SPARK MINDA
Powered by Passion

MINDA CORPORATION LIMITED
(GROUP CORPORATE OFFICE)

Date: 16.03.2021

The Officer-In-Charge (Listing) **Listing Department** **National Stock Exchange of India Ltd.,** **Exchange Plaza, Bandra Kurla Complex,** **Bandra (East),** **Mumbai - 400 051** **Symbol: MINDACORP**	**Head - Listing Operations,** **BSE Limited,** **P.J. Towers, Dalal Street, Fort,** **Mumbai – 400 001** **Scrip Code: 538962**

Dear Sir/ Madam

Sub: Schedule for Conference Call

In compliance with regulation 30 read with schedule III, of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, we wish to inform you that a virtual conference call to be hosted by Dam Capital on Tuesday, March 16, 2021 shall be attended by the Company. The copy of presentation is enclosed herewith for your reference and records.

This information is also being uploaded on the Company's Website www.sparkminda.com

This is for your information and record.

Thanking You,

Yours Faithfully

For Minda Corporation Limited

Minda Corporation Limited DELHI

Pardeep Mann
Company Secretary
Membership No A13371

Spark Minda

Innovation for Electric, Connected
and Shard Mobility

CONTENTS

OVERVIEW 01
- Kaleidoscope
- Operational Structure

OUR OFFERINGS 02
- Vehicle Access Control System
- Information & Connected Solution
- Electric & Connected Mobility Solution

INVEST IN FUTURE 03
- Spark Minda Technical Centre (SMIT)
- Electronics Manufacturing Facility
- Future of Mobility Solution

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SPARK MINDA - Kaleidoscope

Leading Automotive Component Supplier – Since 1958



16,000+
WORKFORCE



5
PARTNERSHIPS

INR 3,750 Cr.
REVENUE



33
PLANTS/OFFICES

14 NORTH	**13** WEST
3 SOUTH	**3** ASEAN

Stoneridge
VAST
SILCA
INFAC 주식회사 인팩
FURUKAWA ELECTRIC

VISION

To be a dynamic, innovative and profitable global automotive organization for emerging as the preferred supplier and employer, to create value for all stakeholders.

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OPERATIONAL Structure

Spark Minda Group

Mechatronics

- **2** Minda VAST Access Systems Ltd.
- **5** Minda Corporation Ltd – Security Division
- **3** Minda Corporation Ltd – Die Casting Division
- **3** Minda Corporation Ltd – Starter Motor & Alternator Division
- **1** PT Minda Automotive Indonesia
- **1** Minda Vietnam Automotive Company Ltd.

Information & Connected System

- **8** Minda Corporation Ltd – Wiring Harness Division
- **2** Minda Stoneridge Instruments Ltd. – (Cluster & Sensors) Ltd.

Plastics & Interior

- **2** Minda Corporation Ltd – Interior Plastics Division

Aftermarket

- **1** Minda Corporation Ltd – Aftermarket Division

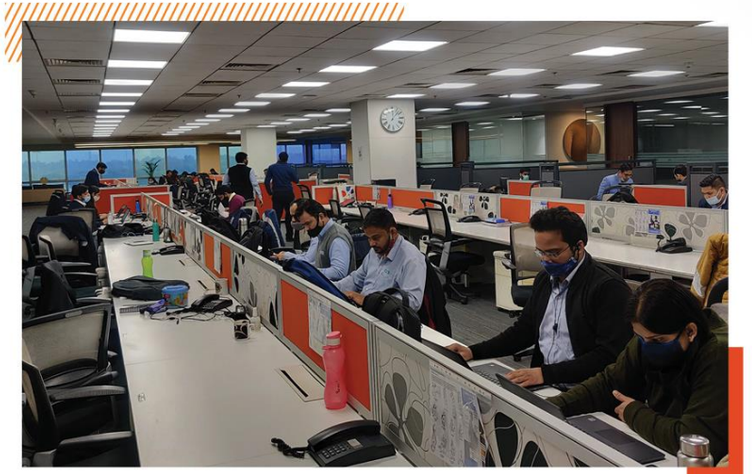
Electronics

- **1** Minda Corporation Ltd – Antenna, Telematics & Electric Mobility

Dedicated Organization for New Technology Products



Spark Minda Technical Centre (SMIT)



