

# Bosch Trac360Retail

Store asset  
monitoring solution



# Agenda

1. Optimizing a supply chain starts with visibility
2. Lack of visibility magnifies issues
3. Digital Condition Monitoring & Energy Management
4. 360 degree view of energy consumption patterns
5. Harnessing Azures services to enable granular tracking

# Bosch Trac360 Platform



Bosch Trac360 is a purpose built IoT platform to enable customers to track and smartly manage products, assets or shipment in real-time, using integrated technologies. The Bosch Trac360 platform offers cross domain, comprehensive IoT applications specifically designed to meet today's critical need of visibility & traceability, reduced risks and optimized costs.





# Store optimization starts with visibility

**>20%**

Decrease in total working hours for retailers using existing technologies to systematically optimize routine processes. <sup>1</sup>

**72%**

Retailers plan to reinvent their supply chain with real-time visibility enabled by automation, sensors and analytics. <sup>2</sup>

**\$3B**

Opportunity to save costs each year in commercial buildings according to US department of Energy's Pacific Northwest Lab. <sup>3</sup>

# Lack of visibility magnifies issues

## Lack of insight in asset utilization

Stores operating with traditional metered systems relying on AMC for asset management often face issues with unplanned downtime, high costs in maintenance and are unable to leverage untapped saving opportunities.

## Error-prone manual monitoring

Relying on manual entry, in terms of recording temperature and energies or manually inspecting products increases the probability of errors, which can cascade through the supply chain, and will lead to asset failures and wasted products.

## High costs in product wastage

Due to lack of digitization, it can be challenging to monitor quality of products, their state, treatment during shipment, and in transit conditions.



**Bosch Trac360Retail** enables retailers to track usage trends and smartly monitor condition and energy to ensure optimum asset utilization and improved performance.



Provides real time condition and energy monitoring of assets and products



Rule based anomaly detection and preventive analytics



Usage based maintenance and optimization insights

# The connected retail store

## Non-intrusive load monitoring

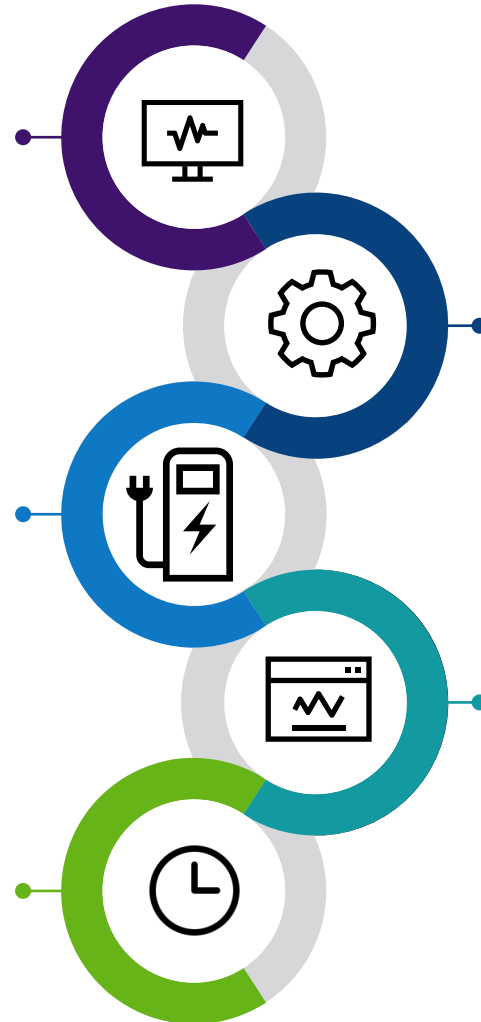
Bosch energy sensor per supply at electrical service panel giving multiple device level energy consumption

## Automation of monitoring products

Automated Temperature and condition Monitoring  
Energy management  
Increasing productivity of personnel  
Digital retrofitting of assets for smart monitoring

## Alerts and notifications

Real time warnings based on business rules  
Reports during breaches



## Digitization of maintenance

Centralized ticketing system  
Eliminate excel based logging of maintenance tickets  
Digitization to improve transparency

## Asset health & utilization

Application Portal designed and customized  
Peer group comparison of performance and reporting  
Asset Utilization levels for every asset category

# A Smart solution which goes beyond monitoring and your assets will love it!

Thanks for taking care  
of me at the right time.  
I'm 20% more efficient

Alert! I'm operating with  
Low power factor.

