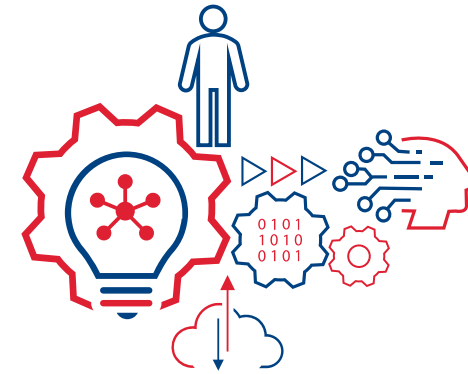


Intelligent Operations with IoT

06.11.2019

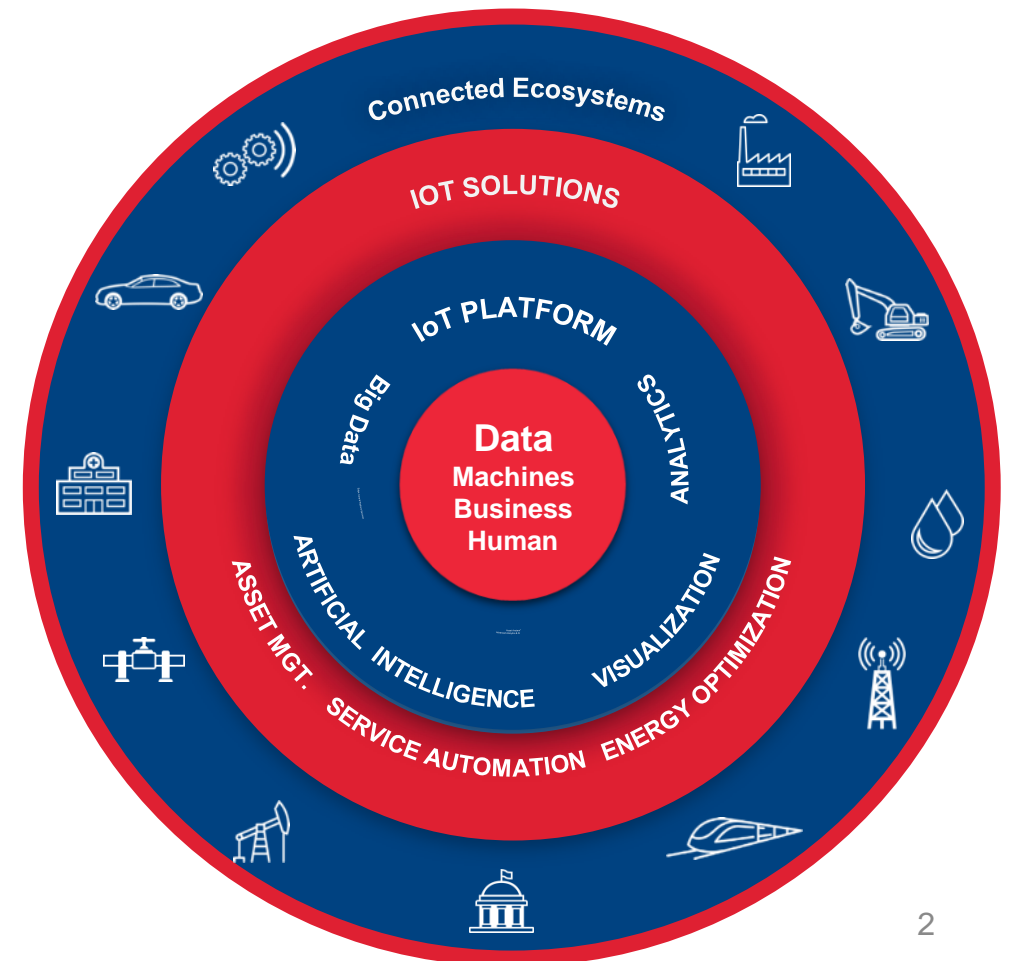


PACTERA EDGE IoT FRAMEWORK



Pactera's approach is to provide a complete solution to accelerate **customer's IoT journey**.