Group Corporate Office

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LEADERSHIP Team



Ashok Minda
Chairman & GCEO

BUSINESS VERTICALS

Arvind Chandra
CEO, BV I, Mechatronics
27 years of Automotive Experience in Europe, US and India





Biranchi Mohapatra
CEO, BV II, Information & Connected System
Over 29 years of experience in Auto Component Industry

Aakash Minda
ED- Group Finance & Strategy & CEO BV III -Plastics & Interior
7 years of Global Auto Component Industry experience





Neeraj Sharan
CEO BV IV, Aftermarket
29 years in Auto Industry in India and overseas

CORPORATE FUNCTION

D. Suresh
Group CTO
26 Years of Global and domestic experience in R & D of Auto Industry





Neeraj Mahajan
GCMO
30 years in India and overseas with OEMs and Auto Components

N. K. Modi
ED & President GCEO Office
35 yrs of experience in Auto Comp Industry





Ashim Vohra
Group Chief Manufacturing Excellence Officer
Over 30 years of experience in Auto Component Industry

Srinivas A
Chief Advisor, EME
33 years of experience in product Development.





Vikas Thapa
GCHRO
29 years of Global HR Leadership experience including UK and US (Ex Indian Army)

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Tesla’s 3 Pronged Approach

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CUSTOMER Centricity

Innovation
Commercialization of patents & technology

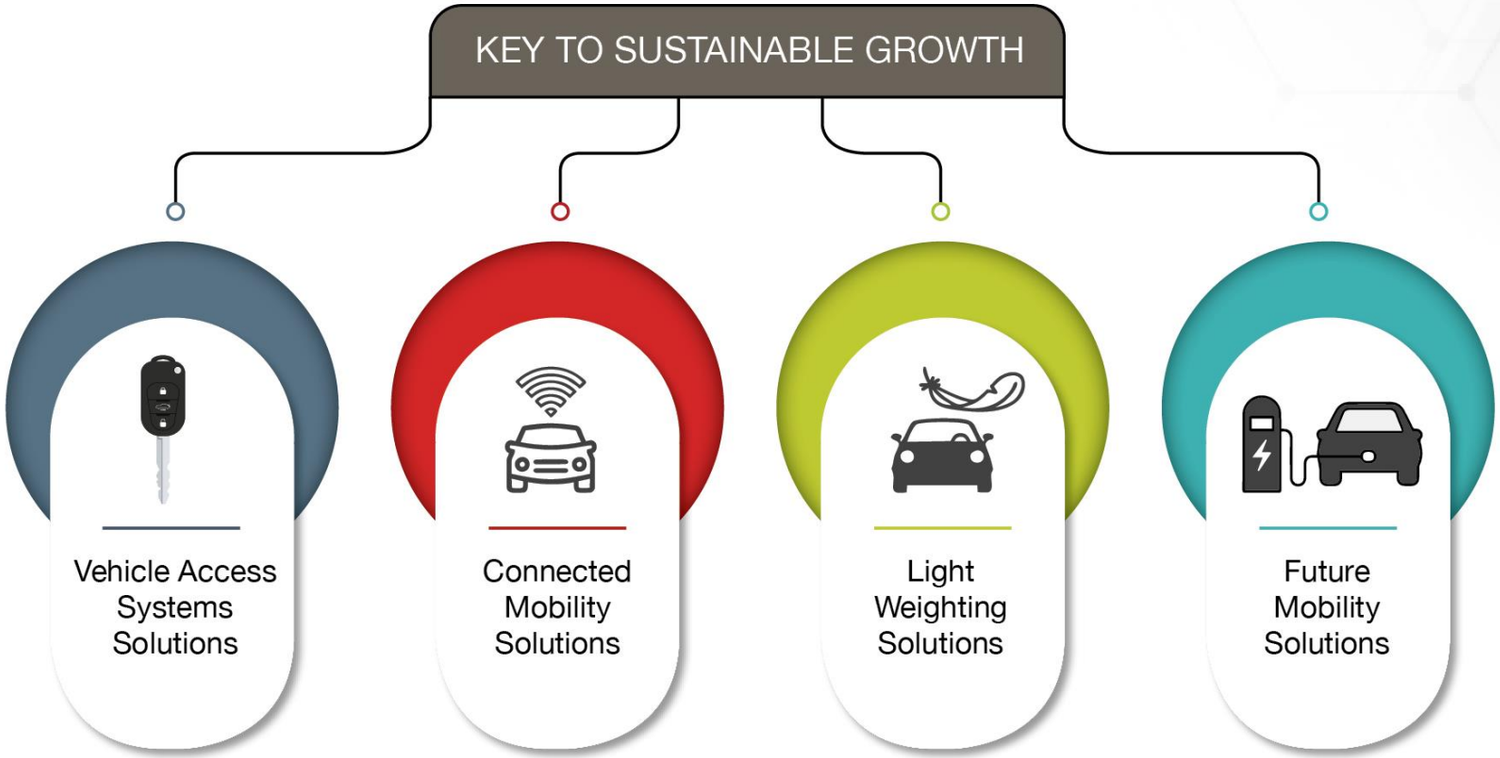
Agility
Captive customization & adaptation meeting QCDD