Should I be ON  
during non  
productive hours?

I'm 5% more stressed  
than usual!

Insights that goes beyond  
just **consumption**







# Provides Real time condition and energy monitoring

Automated 24/7 monitoring of store equipment reduces manual inspection. Intuitive dashboard to monitor all of your equipment.



Automated monitoring takes over time-consuming manual tasks and frees up valuable time of store personnel, resulting in a higher level of service

Peaks in energy consumption can be monitored to save costs. The peak load can be calculated by means of the constant monitoring of the devices and of current overall power consumption.

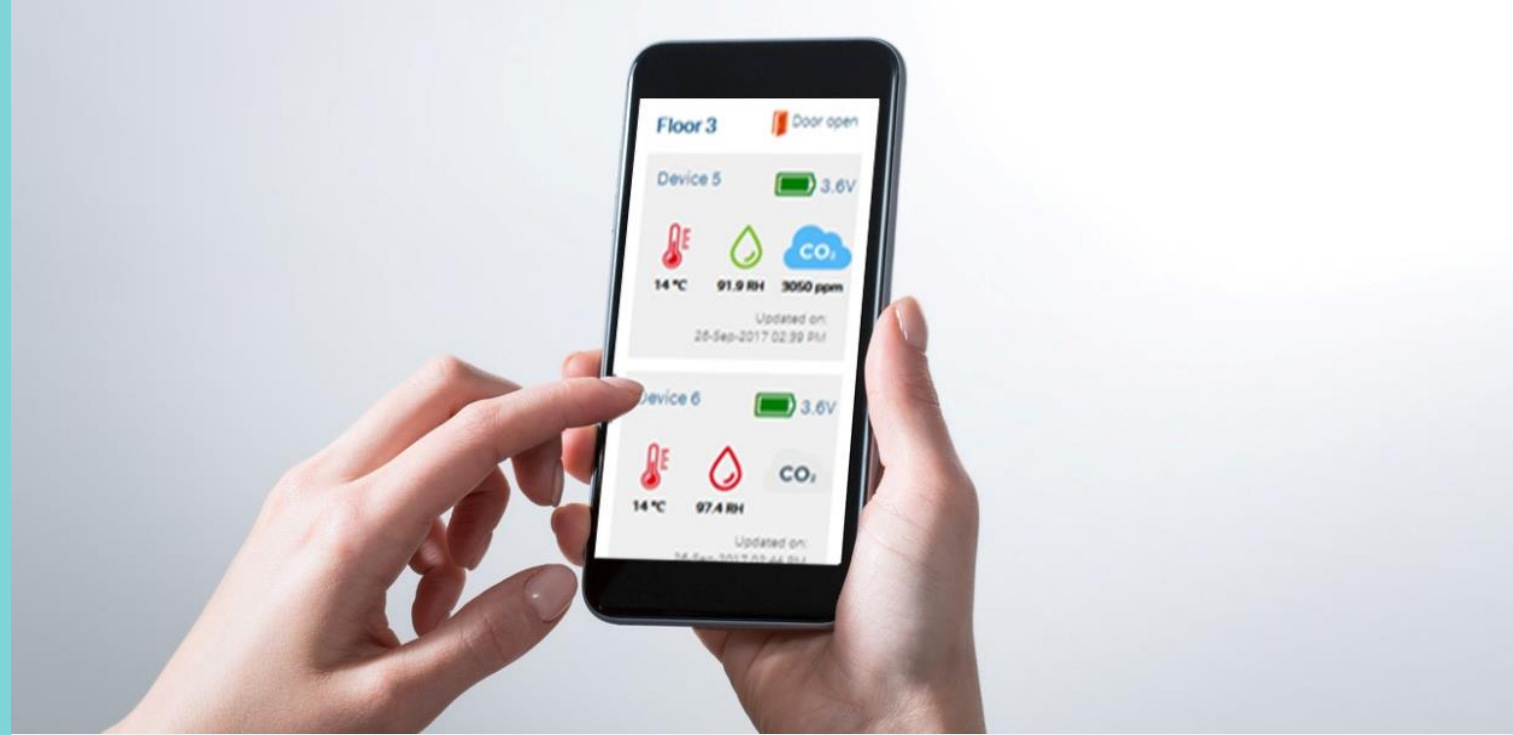
Whenever a pre-defined condition (temperature, humidity, door open/close) is not met, a real-time notification allows store personnel to react quickly to avoid product degradation.