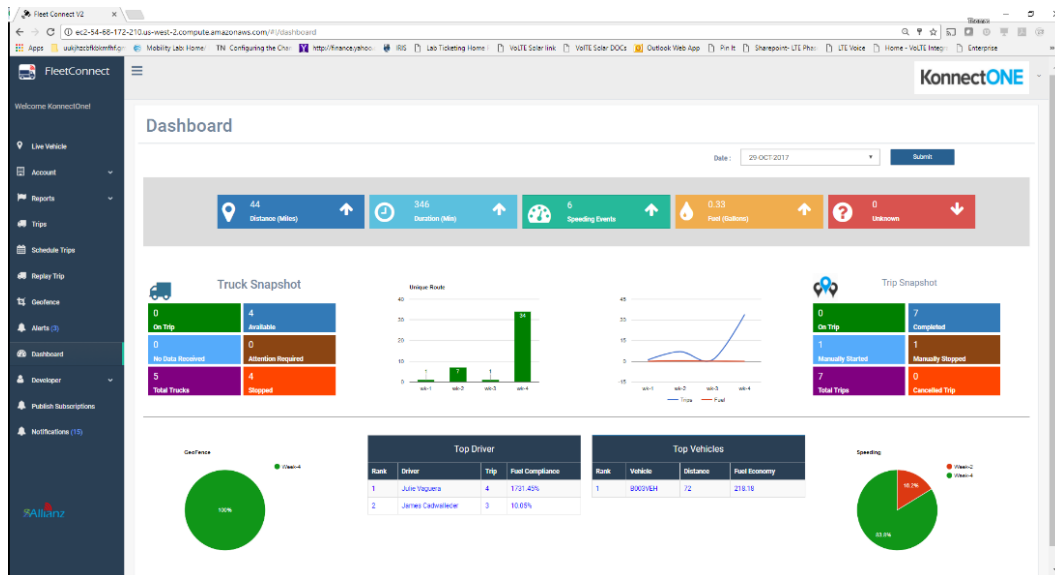
- The solution starts with connecting to assets, that generate **data from machines, business and human, they are blended in the IoT software platform** (Integration, Big Data, AI & Visualization)
- Based on real world deployments, Pactera develops **IoT Solutions** as building blocks with blueprints, software, solution templates and methodologies.
- The final step is to connect the **customer's IoT Solutions to Connected Ecosystem**



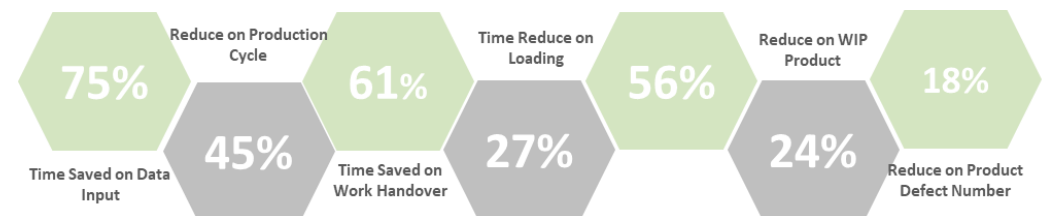
PACTERA EDGE IoT PLATFORMS AND SOLUTIONS



Fleet connect is one of our flagship IoT product that enables realtime tracking of vehicles with an uber like interface. It provides real time alerts, intelligent trip scheduling, automatic root detection, fuel consumption etc. using the inbuilt analytics engine.



OctoloT is an industrial IoT platform which enables quick connection of industrial devices (PLC, machine tools, etc.) and enterprise applications (MES, etc.) for a connected enterprise to generate insights using data visualization tools. Using models, Google TensorFlow the platform can be used to enable smart manufacturing

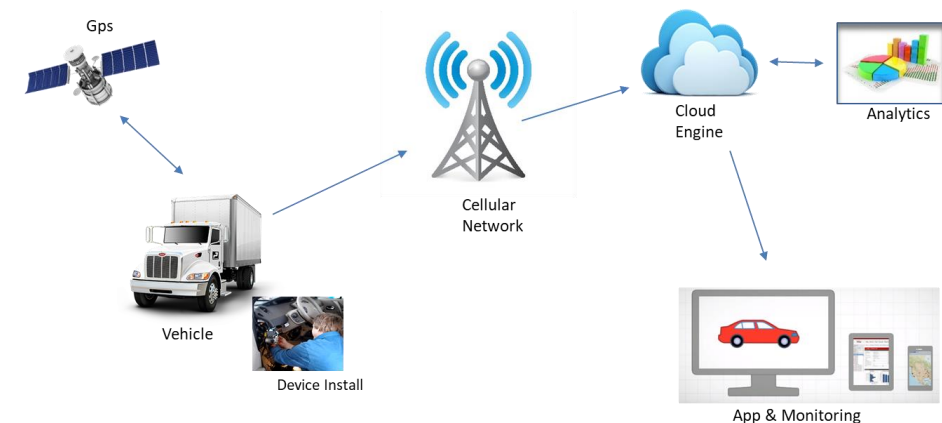
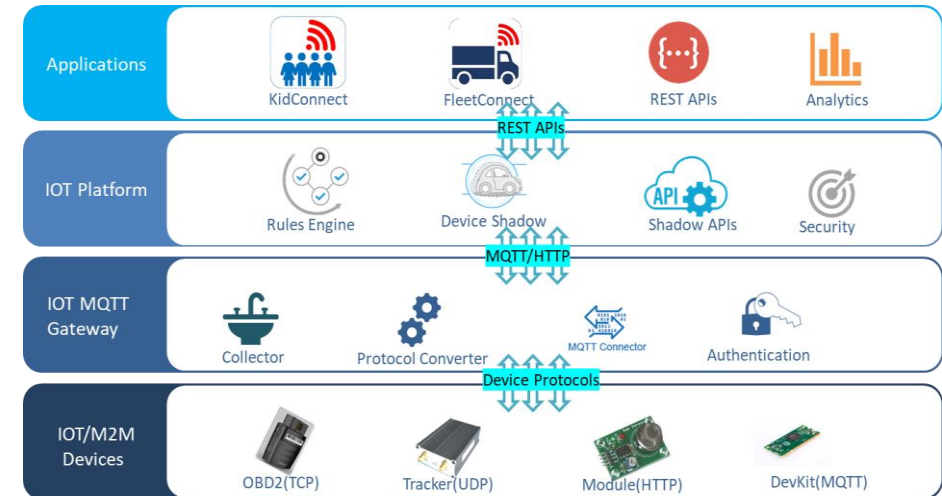


