



DATA SCIENCE

@ ROAD

VISION PROCESSING, AI/ML & Analytics
Capabilities of Team RoadE



TEAM ROADE

Core Team of IIMK Alumni (and Engineers) with
Average industrial experience of 15+ years

Our Team

A team of 4 IIMK alumni with engineering experience of more than a decade



Education

B Tech in Computer Science & Engineering from CUSAT (Cochin University of Science & Technology)

Masters from Indian Institute of Management, Kozhikode (IIMK)

Certified in BI by MicroStrategy & IBM

Work Experience

2009 : Assistant Professor at Govt Engineering College, Cherthala, Kerala

2010-2012: Business Intelligence Practitioner (Software Engineer) at Larsen & Toubro Infotech (LTI)

2012-2015: Business Intelligence Consultant at UST Global

2015 – Present: Entrepreneur



BANARJI BALAKRISHNA PILLAI

Computer Science Engineer with Masters in Management from Indian Institute of Management, Kozhikode. 10+ years of experience in Information Technology industry in various roles as Business Intelligence consultant, Business Analyst for Analytics projects, Pre-Sales & Product Development in AI, BI & IoT products etc. CEO for RoadE Labs, Banarji envision the roadmap of products & handles the strategic management at RoadE

Skills



Our Team

A team of 4 IIMK alumni with engineering experience of more than a decade



Education

Bachelors in Mechanical Engineering from NITIE (National Institute of Industrial Engineering)

Masters from Indian Institute of Management, Kozhikode (IIMK)

Work Experience

2003-04 : Tool Engineer at BPL Automation , India

2007-09: Application Engineer at HASCO India

2009-13: Business Development Manager at Volastic India

2013 – Present: Entrepreneur



ANOOP RAMAKRISHNAN

Mechanical Engineer with Masters in Management from Indian Institute of Management, Kozhikode. 17+ years of experience in Operations & Sales in manufacturing domain. COO for RoadE Labs, Anoop plays a key role in managing operations & sales at RoadE Labs Pvt Ltd

Skills



Our Team

A team of 4 IIMK alumni with engineering experience of more than a decade



Education

MCA from MG
(Mahatma Gandhi)
University

Masters from Indian
Institute of Management,
Kozhikode (IIMK)

Work Experience

2007-12 : Consultant at KPMG,
Singapore

2012-15: Consultant at UST Global

2015 – Present: Entrepreneur



RENJITH VISWANATH

Masters in Computer Application & Master in Management from IIMK, Renjith Viswanath has an overall experience of 14+ years in Information Technology spanning across multiple technologies. His expertise is into SAP, Mobile Technologies, IoT & Data Science. CTO at RoadE Labs, Renjith spearheads the research & product/project development at RoadE

Skills



Our Team

A team of 4 IIMK alumni with engineering experience of more than a decade



Education

B Tech from CUSAT

Masters from Indian Institute of Management, Kozhikode (IIMK)

Work Experience

2012-2021 : Service Lead & Solution Architect ,IBM Asia Pacific

Prior to 2012: Various organizations

Liz Thomas



B Tech in IT & Master in Management fro IIMK, Liz Thomas has an overall experience of 20+ years in Information Technology spanning across multiple technologies. She is an expert in Risk Analytics, Solution Architecture, System Architecture, Contracts/Agreements and an expert across technologies

Skills



Video Analytics - Capabilities

Research & Development in AI/ML, Analytics & IoT

RoadE has a lean team focusing on research & development of cross-technology platforms using Data Science & Electronic devices

On Premise Processing

On-premise processing capability available for remote locations, which enables 'Plug N Play' in true sense. In such case, RoadE VPU would be a portable hardware

Behavioral Analysis

Detects and classifies behavior patterns from video streams. This helps to identify possible threats of burglary, theft, assault, mob violence etc.

Number Plate Recognition

Number plate recognition for INDIAN NUMBER PLATES. The algorithm automatically decodes the number from a vehicle number plate (across various fonts) from video frames

Object Detection

Detection of objects from video frames & classifying the same. This would enable Human Detection, Vehicle Detection, Detection of weapons, Detection of bags, garbage junks etc.

