



**BOSCH**

Invented for life



**Creating a Connected Future Together**





# Bosch & Microsoft

## Key Offerings

- ▶ Microsoft Dynamics 365
- ▶ Portal Solutions
- ▶ Application Dev.
- ▶ Mobility & Cloud
- ▶ Business Intelligence
- ▶ Microsoft HoloLens

## Our Enablers

### Deep Expertise

- ▶ Technology Competence
- ▶ Industry Knowledge
- ▶ Proactive investments

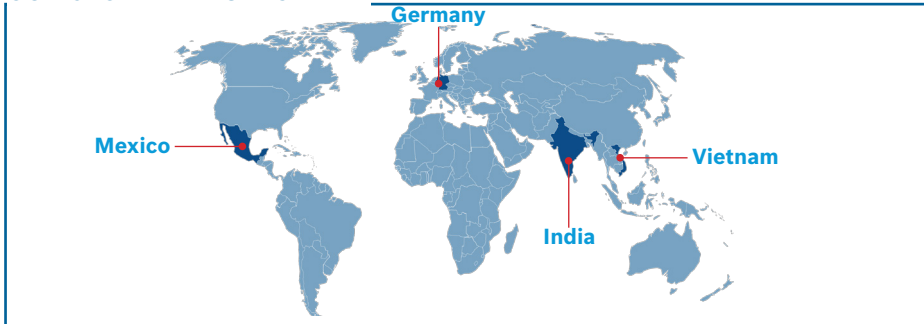
### Strong Partner Ecosystem

- ▶ OEM
- ▶ Technology Partners

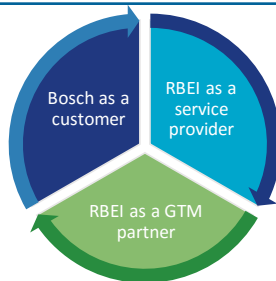
### Proven Practices

- ▶ Continuous monitoring and training
- ▶ Associates exposed to latest trends & technologies
- ▶ Knowledge Management Portal

## OUR GLOBAL PRESENCE



- ▶ Bosch is one of the largest customers for Microsoft
- ▶ Entire office communication / collaboration of Bosch on Microsoft platform
- ▶ Microsoft Azure as preferred cloud platform for Bosch



- ▶ Core Implementation Partner for Cloud Solutions
- ▶ Dedicated ODC of 200+ consultants
- ▶ Fast Track Centre Factory for on-premise to cloud migration
- ▶ IOT / Azure Based projects

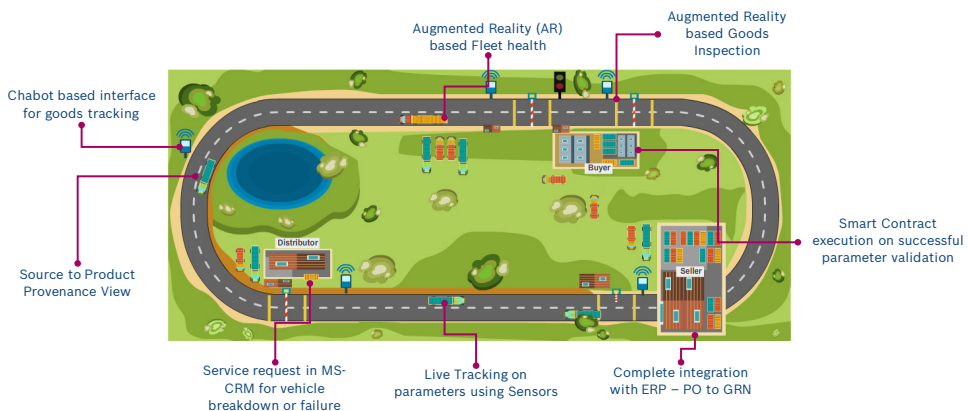
- ▶ Technology partnerships - Gold partner & CSP
- ▶ GTM partner for MS in India, UK and Germany
- ▶ Co-operation in new areas like Connected Devices, IoT, AR/VR

## Digital Supply Chain Solution

Microsoft Azure | Microsoft BaaS |  
Microsoft Dynamics 365

### Overview

With the numbers of stages involved, spread across multiple international locations and the diversity of the transactions happening between numerous entities, supply chain management is extraordinarily complex, time-consuming and not really transparent. Our solution leverages Blockchain to provide the reliability and integrity of the entire supply chain and offers complete transparency for all the stakeholders in terms of provenance. Additionally, smart contracts simplify the financial transactions built on certain conditions between the entities. IOT is used for monitoring the goods and the conditions agreed between the logistics provider and seller/buyer.