FLEET CONNECT



- Built 100% on Public Cloud-IOT Platform
- Multitenant & Scalable
- Leveraging Cloud Security and Authentication
- Easy expansion to different IOT segments like energy, home automation, healthcare, and wearables
- Flexible APIs
- Simplified Business Rules
- Connected Vehicle Apps
- Global Platform- can be deployed anywhere
- Analytics and Data Intelligence
- Fully customizable
- Data is collected from vehicle, device and sensors in short intervals keeping the overhead minimum.
- Data is processed after device authentication.
- Data is processed and handled securely.
- Our IoT platform rules engine is flexible and applies business rules for processing the data.
- Devices , vehicles and sensor data handled in real-time.
- The data is compared against the benchmark rules and immediate action is performed.
- Real time notification and alerts are sent to system and users.
- Data is tracked, stored and used for analytics and machine learnings.
- Dashboard and reports available for operational efficiency and ROI

Face-lifting WIP



Sanofi Intelligent Operation Solution - HealthCare

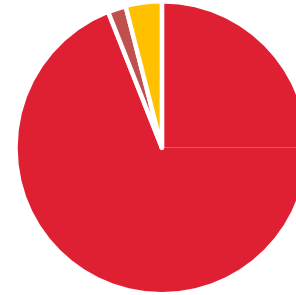
From Factory, to transportation, to CDC Warehouse to the final consumption point, the temperature, humidity and location at every point are monitored.

- The project implemented in 2 stages

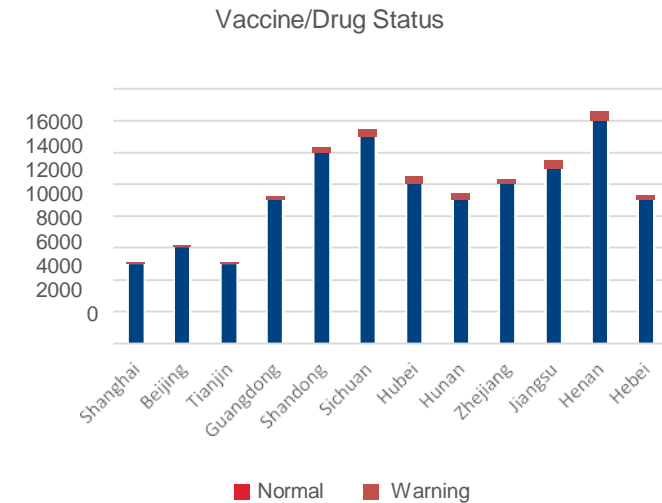
Stage 1, warehouse (without hospital) and truck were monitored;

Stage 2, even every box and hospital warehouse/refrigerator can be monitored.

