

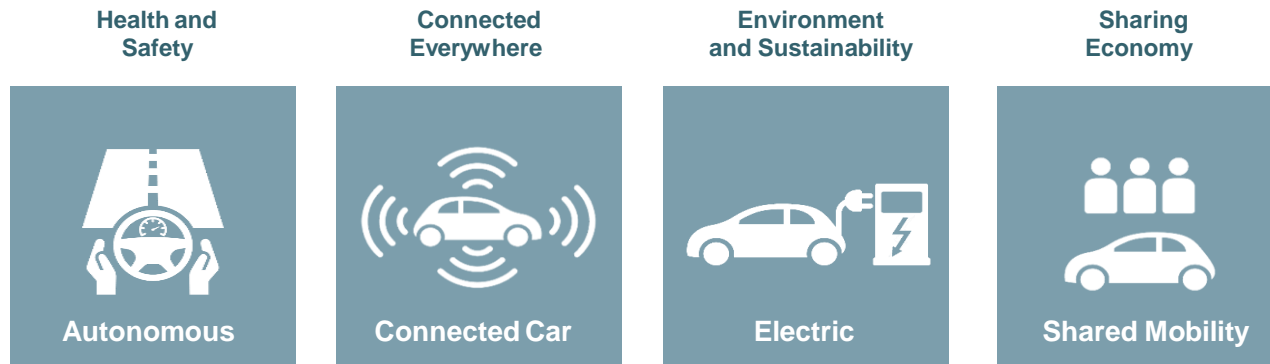


UNO MINDA

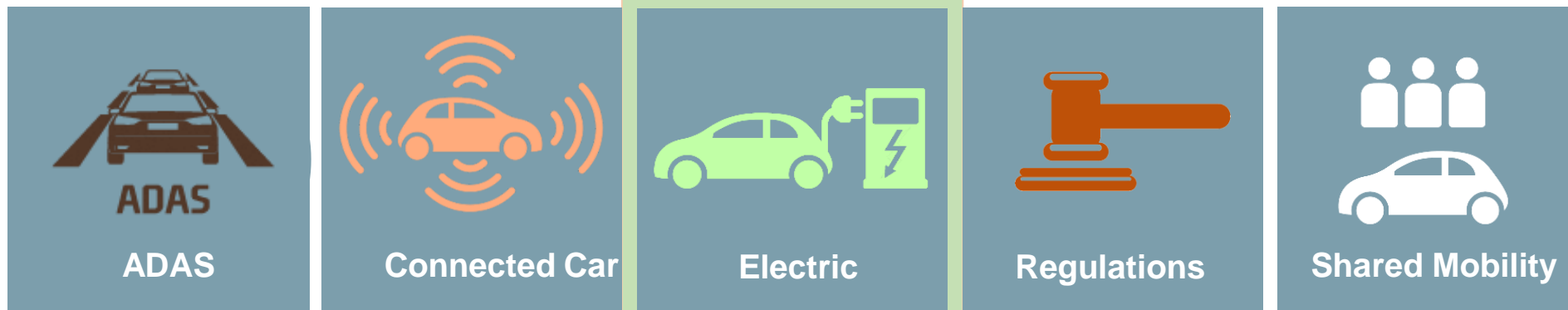
Uno Minda EV Roadmap

Building Trust, Expanding Possibilities





India



- Almost all products of Minda are EV agnostic
- Minda is following a two prong strategy on EV
 - Upgrade / Enhance / Adapt our current products for EV specific applications
 - Develop new EV specific products which are currently not in the Uno Minda portfolio
- Current focus is on 2W and 3W segment which is expected to see the maximum growth

Sensors for Electric Vehicles



Brake Pedal Sensor for EV Regenerative Braking



EV Battery Temperature Sensor



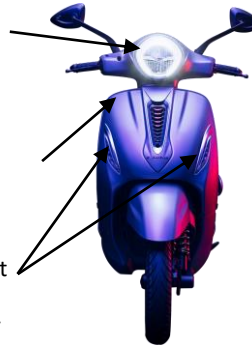
Accelerator Position Sensor for EV



Vacuum sensor for EV Brake System

LED Lighting & Switches for Electric Vehicles

LED DRL & Position Lamp



LED Head Light

LED Front Turn Indicator



LED Sequential Turn Indicator Lamp

LED Tail Lamp with Stop Lamp

LED Front Position Lamp
LED Head Light



LED Front Turn Indicator



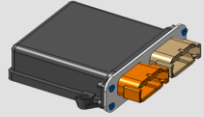
Switches

LED Tail Lamp with Stop Lamp

LED Rear Turn Indicator

EV Products Under Development

Low Voltage EV Products (48V to 72V)