### The benefits for you

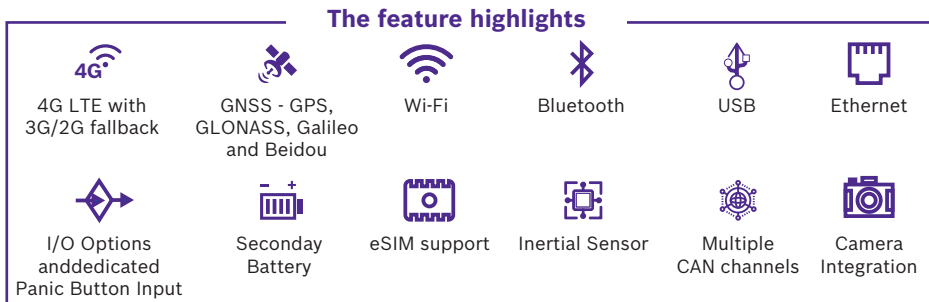
- ▶ Transparent and faster dispute resolution
- ▶ Improved transaction flow using smart contracts
- ▶ Provenance – Source to Product traceability leading to secured supply chain

- ▶ Real-Time tracking of goods and their conditions resulting in optimal operational efficiency
- ▶ Higher reliability of logistics through real-time fleet health monitoring
- ▶ Seamless integration of IOT,

- ▶ Block chain and enterprise systems of partners
- ▶ Improved quality and swift in-warding of goods using augmented reality

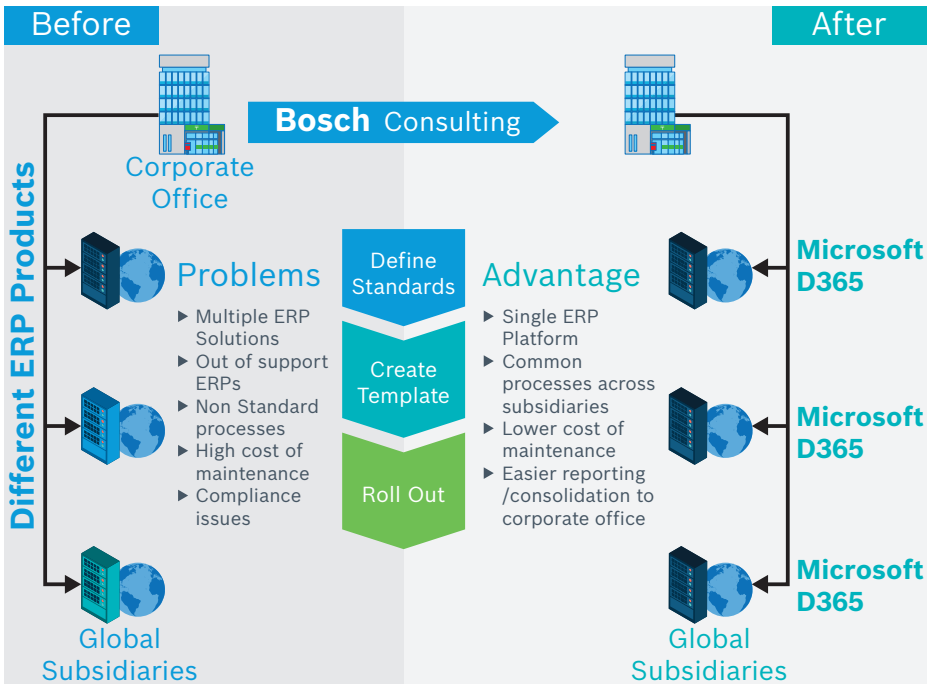


iTraMS is an end-to-end Vehicle to Infrastructure (V2I) ecosystem, designed to address the challenges of modern-day transportation and management of vehicles. Leveraging on its years of mobility solutions experience, Bosch has the edge to provide insights on vehicle health management and performance. Through data analytics a customer can get valuable insights on vehicle performance, usage and health





In current business scenario corporations struggle with Fragmented ERP landscape and difficulty to have uniform standardized process across all subsidiaries and with expensive to maintain and upgrade the multiple small ERP