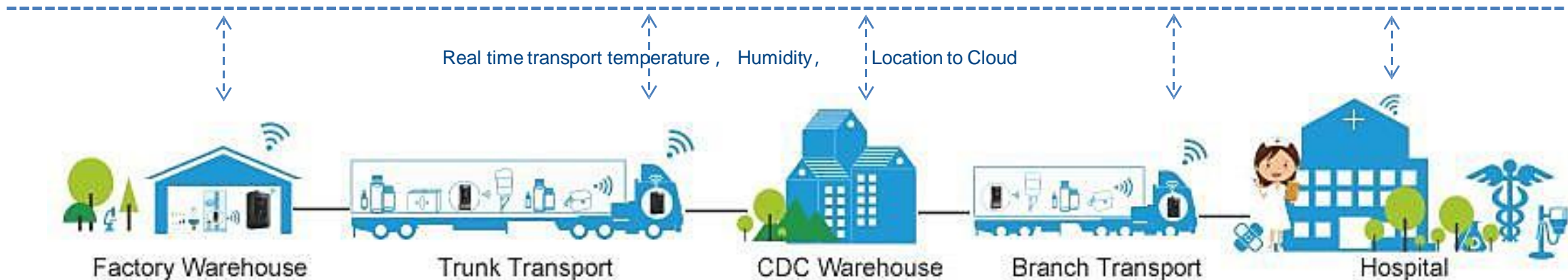
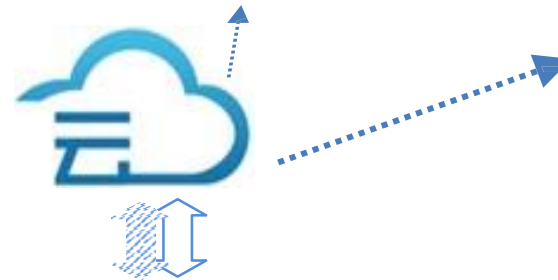
- All data can be traced back & Analysis of all data by vaccine type, location, date, etc.



■ Normal ■ Warning ■ Pre-Warning



■ Normal ■ Warning



Sanofi Intelligent Operation Solution – Sample Screens



Dashboard



GPS



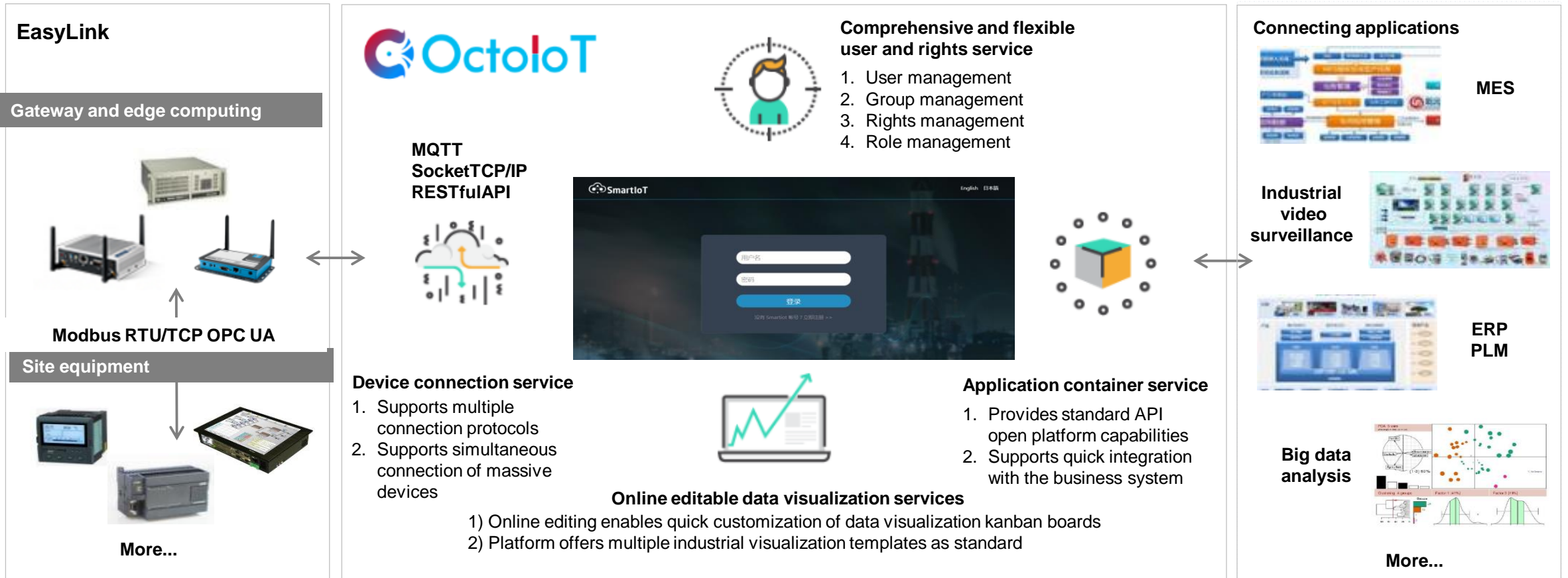
Cold Chain Temperature and Humidity Monitoring Curve