KAM
Dedicated point of contact for customer

Proximity
33 plants & offices spread across 5 countries

WHAT DO WE OFFER

Key to sustainable Growth



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VEHICLE ACCESS Control System

We Differentiate Ourselves

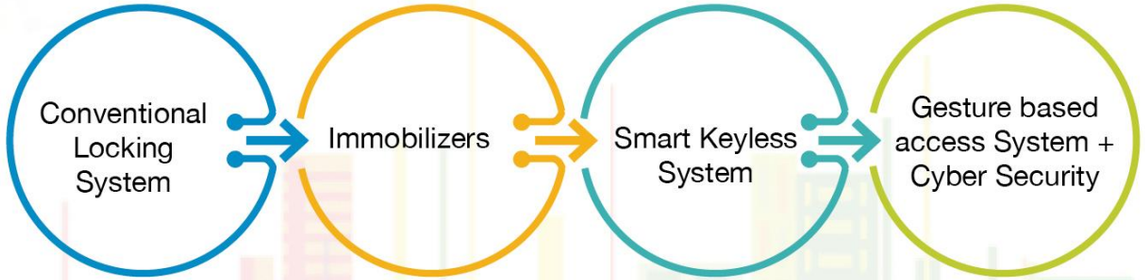
- Preferred supplier where reliability is a key aspect
- Diverse customer base across segments
- Global Technology alliance to stand at par with Customer future needs

Benchmark Manufacturing Practices

- A completely automated robotic paint shop for door handles and locksets



Technology Trends



Major Offerings



Keyless System



ESCL



Conv. Locksets



Latches



Fuel Cap



Door Handles

PARTNERSHIP

Leveraging technology and strength with US Partner – **VAST**

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INFORMATION & Connected Solution

We Differentiate Ourselves

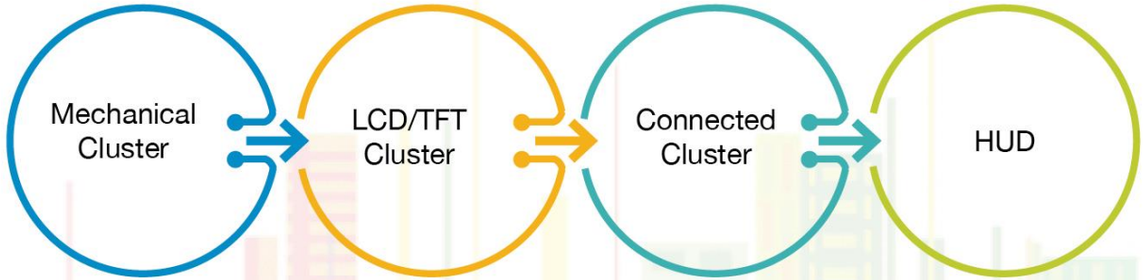
- Preferred supplier where on-time delivery and reliability is a key aspect
- Diverse customer base across segments
- Field warranty and support

Benchmark Manufacturing Practices

- SMT Capability
- Dust Control by Operations Control



Technology Trends



Major Offerings



TFT Cluster



Elec. Cluster



Wiring Harness



Mech. Clusters



Speed Sensor



Emission Sensor

PARTNERSHIPS

Partnered with leaders like **Stoneridge,** US and **Furukawa,** Japan

WIRING HARNESS Capability Enhancement

We Differentiate Ourselves

- Full System Supplier Capability for Wiring Harness Products in convention vehicles & EV's