**Benefits**



Increased ROI 3% due to reduction in operational cost



Cost of maintenance reduced by more than 5%

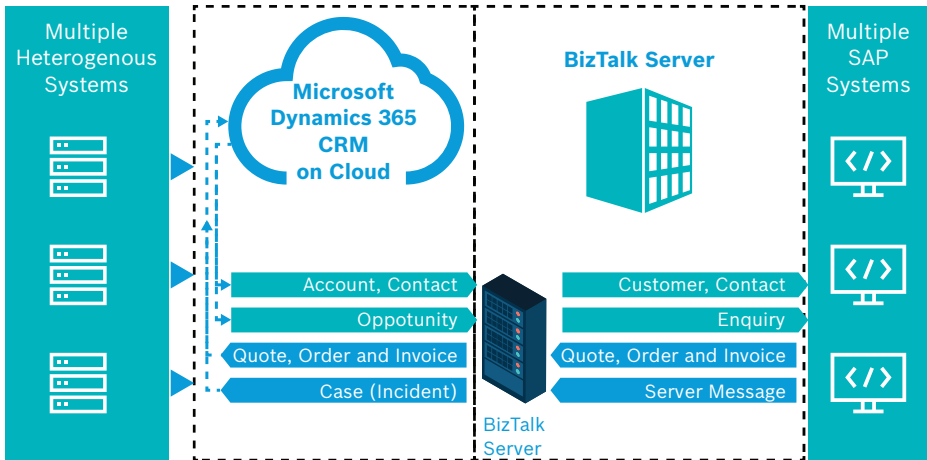


One single platform across all geographies and subsidiaries



Sales function in large organizations are faced with crucial business problems such as:

- ▶ Customer data management was difficult due to existence of different ERP systems
- ▶ Approval of change for customer master data from multiple owners of the data
- ▶ Paper based approval for providing user access used to take long time
- ▶ Language of the application as users were from different parts of the globe



Microsoft CRM based solution with integration to parent company’s SAP systems can solve these problems seamlessly

- ▶ Creation, maintenance of customers, equipment info
- ▶ Integration to:



Identity Management System



Finance, Planning and Logistics



CPQ and Controlling system for quote generation

### Benefits

- ▶ Achieved master data distribution with 95% accuracy
- ▶ Reduction in 50% of Manual effort
- ▶ Streamlined Lead qualification process with approximate 15% increase in lead quality
- ▶ Multi language capability helps users to read & write data in his/her own preferred language

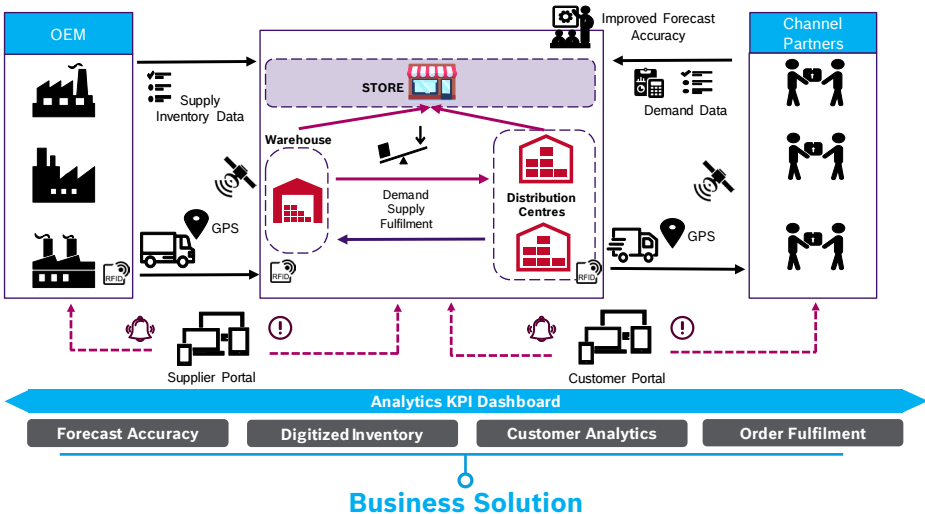


**In-store Customer Recommendation  
– Point of Sale**

**Microsoft Dynamics 365 |  
Microsoft Azure | Cognitive Services**

Increasing the topline is a critical KPI for any retailer. But they are faced with business challenges to accomplish this

- ▶ Need to increase upselling at Point of Sale
- ▶ Lack of targeted offers based on Customer behavior and purchasing patterns
- ▶ Silos of sales data in multiple systems and locations
- ▶ Lost sales opportunities



