity Status

### High voltage Powetrain

•

#### Immersion cooling technology for battery packs

### All climate Capability

#### Battery-2-Battery charge transfer protocol

# Differentiation

Industry leading Battery Packs and Drivetrain Systems for electric trucks. Powertrain architecture with easy scalability to high voltages (48V to 800V) for better vehicle performance.

• Ultra-safe batteries with in-built fire retardation for highly demanding eCV applications.

• With wide operating temperature of –20degC to 55degC, our battery packs and powertrains are designed to work gloably across all geographies and weather conditions.

• Proprietary application protocol for reliable charge transfer between two vehicles.

![](_page_13_Picture_0.jpeg)

# Competitive

Proprietary software and hardware technology stack to defend our business.

#### Ultra Fast charging

• Proprietary charge control topology along with immersion cooling to enable less than 30-min charging for large electric trucks.

#### Best in class mileage

• High Voltage powertrain means better system efficiency • Immersion cooling along with proprietary motor drive firmware enables high regen from motor.

#### Vehicle-2-Vehicle charge transfer

• Proprietary connector and charge transfer control algorithm to enable V2V charging. • Initially for emergency charging services & in futrue for P2P energy trading.

#### Data acquired from Powertrain Platform

• Vehicle data enables fleet asset management, energy management, preventive maintenance, and many more use cases and services.

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# SELL/LEASE

COMMERCIALS

# **\$**15,000 Per Vehicle

TARGET TOPLINE \$150 Million

GROSS MARGIN
 20%

Target to deploy 10,000 eLCVs by 2025 in India

## ANCILLARY SERVICES

- COMMERCIALS
  \$200 Per Vehicle, Per Month
- TARGET TOPLINE \$2 Million Per Month
- GROSS MARGIN
   30%

# KEY MARKET DRIVER - TCO

20 Percent

Reduction in Total Cost of Ownership.

75 Percent

Reduction in Average Vehicle Running Costs.

Key to Scale:

- ICE Fuel Cost + ICE EMI > eCV EMI + Electricity Cost

Owner recovers premium paid on eLCV in less than
20 Months

Ownership Cost

![](_page_15_Figure_9.jpeg)

Purchase Cost

Fixed Costs

Maintenance Costs

# MEETTHE CORETEAM

The founders have worked together for 6 years with a combined experience of 30+ years with ISRO

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7 years experience with rocket engine and electric aircraft design & development.

# MANAGEMENT TEAM

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#### NAKUL KUKAR CO-FOUNDER & CEO

5+ years experience in the CV Space

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#### PARAS KAUSHAL CO-FOUNDER & COO

6 years experience with rocket engine ignition systems, spacecraft thermal & energy storage systems.

> 5+ years experience in the CV Space

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#### SUPRATIM NASKAR CHIEF TECHNOLOGY OFFICER

7 years experience with launch vehicle structures, spacecraft mechanisms & space robotics.

5+ years experience in the CV Space

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PRATEEK DUDEJA **VP-SALES & CUSTOMER** SERVICE 10+ YEARS OF EXPERIENCE

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**ROHAN DUTTA** VP-SOFTWARE SYSTEMS 10+ YEARS OF EXPERIENCE

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RAMESH KUSHBAHA

CHIEF FINANCIAL OFFICER 20+ YEARS OF EXPERIENCE

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**RAJEESH R** VP-ELECTRICAL & ELECTRONICS 7+ YEARS OF EXPERIENCE

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# TECHNICAL ADVISORS

Industry veterans helping us with industry connects and partnerships to enable the next phase of growth.

BUSINESS ADVISORS

Suporting with customer connects and business development.

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**MOHIT TANDON** FOUNDER DELHIVERY; INVESTOR AND ADVISOR

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NAVIN PAUL EX BOSCH INDIA; 40+ YEARS OF EXPERIENCE IN AUTO PARTS SUPPLIER INDUSTRY

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#### **APOORV AGARWAL**

EX FORD USA; 25+ YEARS OF EXPERIENCE WITH AUTOMOTIVE POWERTRAIN SYSTEMS

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HIMANSHU AGGARWAL FOUNDER ASPIRING MINDS; INVESTOR AND ADVISOR

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Key Objectives

#### Cell Propulsion aims to be a full stack OEM building EVs for logistics

• Complete homologation of our branded eLCV for mid mile logistics

• Hire key senior executives for management team

• Build a marketing plan & pre-order book of 5,000 units

• Develop a detailed blue print of mass production including identifying strategic suppliers and manufacturers

# Oryx Market Leading eLCV

<b>KEY SPECIFICATIONS</b>	VALUE
RANGE	200 KM
PAYLOAD	1.5 TONS
TOP SPEED	<b>60 KMPH</b>
OPERATING VOLTAGE	350V
RATED POWER	<b>30KW</b>
GVW	3500 KG

#### USPs:

- Highest vehicle range on single charge
- Less than 1hr charging time
- Better than ICE, Power/Torque Capability
- Market leading gradeability and loading capability

