ORAN and 5G Private Networks

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5G Accelerates Digital Transformation

NEXT GENERATION OF WIRELESS NETWORKS

HIGHER SPEEDS, GREATER CAPACITY AND LOWER LATENCY

BILLIONS OF CONNECTED DEVICES AND THINGS

2G
Cellular Comms

3G
Data and the app revolution

4G
Faster data & More Users

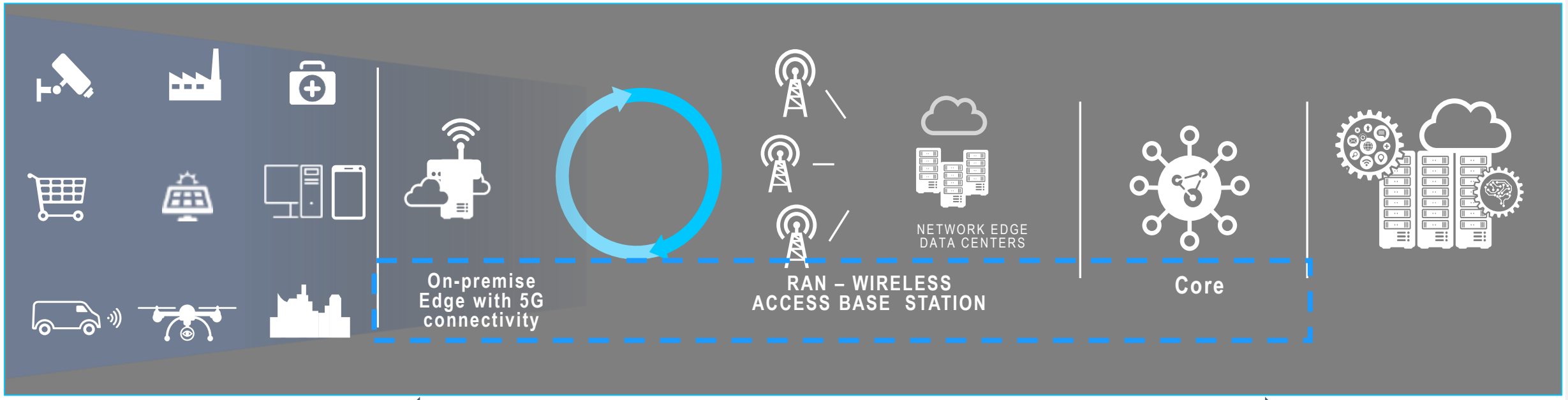
Investment Trends

- ORAN / vRAN
- Multi-Access
- Private Networks
- Security and Trust
- Cloud Native
- MEC 2.0
- Network Slicing
- Satellite