Single system for all customer engagement and PoS activities

Microsoft Azure Cognitive services to analyse product/customer patterns and recommend – “People also bought this”

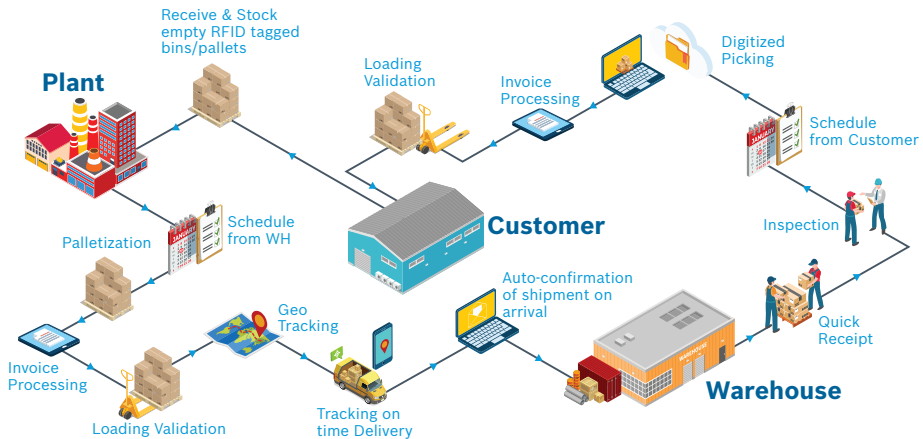
**Benefits**

- ▶ Cognitive Service – Recommendation API provides product suggestions
- ▶ Continuously evolving recommendation system improves to give better results over time
- ▶ Enables upselling, improves sales and profitability.

## Trac360 : Integrated Product & Shipment Traceability Solution

Microsoft Azure

TRAC360 is a robust and innovative IoT Solution that enables OEMs to perform real time tracking of their parts and shipment using integrated technologies like GPS and RFID.



### Business Challenge

- ▶ Mismatch in parts delivery
- ▶ High manual effort in logging data across multiple applications
- ▶ Long lead time in responding to customer queries
- ▶ Tedious process to locate parts in real time

### Solution Features

- ▶ Transparency throughout the Supply Chain
- ▶ Digitally powered Logistics Operations
- ▶ Products/Bin/Pallet/Invoice Traceability
- ▶ Integrated Systems with real time Inventory view

### Benefits



100% on time delivery since roll out of Trac360



Optimization of warehouse inventory space by more than 5-10%



Premium freight reduced from 3-4 to 0.

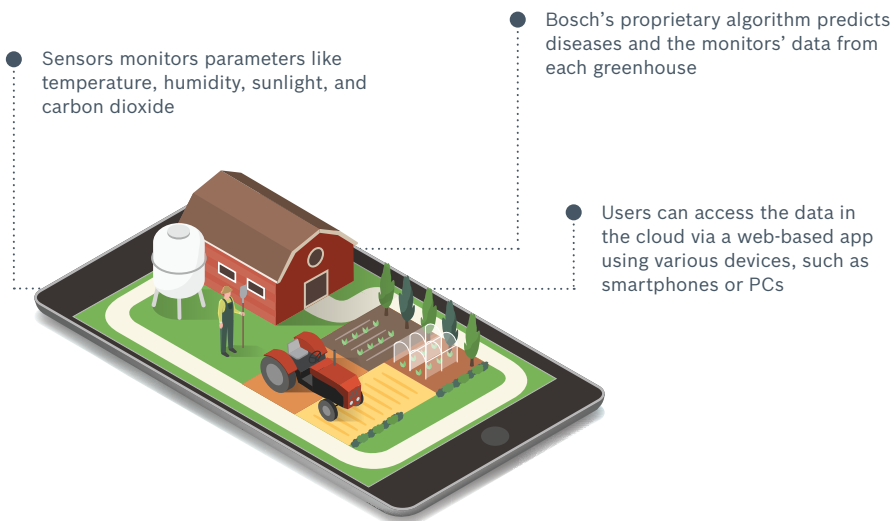




## Overview

Cloud-based data analysis using AI achieves disease prediction accuracy of 92 percent

Plantect™ is a service comprising hardware for measuring the environment inside a greenhouse and software for predicting disease occurrence based on the measurement data. Plantect™ also has a function for predicting the occurrence of disease. Using the data sent to the cloud by the monitoring function, Bosch's proprietary algorithm analyses elements related to disease occurrence