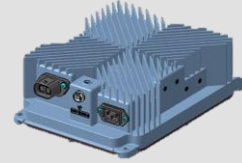


Body Control Module (BCM)

Smart Plug

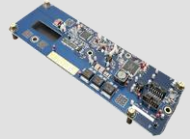


On-Board Charger



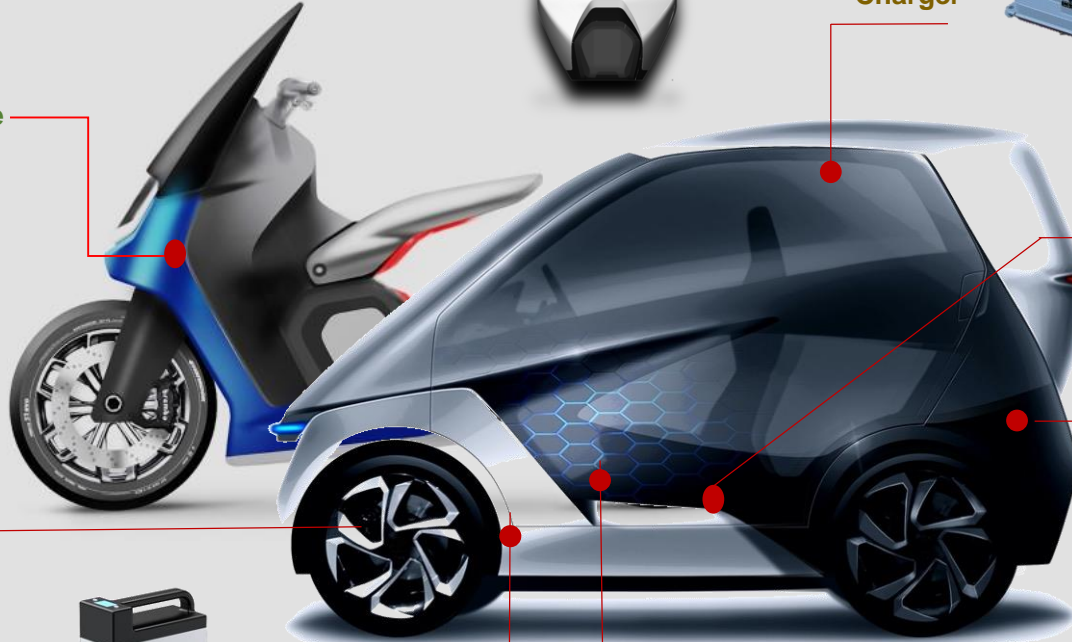
DC-DC Converter

Telematics



AMP
empowering mobility

Battery Management System



Li-Ion Battery Pack



Motor Controller

Under Production
Under Development
Under Study

Battery Management System



Entered into a TLA with AMP, USA for Battery Management Systems for 2W, 3W, 4W and CV Markets in India