From building technology such as heating, ventilation, and air conditioning (HVAC), to lighting, automatic monitoring of energy consumption at store and asset level is a big lever on cost savings



# Rule based anomaly detection and preventive analytics

This non-intrusive system is able to monitor asset utilization trigger notifications in case of malfunctions. It also identifies anomalies and patterns to provide actionable insights



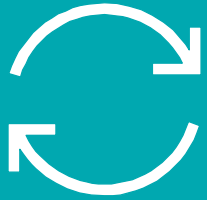
In the case of malfunction, technicians and facility managers can be automatically alerted to resolve the problem, having received the information from the device in advance.

Predictive notification of malfunctions (or notification before a pre-defined configuration is reached) ensures that staff can intervene proactively

The data can be viewed collectively across specialist divisions and departments to identify optimization opportunities.

Analyzes changes in the current and voltage used by a setup and measuring the individual energy consumption and load of the assets.





# Usage based maintenance and optimization insights

Provides an integrated, data from multiple parameters in real-time to lower maintenance costs and re-assess annual maintenance contracts



Optimization of energy across assets and store levels depending on consumption and energy needs

Automated digital maintenance to ensure preventive maintenance and ensuring faults are detected, diagnosed and attended to in order to reduced unplanned downtime

If there is an alert that some parts of the store have not been switched to power saving mode, corrective action can be taken.

Shift from time based to need based maintenance to ensure optimum asset utilization.



# Harnessing Azure services

Enabling granular tracking of goods, carriers, and processes across the supply chain



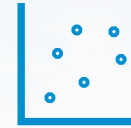
Integration to  
speed data into  
cloud



Storage to  
scale without  
latency



Visualizations  
to surface  
insights



Analytics to  
predict and  
plan



Security to  
protect data

# 360 degree view of energy consumption patterns with 10% energy savings potential

---

Customers: Retailers



**Bosch Trac360Retail** uses non-intrusive, smart sensors along with the power of the cloud to give you real time insights for energy management.

Retail industry players can also save big by preventing losses due to spoilage and provide consistent quality to customers. The solution guarantees reduction in temperature losses and reduces maintenance costs.

## **10% Reduction in temperature loss**

Automated temperature logging, increased accuracy and personnel productivity

## **15% reduction in compressor failures**

Transparency in cost and energy savings with real time alerts and preventive maintenance

## **7% Improvement in goods' shelf life**

Retail industry players can also save big by preventing losses due to spoilage and provide consistent quality to customers.

## **Reduction in maintenance costs**

high potential to reduce maintenance cost and revise annual maintenance contracts resulting in improved asset performance





# Ready to increase the product and shipment traceability of your supply chain?

- We will connect you with the Bosch Trac360 sales team:  
[bhuvan.Shetty@de.bosch.com](mailto:bhuvan.Shetty@de.bosch.com)
- Learn more:  
[bosch-india-software.com](https://bosch-india-software.com)