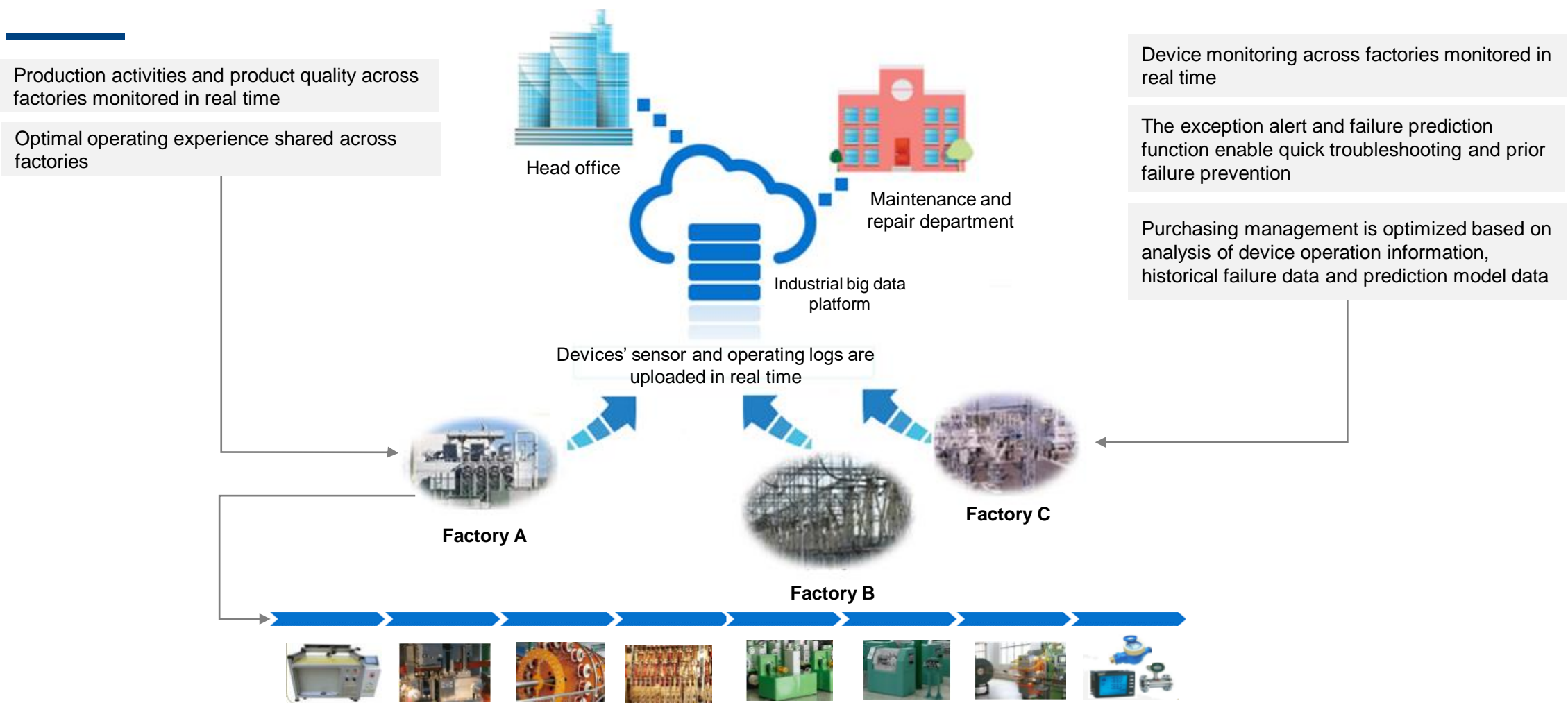
Mobile App

OctoloT IN BRIEF

OctoloT is an industrial IoT product which enables quick connection of industrial devices (PLC, machine tools, etc.) and enterprise applications (MES, etc.) and, through standard and extended functions provided by the platform, delivers convenient digital applications for industrial enterprises, including device management (real-time monitoring, device health management, etc.) and energy optimization (power quality monitoring and optimization), among others.