State of Art NPD Proto Shop



Automatic Cutting, Crimping, Wire seal Insertion M/C Setup



Ultrasonic Welding M/c for joints



CATIA SOLUTIONS · Mentor A Siemens Business Capital HarnessXC™ · creo · U G S

Courtesy : CATIA is trademark of Dassault system, Creo, UGS is trademark of UGS Siemens, AutoCAD is trademark of Autodesk, Capital Harness XC is trademark of Mentor / Siemens

Features

- State-of-the-art NPD proto shop facility for first time right proto manufacturing
- In-house capability to design wiring harness (W/H) using specialized design tools like Capital Harness, CREO, CATIA
- Integrated manufacturing facility and advanced engineering set-up capable of black box design & validation

Benefits

- Reliable W/H manufacturing using navigation system, vision camera and automatic end-of-line testing rig
- Affordable W/H with in-house developed conventional and next-gen connectors & terminals (025, 040srs in development)

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PLASTICS & LIGHT Weighting Solution

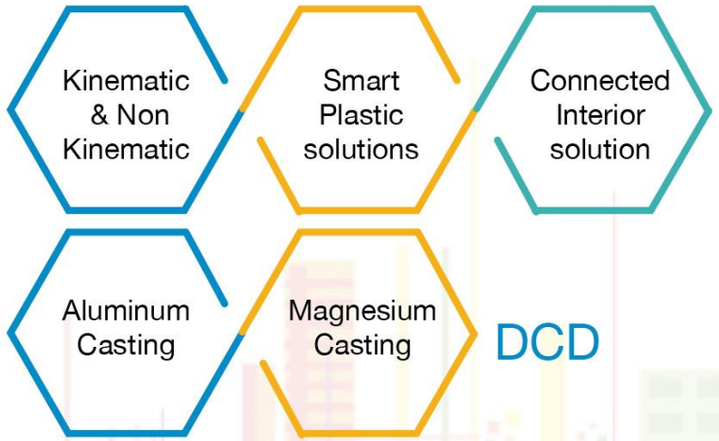
We Differentiate Ourselves

- Diverse Segment Offering
- Focused capability in engine light weighting solution
- Dedicated In house design and development capability

Benchmark Manufacturing Practices

- First Mover in engine light weighting Components
- A global benchmark plant for Intricate parts for casting products

Technology Trends



IPD

DCD



Major Offerings



Cylinder Head Cover



Compressor Housing



Centre Console



Engine Mounting Bracket



Battery Tray



Motored Air Vents

FOCUS AREA

Localization: Product development and transformation to suit customer specific needs

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ELECTRIC & CONNECTED Mobility Solution

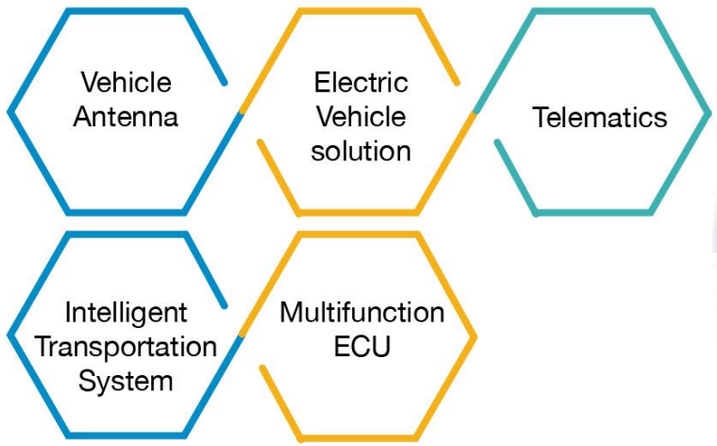
We Differentiate Ourselves

- Establishment of strong advance R&D Centre for electronics initiatives
- A comprehensive portfolio in Electric Mobility Solution
- Expertise in Electronic control units design, Power electronics design & Embedded System Solution

Benchmark Manufacturing Practices

- In-house SMT facility and EMI/EMC facility for product validation

Technology Trends





Major Offerings


Antenna


DC-DC Converter


Battery Charger


Telematics


ITS


MFECU/ BCM

FOCUS AREA

Innovation & Technology Leadership

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TESLA'S 4 Pronged Approach

TESLA

1 2 3 4



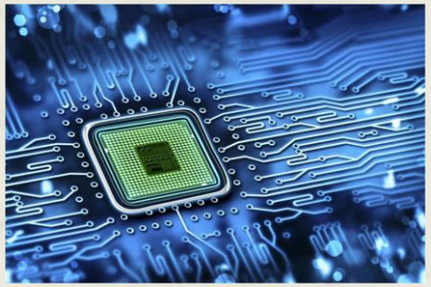
Electric Vehicle using TESLA Energy



Connected Vehicle Platform



Autonomous Platform Standardization



Electronics & Software

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HOWEVER INDIA HAS Unique Requirements