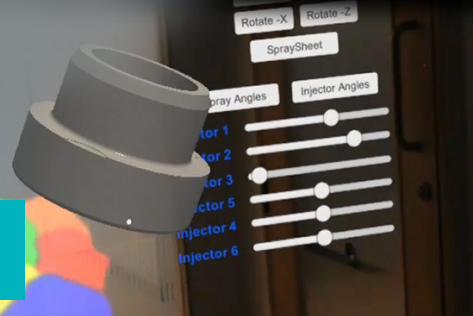


## Benefits

- ▶ AI based Disease risk prediction
- ▶ World unique solution to predict infection risk
- ▶ Protect farmers from yield loss
- ▶ Optimize chemical spray work
- ▶ Excellent user experience
- ▶ Plug & Play
- ▶ No installation work
- ▶ Completely wireless, Hung anywhere
- ▶ Customer oriented 10T business model
- ▶ No upfront payment, monthly subscription fee only

## Collaborative 3D Spray Design

Microsoft HoloLens



Engineering and design relies on 3D modeling software that can simulate the results in a 2D screen. However designs are often complex enough to require further analysis and verification. A mixed reality solution that can easily bridge the gap between simulated 3D and real 3D and also provide seamless access to all the software involved could bring in a lot of value add in terms of efficiency.

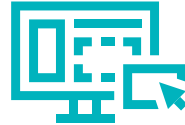
For fuel injector, spray design is vital. This could be executed in collaboration with the auto manufacturer or can be independently carried out by OEM.



The spray design has to consider various factors of engine design and the desired efficiency factors.



The design process normally happens without a real time 3D interface which requires an expert to intuitively provide the input parameters of the system handling nozzle design calculations



The spray design visualization happens only after an export to CAD post the calculation is arrived at

Using Mixed Reality application we introduce the capability for the system to provide flexibility to enable 3D plume designs live.

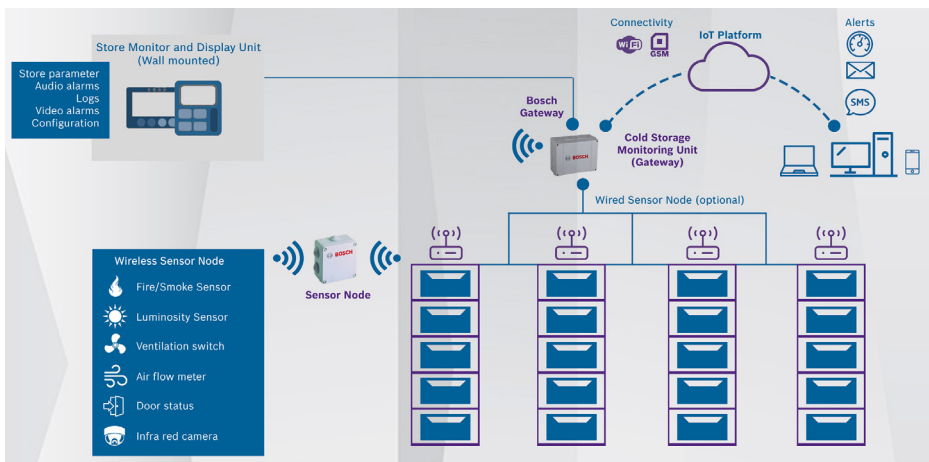
### Features

- ▶ Facilitate 3D collaborative design review between engineers and designers with virtual prototypes imported from CAD
- ▶ Live interaction with models/artefacts
- ▶ Live comments/updates that are synced across participants
- ▶ Reduce Design iterations
- ▶ 3D printing prototypes
- ▶ Design remediation process and task updates can be fed in directly

With the introduction of mixed reality capabilities to the process, we are able to leverage a more natural and intuitive experience by presenting the model in 3D in context with real world.



**Bosch Cold Storage** monitoring system is a unique solution which provides end to end system to monitor and eventually provide intelligence to take necessary action for safe, efficient and reliable cold storage operation. Its purpose to improve shelf-life and salability of agriculture produce. Provide accurate, faster, customized, almost real time status . Reports and analytics to build decision support system.