ROAD E AI

The capabilities have been built through R&D, based on machine learning performed on real data. The capabilities are consolidated as RoadE AI Engine which runs on custom assembled **RoadE VPU** (Video Processing Unit)

Video Analytics

Product Portfolio

Products using aforementioned capabilities,
for various use cases

ATMOS



ATMOS

Automated ATM On-Premise Security

ROADE
Labs Pvt Ltd

ATMOS

**Automated Monitoring
Solution** for banks & financial
institutions

Improves security &
compliance
Thus improving Brand Equity

SPES

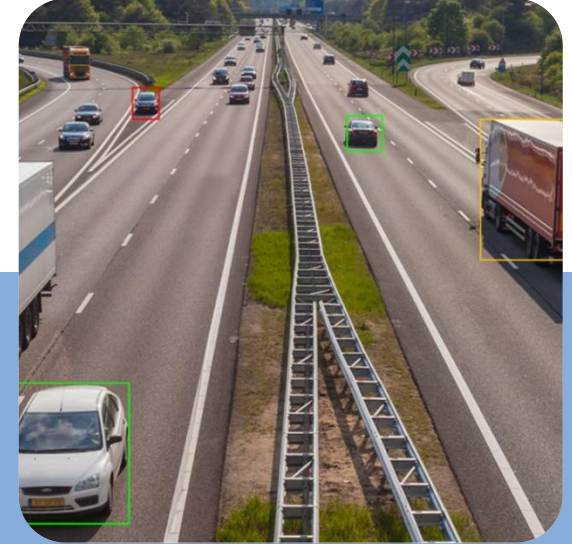


SPES

**Smart Parking & Entry
Security Solutions** for On
Street/Off Street Parking,
Office Complexes, Residential
Complexes etc

- * Improves parking discovery,
- * Reduce parking hassles,
- * Enables digital billing & tracking,
- * Enables automation in authorized entry

AVD



AVD

Real time vehicle detection on
highways & city streets

Automation in Vehicle
tracking, speed tracking etc.

Video Analytics

Product Portfolio

Products using aforementioned capabilities, for various use cases

Garbage Detective



Garbage Detective

Automated Monitoring Solution for tracking illegal dumping & garbage disposal menace

Real Time Tracking & Alert Notification of incidents with miniature incident videos

Graffiti Detective



Graffiti Detective

Automated Monitoring Solution for tracking graffiti activities in public infrastructure (walls, transport means etc)

Real Time Tracking & Alert Notification of incidents with miniature incident videos

AVD for Driving Tests



Auto Driving Tests

Automated tracking of driving tests.

Automated Pass/Fail status on every tests based on prescribed criteria

A Use Cases

Real cases the capabilities being used, tested or prototyped

VEHICLE SEGMENTATION & DETECTION ON HIGHWAYS POC

Trucks to be segmented out from real time traffic & vehicle number to be detected. The vehicle number would be passed on to a cross-verification module on a cloud server



AVD

LITTERING DETECTION at KOCHI & KOZHIKODE LOCATION

POC performed for a surveillance camera provider (client). Cameras installed at 2 locations used to demonstrate the functionality of automated detection of illegal waste dumping or littering

Garbage Detective



02



SPES

AUTOMATED PARKING ML PHASE @ KMRL PARKING

The prototype was executed and is in testing phase at KMRL (Kochi Metro) Aluva station parking ground. Vehicle number based parking availability detection & data infra for automated billing

04

DRIVING TEST VALIDATION

Driving test validation – Prototype study successfully conducted for an upcoming project

AVD



A Use Cases

MechaniquE

The key strengths or core modules that works behind any of the packaged products mentioned in previous slides are Object Detection, Text recognition & Behavioral Analysis. The same modules can be integrated together to build custom solutions which are catered to clients as packaged customized products. One of such products is **MechaniquE**

MechaniquE helps automotive companies to improve the CX by providing the customers with a Mechanic at finger tips. Any warning signs appearing on the car dashboard can be scanned by the user via a 'connected car' mobile app and the explanation of the warning sign will be communicated back to the user in real time. Mechanic-E's powerful video analytics algorithms work in real time, to automatically identify the problem and communicate back to user, without manual intervention

Client : A leading Japanese Automaker



A Use Cases

MasquE

Another such products is **MasquE**

Data security laws are being tightened up across the globe. GDPR compliance is mandatory across all organizations & use cases which involves customer data. PII masking becomes critical for organizations to comply with GDPR in Europe and similar laws elsewhere globally.