	DEVELOPED ECONOMY CONTEXT	INDIAN CONTEXT	INDIAN + EMERGING ECONOMY CONTEXT
BEV upfront price = ICE	✓	✗	✓
Range, top speed, creature comfort, safety	✓	✗	✓
Charging Time	✓	✗	✗
Charging Infrastructure	✓	✗	✓
Maintain Lower Running Cost Advantage	✓	✓	✓
	Average selling price of a car in US is ***US$ 37,777***	Average selling price of ICE vehicle in India is < ***US$ 10,000***	Range: ~100km, Speed: ~50kph, Charge at home
			 
		Range: ~140km, Speed: ~80kph, Price: ~1.5x ICE	

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INDUSTRY Expectations….

Government Inititives

2011 — **NMEM**
National Mission on Electric Mobility

2013 — **NEMMP 2020**
National Electric Mobility Mission Plan

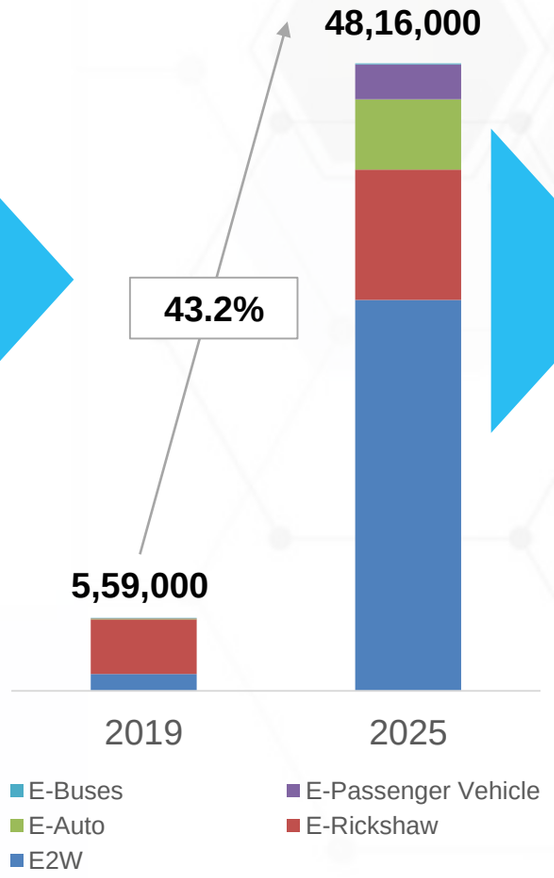
2014 — **Membership in EVI**
to study EV deployment and infrastructure in NCR

2015 — **FAME I**
Faster Adoption & Manufacturing of (Hybrid &) Electric Vehicles

2019 — **FAME II**

2021 — **Go Electric Campaign**

Potential EV Market in India



Government Support

1. Active stimulus and incentives from the government for EV migration
2. Long-term well defined policy and regulation for EV adoption
3. Standardized charging infrastructure and ports
4. Structured approach to reduce dependency on China for EV components

"What the government and industry must do is build a multi-year road map together, with milestones that could help all the players understand shared objectives, build capabilities and infrastructure and minimize any surprises along the way" – *Tata Sons Chairman N Chandrasekaran*

EVI: Electric Vehicle Initiative

Source: Frost & Sullivan

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HOW HAVE WE Worked Around……

Engaging in technology tie-ups with global counterparts with strong regulatory support is a potential way forward for local suppliers