**Benefits**

- Energy savings
- Post-harvest loss reduction
- Multi-commodity storage
- Reporting transparency
- Easy management of multiple cold storage
- Peace of mind

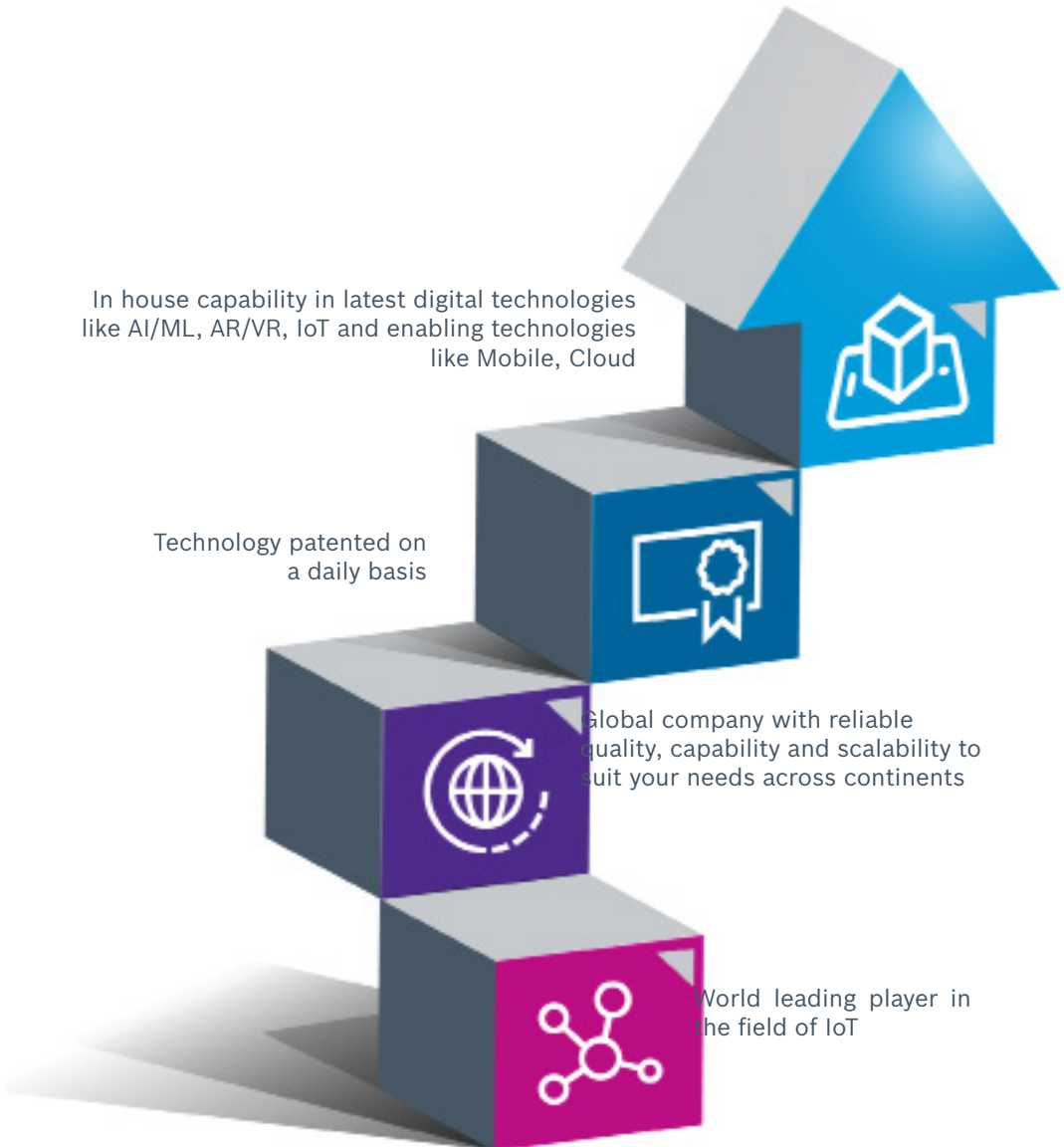
## Bosch Advantage

In house capability in latest digital technologies like AI/ML, AR/VR, IoT and enabling technologies like Mobile, Cloud

Technology patented on a daily basis

Global company with reliable quality, capability and scalability to suit your needs across continents


World leading player in the field of IoT





**Robert Bosch Engineering and Business  
Solutions Private Limited**

123, Industrial Layout  
Hosur Road, Koramangala  
Bangalore 560 095

 [Bosch.Connect@in.bosch.com](mailto:Bosch.Connect@in.bosch.com)  
 +91 80 6657 5757