Battery Runtime

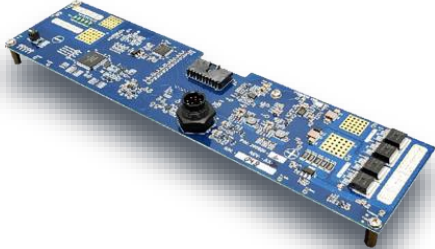
Battery Lifetime

Faster Charging

Automotive BMS



Autonomous Mobility BMS



Motorcycle BMS



Electric Bicycle BMS



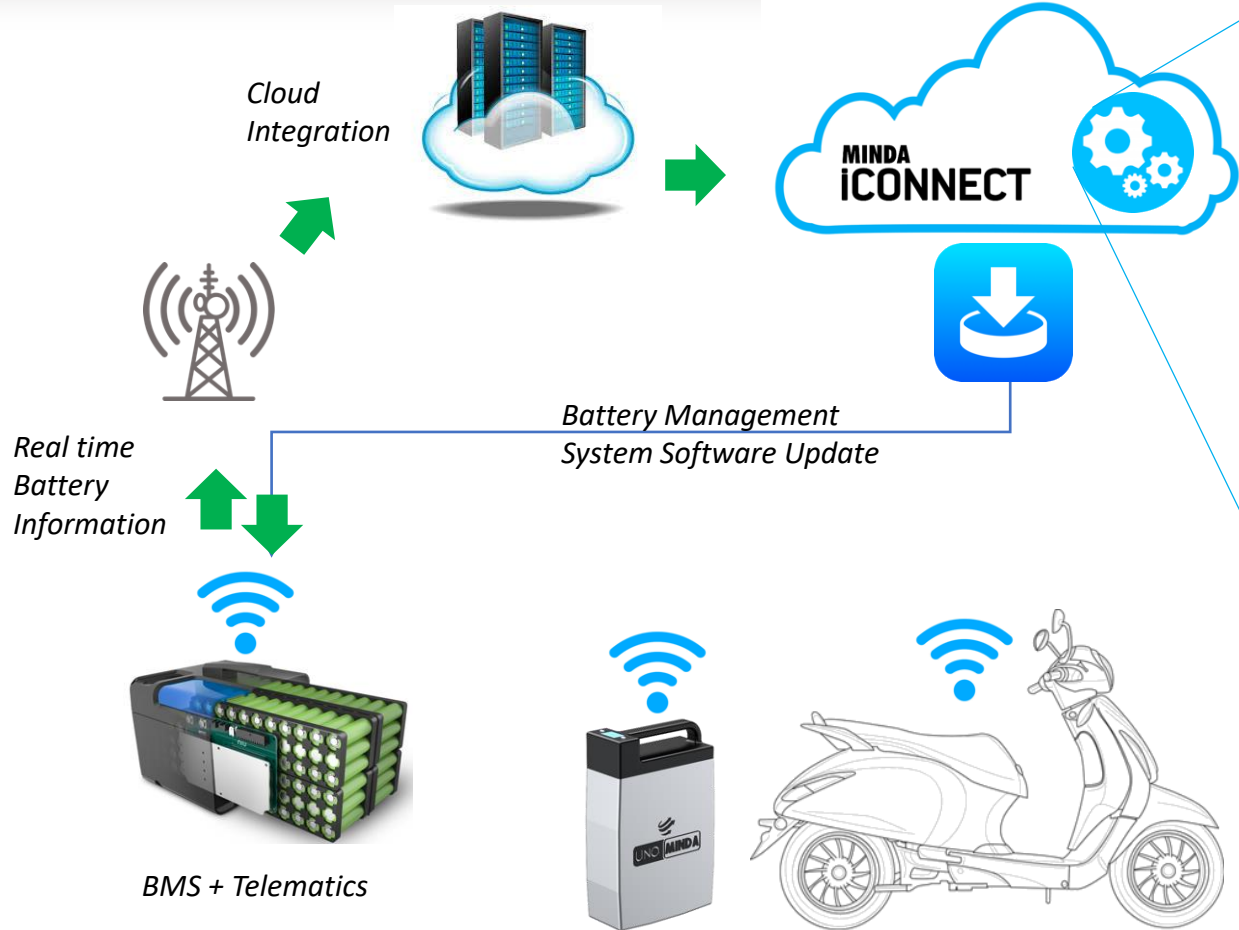
Energy Management System



Fast Charge Junction Box



Integrated BMS and Telematics



- Tracking Battery as an Asset
- Battery Diagnostic
- Battery Predictive Maintenance
- Battery Authentication & Swap

The dashboard screenshot shows a "Quick Glance" section with a bar chart of battery usage over time. Below it is a "Health Summary" section with a donut chart showing a 12% health metric.

Battery Analytics

Smart Plug Charging – Recent Launch

- Recently launched on TVS iQube
- Modular design with various authentication options and integration of connectivity



- Aggressively tracking the EV market
- Although Uno Minda's current product portfolio is EV agnostic, Minda is focusing on upgrading its product line to suit and add value to EV Segment
- Uno Minda is also developing several EV specific products focused on the 2W and 3W market
- Also strengthening its position by Technology driver alliances in high technology area.

Thank You



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