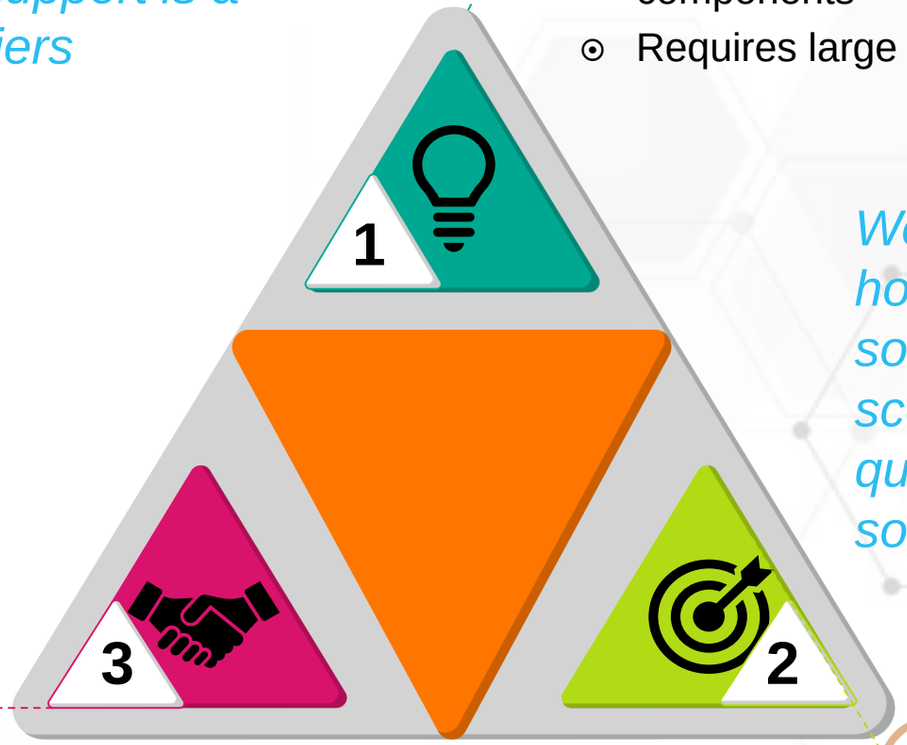
Setting Up own R&D Unit for xEV

- Suppliers to set up their own R&D in xEV specific components
- Requires large investments in terms of money and time

We have already set up our in-house R&D facility for xEV solutions while simultaneously scouting for partners to bring in quality, scalable, cost effective EV solutions

JV's with Global xEV Players

- Entering into JV's with global suppliers would give Indian suppliers access to existing technology
- Commercialization of technology at the shortest time with the potential to further develop joint IPR ownership in the future.