Agility, Scalability and Intelligence Throughout the Network

5G Wireless Network - Today

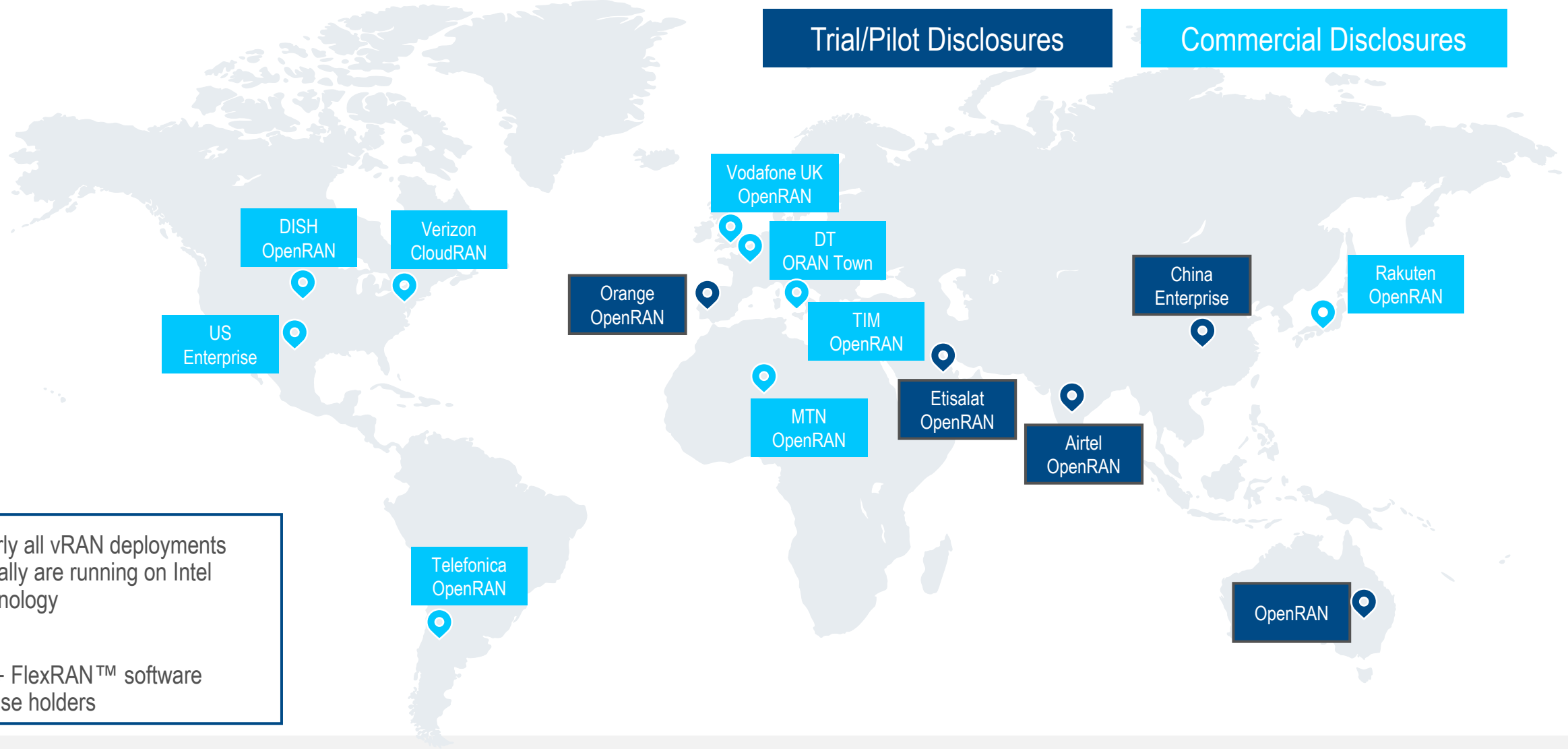
RAN : Radio Access Network,
VRAN : Virtualized Radio Access Network



Virtualization/Cloudification of 5G Network (RAN & Core)

DEVICES/THINGS	ON-PREMISE EDGE	NETWORK EDGE	CORE NETWORK	CLOUD DATA CENTER

Global vRAN/ORAN Momentum



Nearly all vRAN deployments globally are running on Intel technology

140+ FlexRAN™ software license holders

Virtualizing the Radio Access Network

ON INTEL

TRIAL & COMMERCIAL PLAN

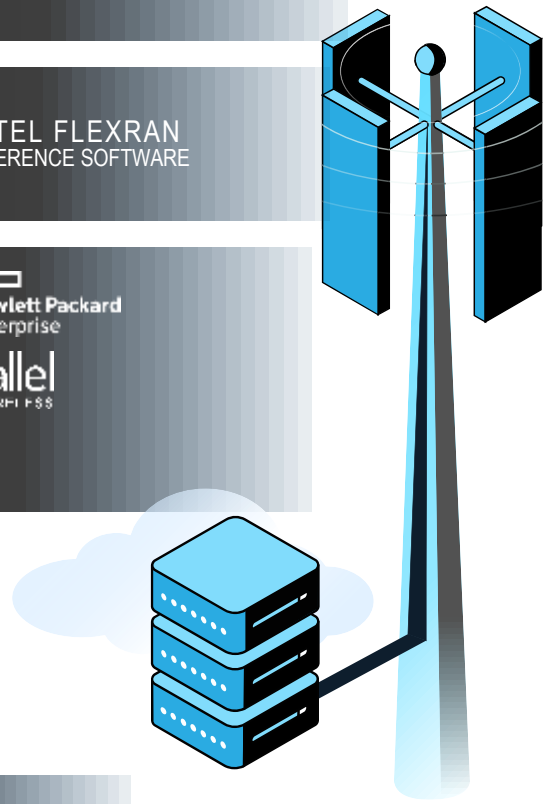
airtel · dish · Rakuten · Telefónica · 中国移动 China Mobile · 中国电信 CHINA TELECOM

INDUSTRY MOMENTUM

3GPP · 5GAA Automotive Association · ETSI World Class Standards · IEEE · O-RAN · TELECOM INFRA PROJECT · INTEL FLEXRAN REFERENCE SOFTWARE

ECOSYSTEM READINESS

ALTIOSTAR · BaiCells · Comba · DELL EMC · H3C · Hewlett Packard Enterprise · JMA WIRELESS · Lenovo · MAVENIR · NEC · NOKIA · Parallel Wireless · QCT · Radisys · SAMSUNG · SUPERMICRO



Real Deployments, Real Momentum, Built-in AI

What Is A Private 5G Network?