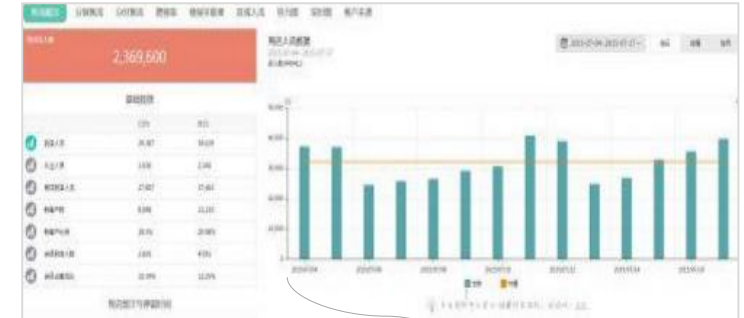
APPLICATION SCENARIO: SMART FACTORY



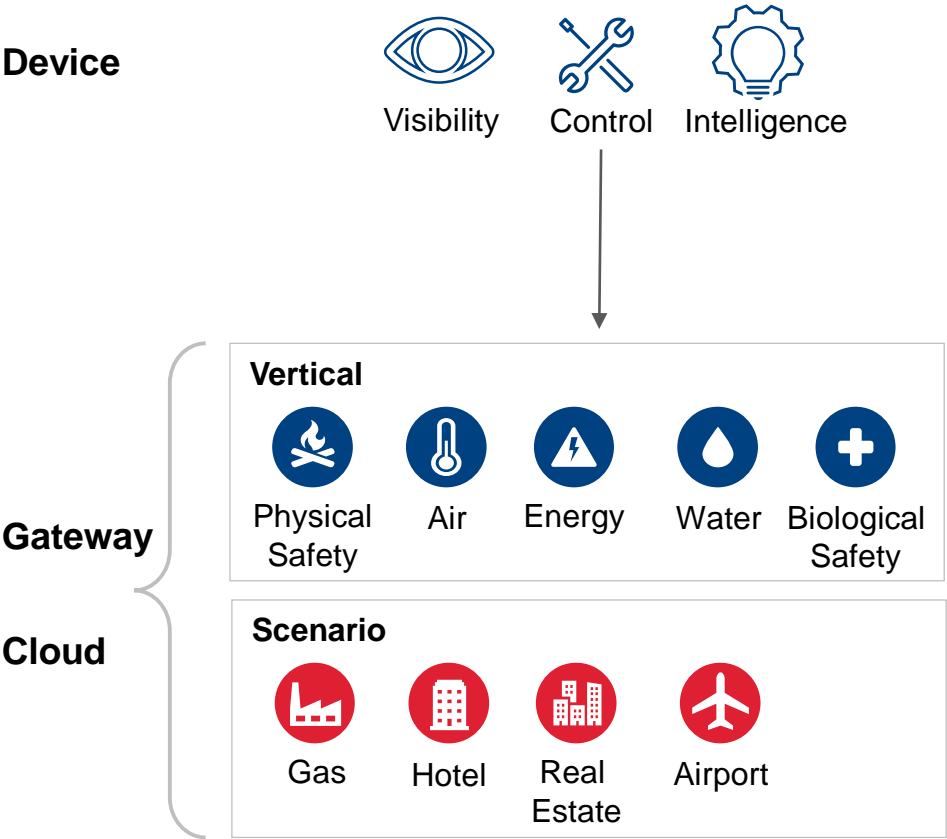
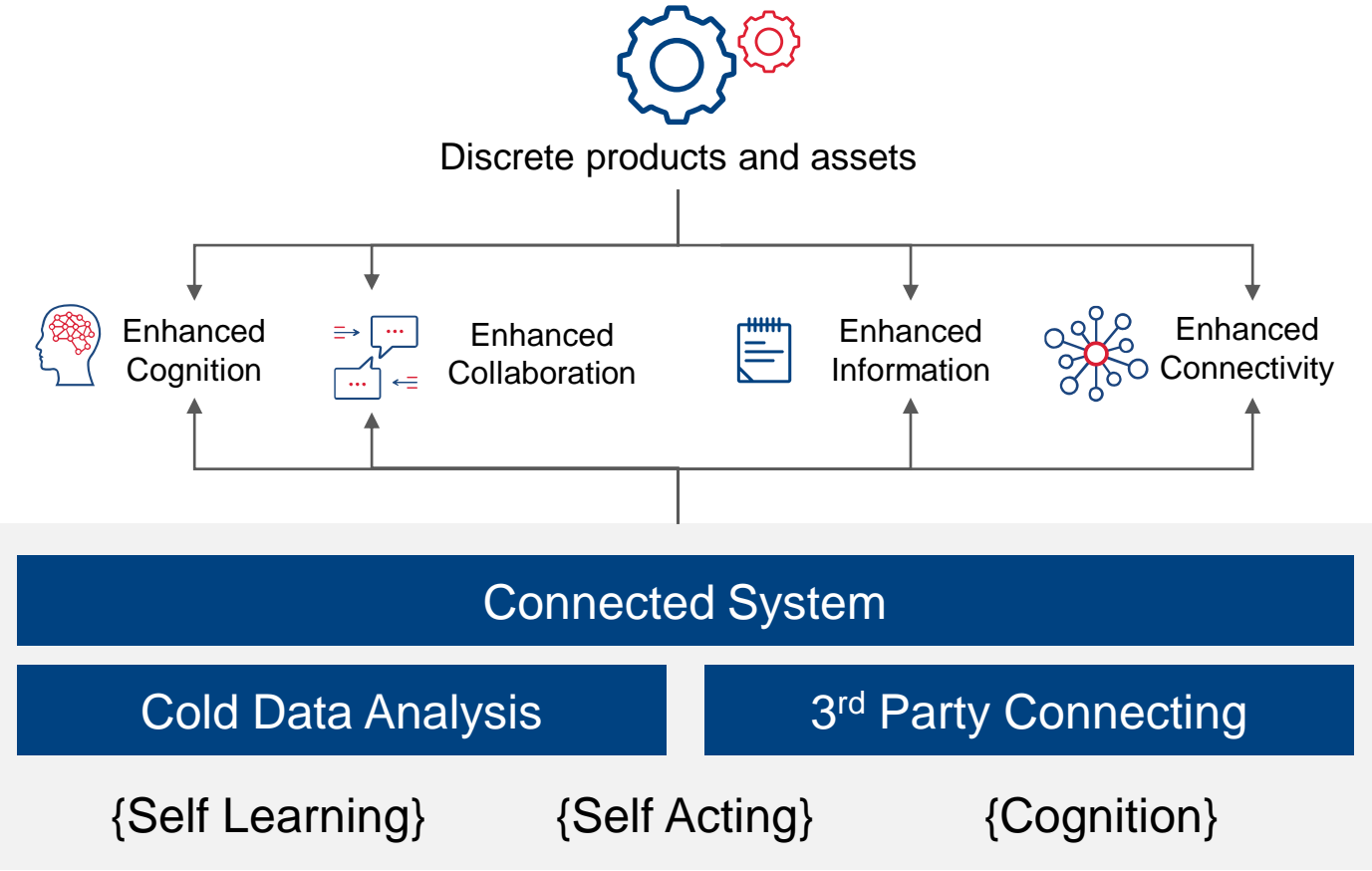
APPLICATION SCENARIO – SMART BUILDING