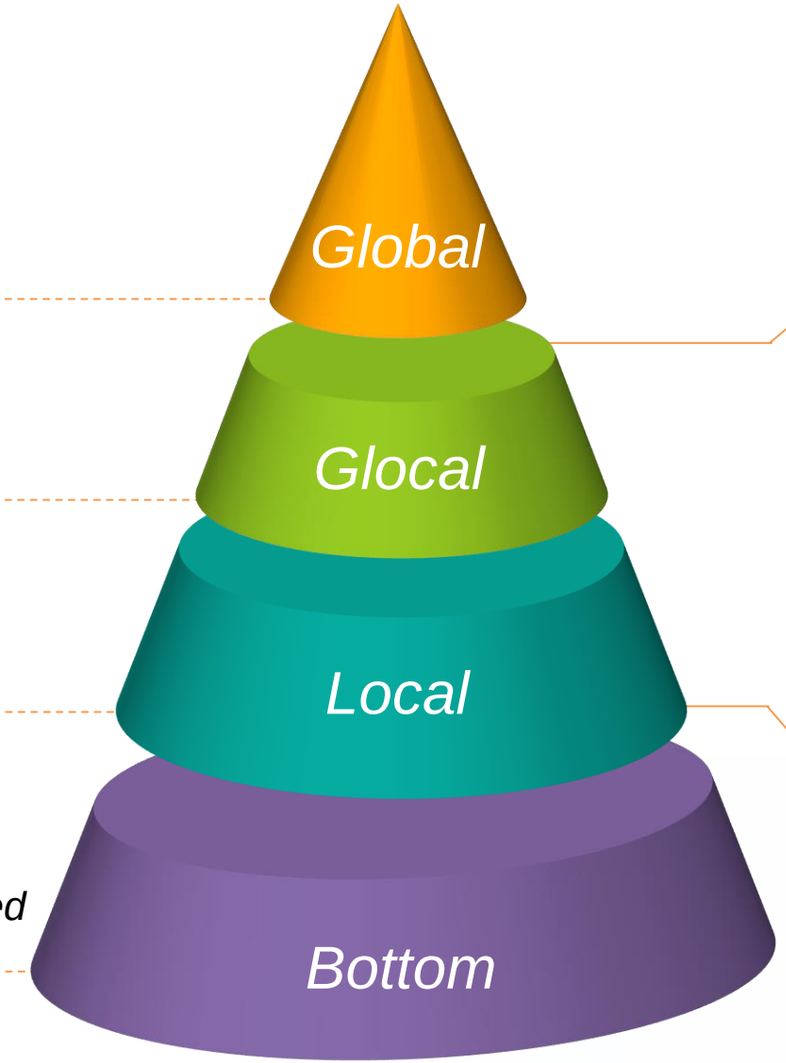
Technology Licensing

- Licensing of exsting technology from global suppliers' xEV sub-components to manufacture in India
- Further development of licensed technology is often challenging

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SPARK MINDA Group Strategy

Bottom-up strategy to create a *Robust, Cost Effective Solution* catering to *Local Need* with *Global Quality*



- Very low speeds, light vehicles and short commutes
- Difficult environment conditions – temperature, humidity, dust, potholes etc.
- Unprofessional and low vehicle/engine knowledge leading to questionable driving practice
- Case for retrofits

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SPARK MINDA Technical Centre (SMIT)


Spark Minda Technical Centre, Pune



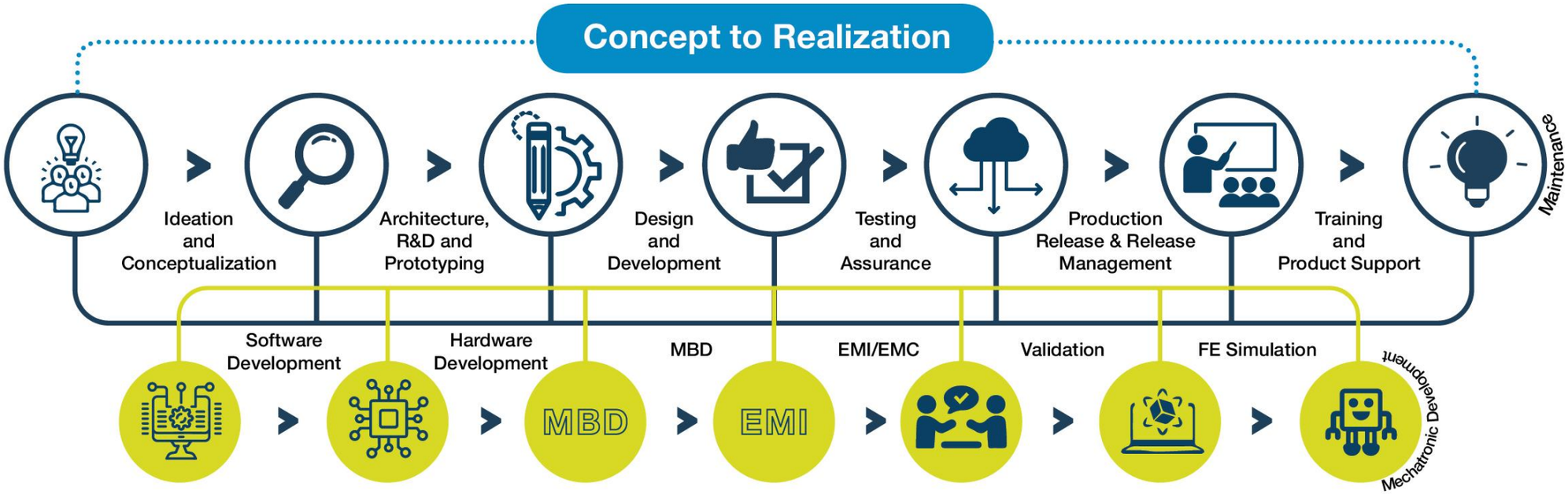
EMI/EMC Lab



Anechoic Chamber

- Over 130 patents.
- End-to-End Product Development.
- Complete ownership of product throughout PLC.

Concept to Realization



ACCREDITATIONS

Applus IDIADA

NABL

DSIR RECOGNIZED

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EV KIT Value

EV Kit Value of ***Rs. 20,000/-*** approx.