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# Quarterly Milestones

#### Milestones for the Company (Starting from funds in bank)

<b>KEY OBJECTIVES</b>	Q1	Q2	Q3	Q4	Q5
VEHICLE HOMOLOGATION	<ul> <li>BATTERY PACK UPGRADE</li> <li>CHASSIS AND BODY DEVELOPMENT</li> </ul>	<ul> <li>PROTOTYPING &amp; TESTING ACTIVITIES IN MANESAR</li> <li>SETUP OF REMOTE OFFICE IN GURGAON</li> </ul>	<ul> <li>FULL VEHICLE         ASSEMBLY &amp; BUILD         PRE-COMPLIANCE         TESTING     </li> </ul>	<ul> <li>SUBMISSION OF VEHICLES FOR HOMOLOGATION</li> </ul>	COMPLETION O HOMOLOGATIO
HIRING KEY MANAGEMENT	HIRING FOR     ENGINEERING AND     MARKETING	<ul> <li>HIRING FOR SUPPLY CHAIN, PRODUCTION, AND DISTRIBUTION</li> <li>HIRING FOR C-TEAM</li> </ul>			
SALES & MARKETING	<ul> <li>COMPANY &amp; VEHICLE BRANDING</li> <li>VEHICLE DESIGN DEVELOPMENT</li> </ul>	<ul> <li>CREATION OF MARKETING COLLATERAL</li> <li>INITIATE PR EFFORTS</li> </ul>	<ul> <li>VIDEO SHOOT OF THE VEHICLES</li> <li>RAMP-UP OF PR &amp; MARKETING</li> </ul>	<ul> <li>PRODUCT LAUNCH A</li> <li>DISCUSSIONS FOR D CHANNELS</li> <li>CUSTOMER CONVER ORDERS</li> </ul>	AND UNVEILING EVE DISTRIBUTION SATIONS FOR PRE-
SCALED MANUFACTURING		DEVELOPMENT OF ASSEMBLY & MANUFACTURING PROCESSES FOR LARGE VOLUME PRODUCTION		DISCUSSIONS WITH SUMANUFACTURERS FOR	JPPLIERS & START OF

![](_page_20_Figure_3.jpeg)

# Quarterly Milestones

#### Milestones for Product Development

TIMELINE	
NOV - DEC - JAN	<ul> <li>SOURCING AND INITIATION OF MOT</li> <li>INITIATION OF BATTERY PACK UPG</li> <li>DEVELOPMENT OF VEHICLE BODY A</li> <li>SOURCING OF NON-POWERTRAIN</li> </ul>
FEB - MAR- APR	<ul> <li>INITIATION OF MOTOR AND DRIVE I</li> <li>COMPLETION OF BATTERY PACK UF</li> <li>INITIATION OF CHASSIS AND BODY</li> <li>INITIATION OF HOMOLOGATION FC</li> </ul>
MAY - JUN - JUL	COMPLETION OF FULL VEHICLE INTI     VEHICLE PRE-COMPLIANCE TESTING
AUG - SEP - OCT	SUBMISSION OF VEHICLE FOR HOM

#### **KEY MILESTONES**

TOR AND DRIVE TESTING RADATION FOR HOMOLOGATION

AND CHASSIS PARTS AND ASSEMBLIES

HOMOLOGATION PGRADATION AND INITIATION OF BATTERY TESTING

**CRASH TESTING** 

**DR NON-POWERTRAIN PARTS & ASSEMBLIES** 

EGRATION AND BUILD

G

OLOGATION

# Funding Requirements

Key Areas for Fund Deployment

- Sourcing of motors, drives, cells and other vehicle parts & assemblies (INR 0.3 Cr)
- Development of upgraded 350V battery packs (INR 1 Cr)
- Development and production of vehicle chassis and body (INR 0.7 Cr)
- Procurement of non-powertrain parts and machinery (INR 3Cr)
- Engineering, Product Design, Testing & Homologation Services (INR 5 Cr)
- Salaries (INR 3.5 Cr)
- Operational Overheads (INR 0.75 Cr)

#### We'll need about INR 15Cr for next 12 months (20cr for 18months) to achieve our objectives

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Thank You

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# Annexures

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## 2017 - 2018

Developed core powertrain technology for LCVs and M&HCVs.

Developed the digital infra to connect our eLCVs to cloud.

## 2019 - 2020

Deployed Oryx-1 with cutomers for trials and pilots.

Successfully deployed an eBus for road testing in BLR in partnership with BMTC.

## 2021 - 2022

Completed all product certifications for commercial deployment.

Executing GTM Plan - Building fleet electrification eco-system.

# Key Achievements

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## 2018

Awarded \$50,000 in Grants from the World Resources Institute to develop the eBus technology in partnership with BMTC.

## 2021

Awarded \$50,000 from the UNIDO-FLCTD Innovation Challenge to develop High-Voltage Battery Packs for eHCVs.

Awarded \$50,000 from MEITY under their TIDE 2.0 Scheme.

## 2022

Awarded \$100,000 after being selected by Third Derivative to be a part of the USbased climate and sustainability accelerator.

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# CV Market Share: Units Sold, with Percentages

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Vehicles Sold in FY 2020

Data Showing Market Share % in FY 2020

![](_page_27_Figure_4.jpeg)

Figures Shown Only Pertain to FY 2020