OctoloT can enable centralized management of buildings located in different places and the devices in the buildings, real-time monitoring of the devices, visual display of power consumption and other data, and remote control and management.

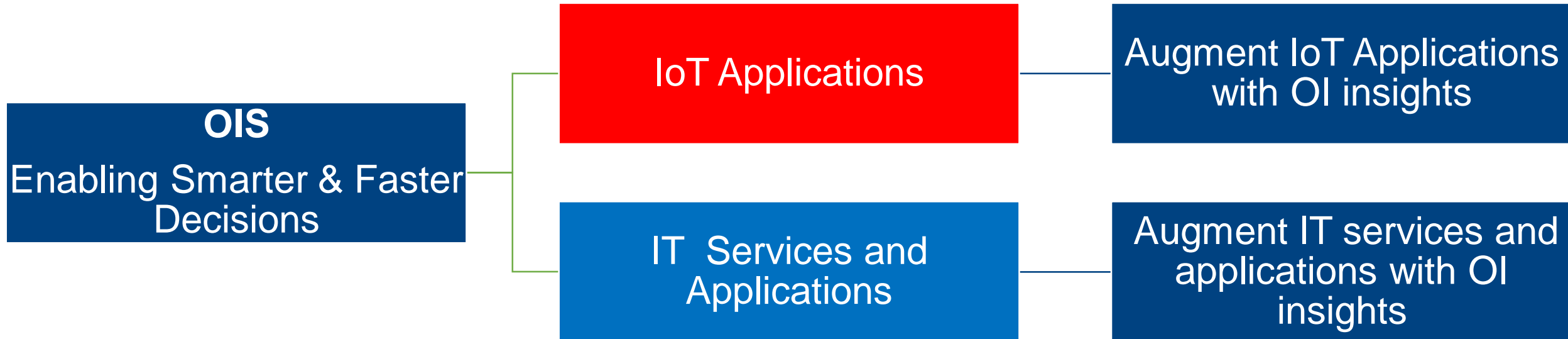
[Exception alarm] Monitor devices in real time and issue real-time alerts on exceptions
[Trend prediction] Store information uploaded from devices and make predictions based on the information processed with AI



APPLICATION SCENARIO – SMART HOSPITALITY



Operational Intelligent Solutions (OIS)



Operational Intelligent Solution Framework



Business Ecosystem



Intelligent manufacturing

By bridging corp net and AI, **real-time collaboration and data sharing** can be achieved for companies on the whole chain.