A wireless network set up specifically for dedicated use to drive better coverage & control

Comparing public and private networks

Private

- Spectrum owned by enterprise or CoSP
- Network management flexibility
- Targeted coverage, for example, campuses, arenas, retail
- Versatile deployment options for vertical use cases

Hybrid

Uses public and private aspects and network slicing to reduce complexity and cost while increasing capabilities

Public

- Communication service provider-owned spectrum
- Provider manages network and scalable services
- Broad coverage across a wide area
- Licensed spectrum, including mmWave

Private Network Deployments

INDUSTRIAL

- Autonomous Mobile Robots
- Textile Defect Detection
- Virtual Power Protection Relay
- PCB Defect Detection

CITIES & TRANSPORTATION

- Intelligent Traffic Management
- Smart Campus
- Marine Port Truck Access-Gate Automation
- Smart Spaces

EDUCATION

- Remote Education
- Remote Testing
- Recording / re-runs

RETAIL

- Inventory Management
- Personalized Shopping
- Frictionless Stores
- Customer Traffic Monitoring


Ports Indoor /Outdoor Connectivity


Mfg. w/ real-time data collection and analysis

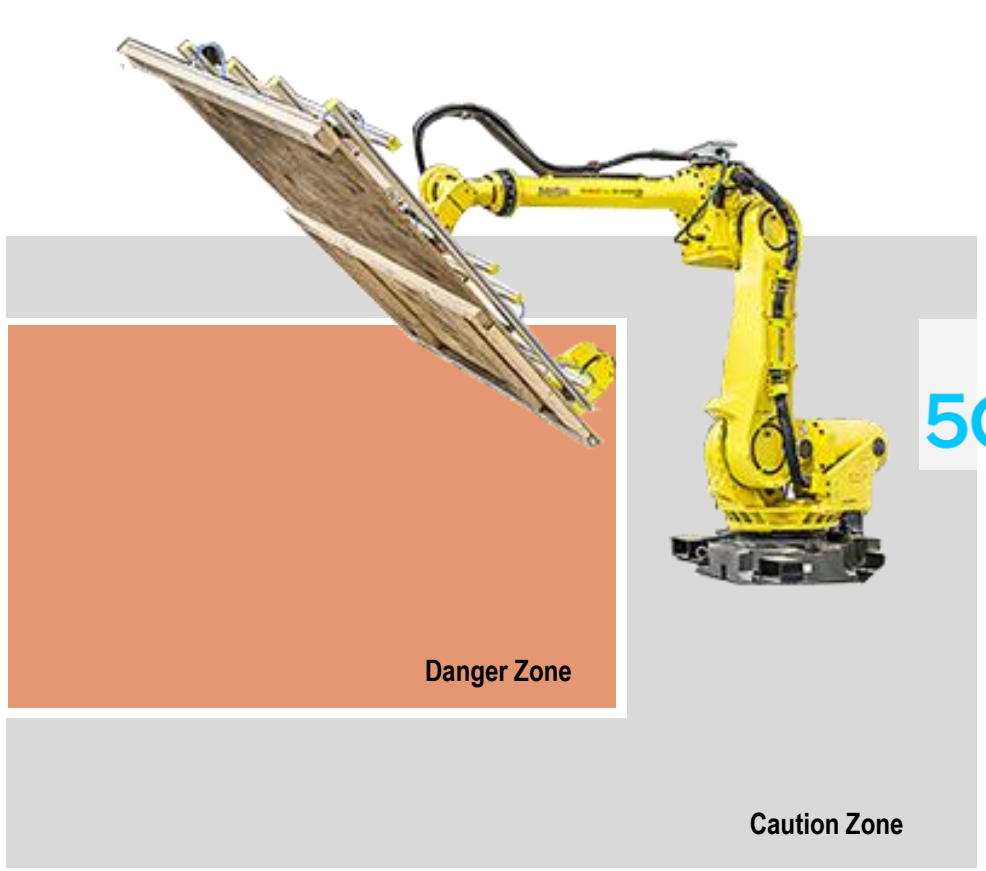

Integrated Wired/ Wireless Motion Control


Protecting / transmitting video surveillance data


Remote Facility monitoring


Manufacturing Facility Reconfiguration

Industry 4.0 Realized : Factory of the Future



5G

Radio

5G

Factory Manager Server

Virtual PLC

Hyper Converged Workloads CT/IT/OT

Secure –Zero Trust

Customer CX/UX

Data Parsing & Management

CODESYS

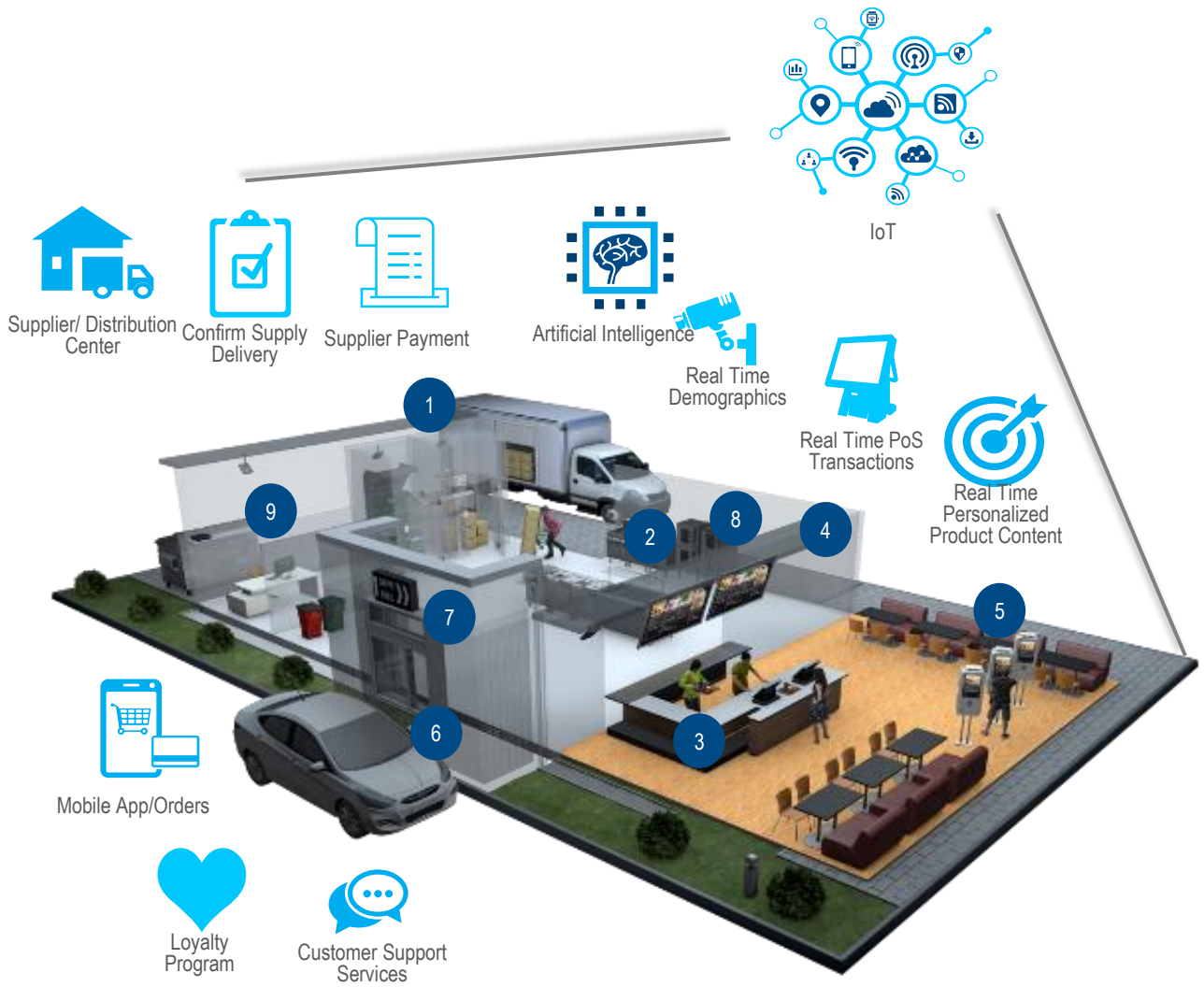
TTTech industrial

Managed Machine Zone

Human / Machine Cooperation

Driving the promise of Industrial 4.0 in improving the cost, flexibility and performance on the factory floor

Edge Quick Service Retail (QSR) Infographic



QSR Edge Automation Use Cases

1. Supply/Inventory Management
2. Kitchen Ops Optimization
3. Associate Service Activation
4. Personalized Product Content
5. Interactive Kiosks
6. Mobile Checkout
7. Predictive Traffic Analysis (Queue, Weather, Events, Time)
8. Loss Prevention
9. Workforce Management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