Seat Actuator



Glovebox Actuator



Keyless Entry Systems with ESCL

Connected Cluster









Battery Charger



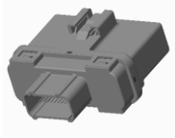
DC to DC Converter



Motor Controller



Battery Management System



VCU



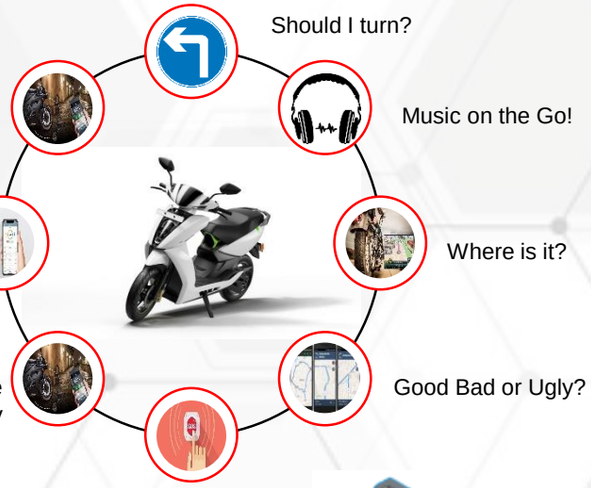
Wiring Harness

Sensors (Pressure, Temperature, Position etc…)

Plastics & Die Casting Products



Telematics



ESCL: Electronic Steering Colum Lock

Electric Vehicle Components | **Mechatronics** | **Information and Connected Systems** | **Plastics & Light Weighting**

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SUCCESSFUL DEVELOPMENT OF INHOUSE Power Electronics Solution

3x3x3 Strategy

3 SEGMENTS







3 PRODUCTS



DC-DC Convertor



Battery Charger



Motor Controller

UPTO 3kW

Battery: Lead acid / Lithium

Battery Voltage: 48 to 60 v

Battery Capacity: 25 to 120 AH

Motor: 600W – 3 kW

Peak Speed: 25km – 80 km

Range: 60km – 120km

Products ≤ 3 kW

EV Customers

AMPERE By GREAVES, ASHOK LEYLAND, BAJAJ, BGAUSS, ELECTRA EV, ESCORTS, ETERGO, Mahindra electric, OLA ELECTRIC, Olectra, POLARITY, TAFE, TVS, virya MOBILITY 5.0

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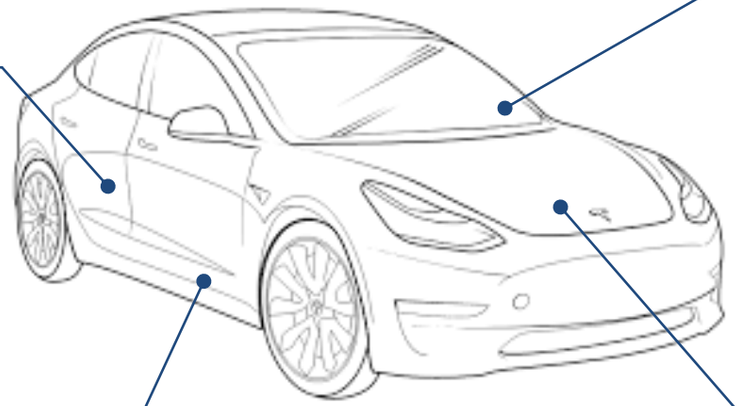
SUCCESSFUL DEVELOPMENT OF INHOUSE Connected Mobility Solutions

Spark Minda has a telematics solution for every E&E architecture of EV



Battery Swap Telematics

For a battery swap EV, tracking the battery, its SOC and discharge profiles is a must have. A built-in telematics function makes it smart battery



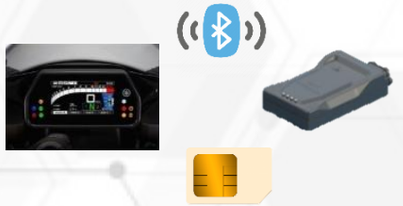
Connected Vehicle Control Unit (VCU)



Connected Vehicle Control Unit not only monitors the vehicle data but also provides vehicle control options like limp home, vehicle mode set, geofence etc in addition to FOTA features



Connected Cluster



Connects the vehicle to the cloud through the cluster. All ride parameters are available for big data analysis on the cloud

Telematics Gateway



Track and Trace, Immobilization and find me functions with a simple gateway

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THE BIG Picture…….



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LET'S Connect



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