Those forecast & trend based decision making based on big data and AI forecast can then land to real manufacturing management

Corporation Operation



Digital Enterprise

By connecting data from ERP, BI, IoT, those workflow and resources are well managed not only from equipment perspective. Which including human resources, assets, and production execution. By managing the data, it can help real-time and globally understand the operations of each plant and company and make decisions efficiently and achieve lean management.

Production Management



Smart Factory

With IoT technology, data from equipment, sensors, controllers and others from all workshops and factories are collected continually. It can promote the collaboration among equipment, process and human-beings.

It also make production optimization during manufacturing possible. From where, decision can be made with assistant from plan and scheduling, equipment utilization, power consuming and product quality.

Manufacturing Execution



Intelligent Workshop

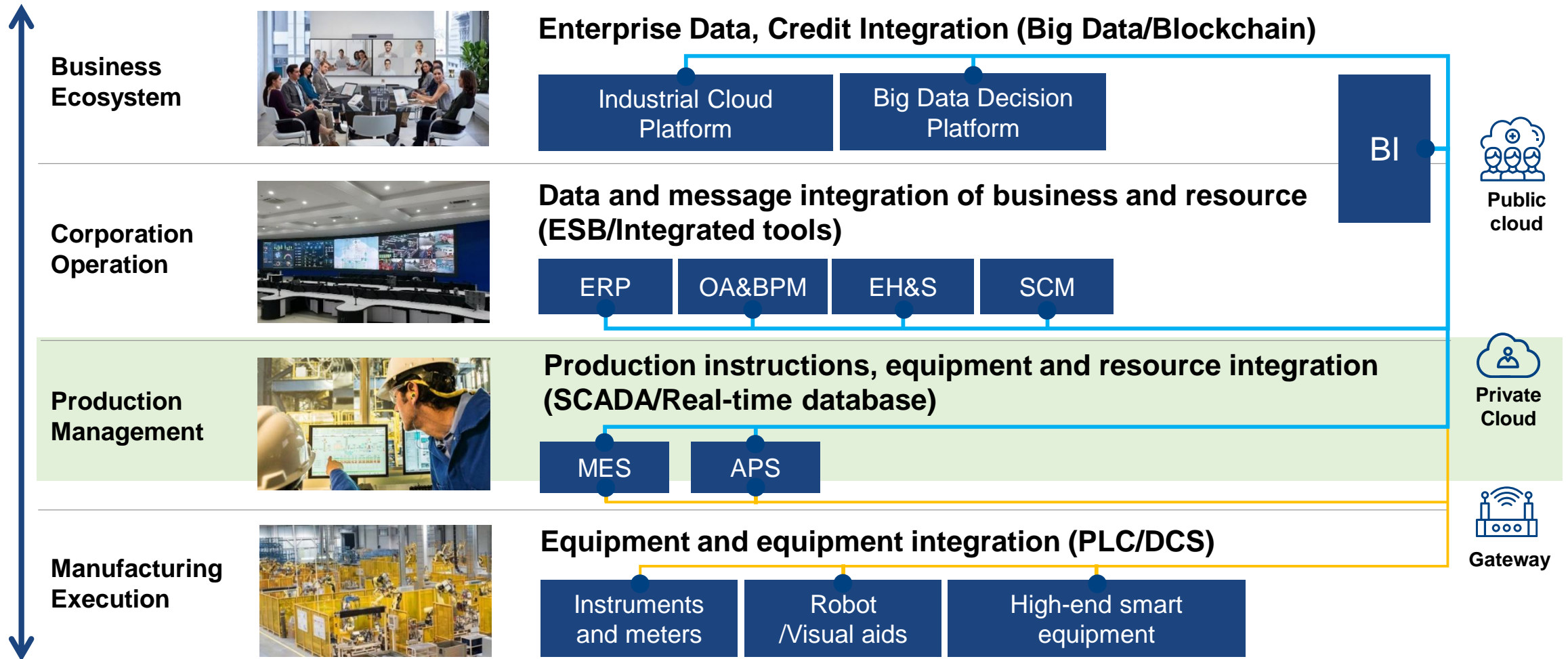
By deploying AGV, production line robots, intelligent equipment (including retrofits of old equipments), machine vision intelligent auxiliary devices, and on-line inspection instruments, it can reduce manual intervention and improve production efficiency and quality in production and quality control processes.

OVERALL STRUCTURE



ARCHITECTURE

- Step1:** ERP+Perceptual integrated platform+MES partial function
- Step2:** MES+SCM+OA&BPM+BI+Production line upgrade
- Step3:** EHS+APS+BI+Production line upgrade
- Step4:** Big Data Decision Platform+BI+ oduction line upgrade



pactera  EDGE