MasquE helps automotive companies to comply with GDPR while analyzing/utilizing images for crash & safety R&D. MasquE automatically masks PII from images that are fed into it. It can mask number plates, VINs, name boards, billboards, phone numbers etc. and pass the masked images as output

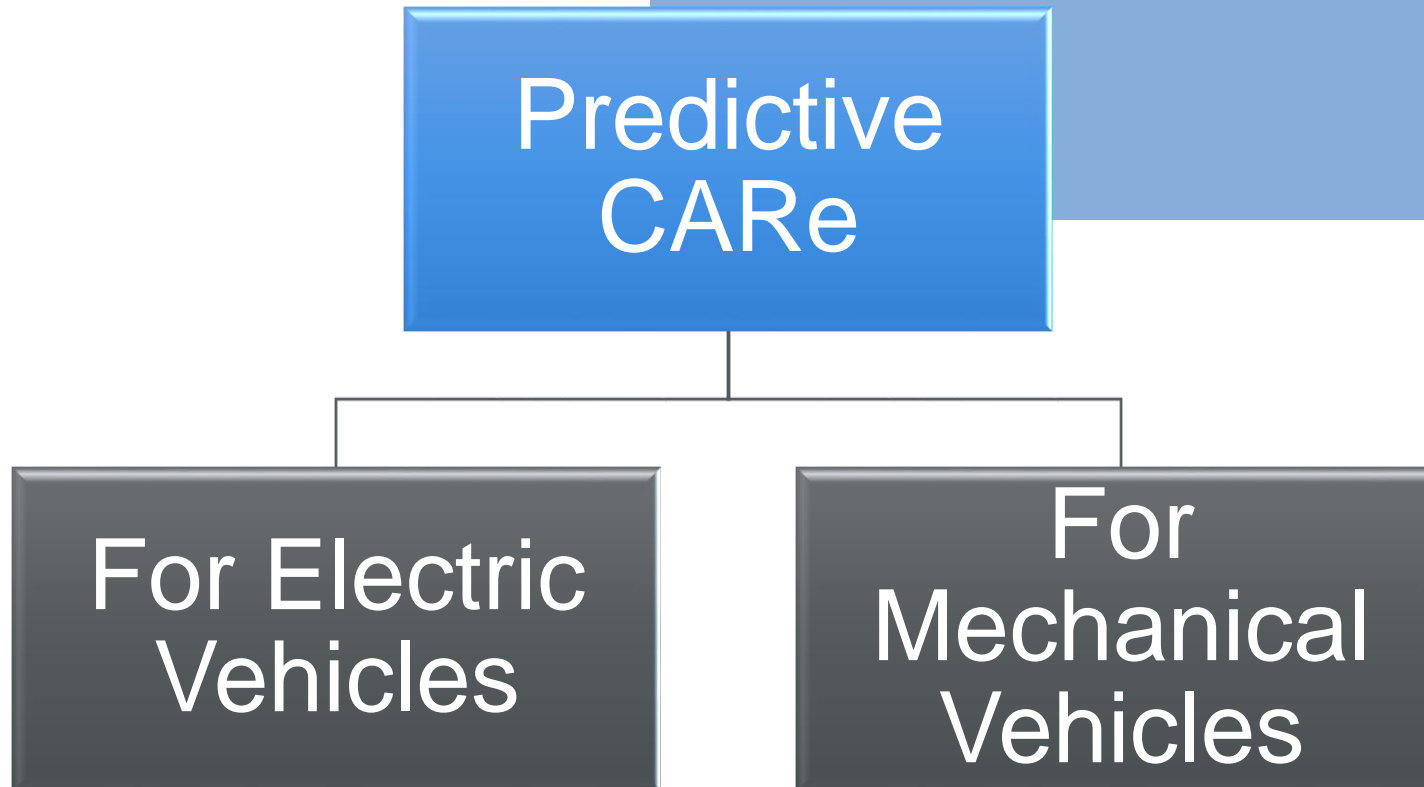
Client : A leading German Automaker



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Product Portfolio

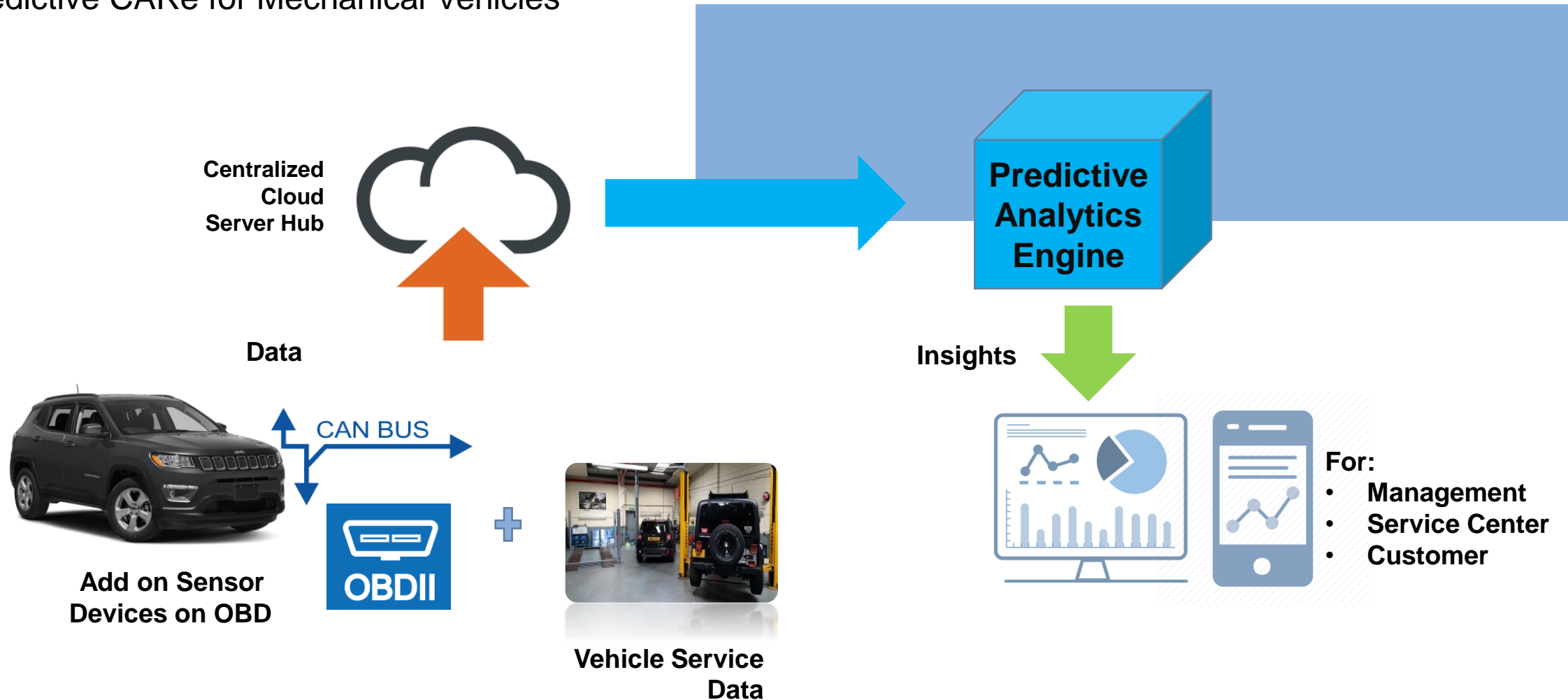
Products using aforementioned capabilities,
for various use cases



DATA SCIENCE

Predictive CARe

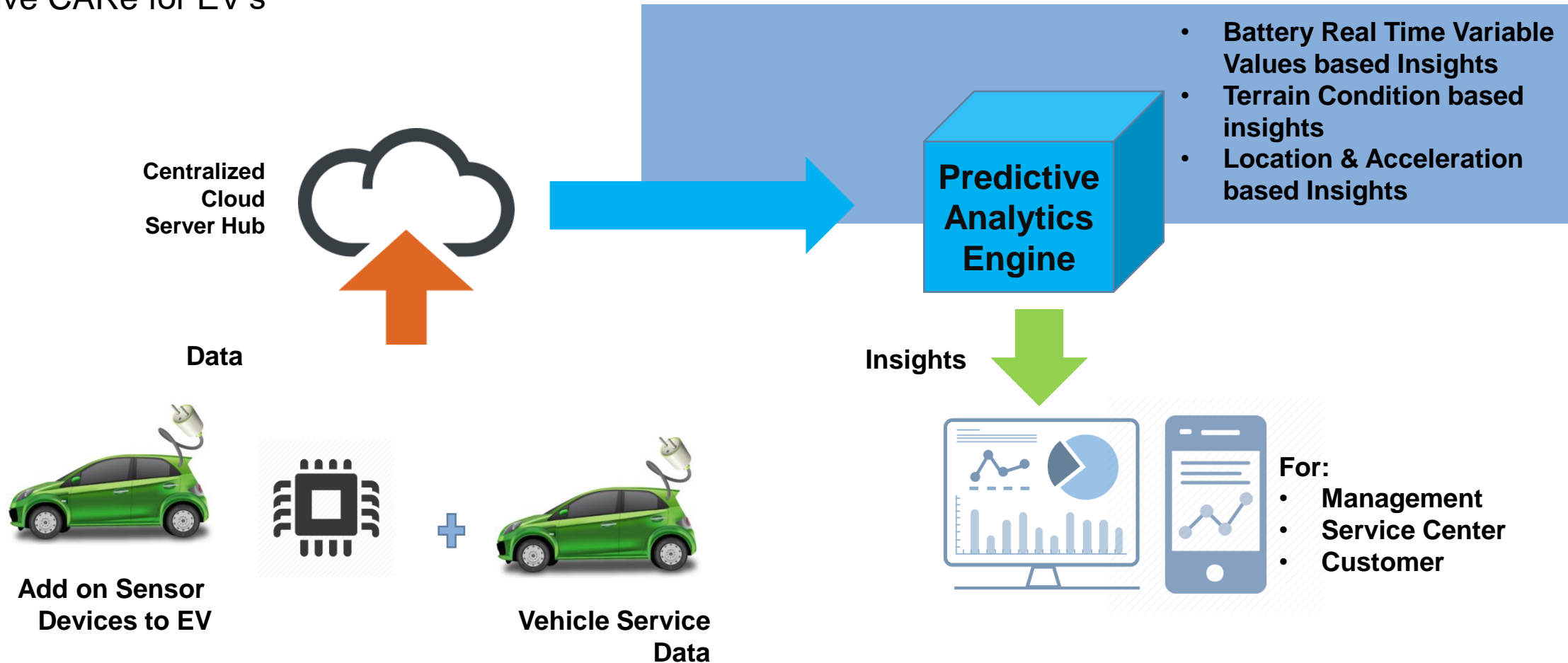
Predictive CARe for Mechanical Vehicles



DATA SCIENCE

Predictive CARe

Predictive CARe for EV's



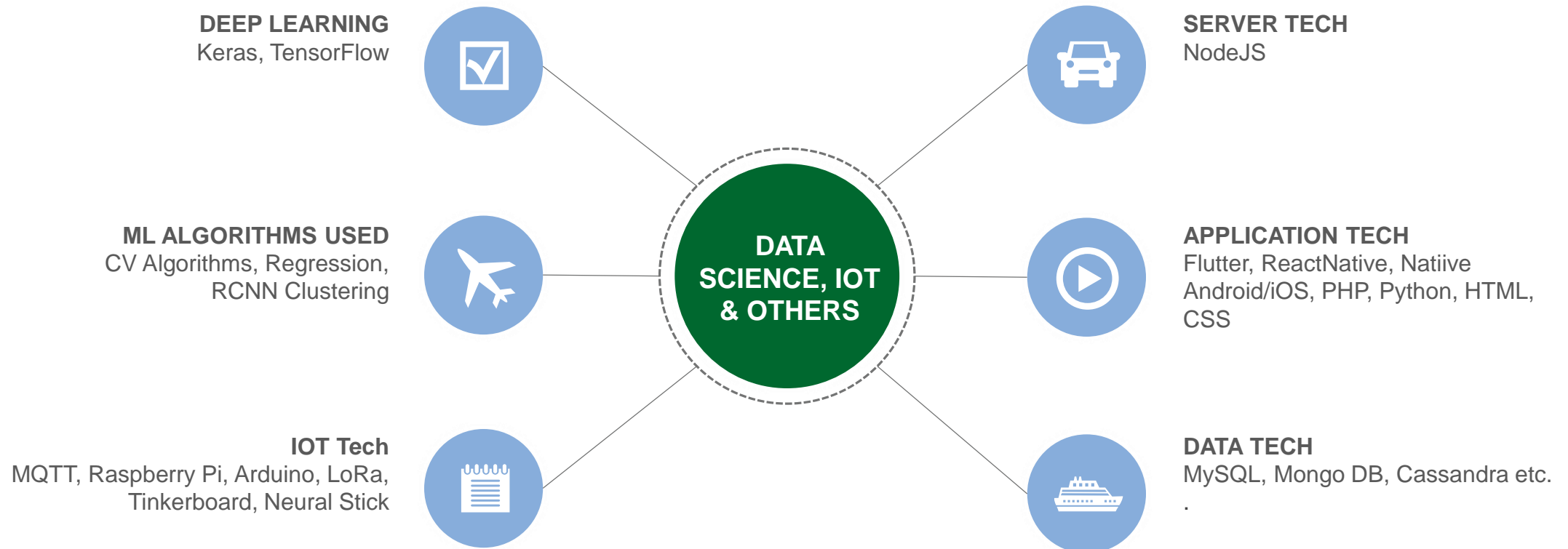
ARTIFICIAL INTELLIGENCE

PRODUCT/PROJECT TECHNOLOGIES

Technologies used at RoadE Labs



AI TECHNOLOGY STACK





PLEASE CONTACT US

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THANK YOU