

Avnet IoTConnect and Smart Cell Tower Monitoring Solution

Optimized monitoring and management for cell towers

AVNET



Agenda

1. IoT market opportunity and challenges
2. Avnet IoTConnect
3. Avnet Smart Cell Tower Monitoring Solution
4. Get started today!

IoT deployments face unique challenges

Connecting devices,
data, and systems

Seamlessly connecting and integrating disparate legacy devices, data and systems can be a daunting task, requiring expertise that most businesses don't have.

Identifying the right
resources

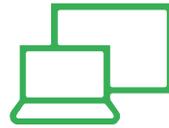
IoT complex and requires different hardware and software resources and more integration than most traditional IT projects.

Managing a complex
ecosystem of providers

It can take up to 10 partners to get an IoT system deployed, which can cause disconnects that slow time to market.

Avnet IoTConnect & Smart Solutions

Everything you need to jump-start the development of your IoT initiative



Secure connectivity & control



Optimized operations



Data-driven insights

How it works

An end-to-end solution that takes the complexity out of IoT



Your business infrastructure

Any devices, data, and systems you want to connect, such as:

- *Devices and equipment*
- *Sensors and gateways*
- *Internal data systems (ERP, CRM, etc.)*
- *External data (social media, weather, traffic, APIs, etc.)*



IoTConnect (PaaS)

A secure platform built on Azure cloud services

- *Multi-protocol connectivity*
- *Easy-to-use toolkit*
- *Hardware support*
- *Artificial intelligence*
- *Predictive analytics*
- *Data visualization*



Smart Solutions (SaaS)

Nine pre-built solutions that address common business challenges



Secure connectivity & control

Easily connect and manage all your devices, data, people, and systems using a secure, cloud-based platform.



Seamlessly and securely connect all your devices with support for multiple connectivity protocols and cross-device communication.

Easily register and pair legacy devices to the platform without coding to get up and running fast.

Manage all devices, data, and applications from one central portal.

Rely on the enterprise-grade security of the Azure platform to encrypt sensitive data, protect devices from viruses and malware and secure network traffic.



Optimized operations

Lower your costs and increase productivity by making existing processes and infrastructure more efficient than ever before.



Minimize downtime and increase productivity using real-time analytics and predictive maintenance to proactively monitor devices and improve processes.

Reduce costs by identifying and addressing issues early. For example, by using IoTConnect, an oil and gas company discovered a gas leak issue that was costing them \$150,000 per day.

Quickly scale your computing power up or down as your business needs change.

Jump-start development of your IoT system with smart, market-ready connectivity solutions for 9 different verticals.



Data-driven insights

Use real-time analytics and artificial intelligence to gain deeper insights, make informed decisions, and drive innovation.



Harness the potential of the vast amounts of data collected by your IoT solution with real-time analytics and artificial intelligence capabilities powered by Microsoft Azure.

Integrate and analyze data from new and existing systems to identify trends, optimize operations, better understand customers, and uncover new revenue sources.

Accelerate decision making and speed time to market by giving stakeholders across the business access to real-time insights via customized, interactive dashboards.

Use live, interactive reports to monitor and optimize device performance and improve processes over time.



Smart Cell Tower Monitoring

Optimized cell tower management keeps communication flowing



A leading telecom company needed a way to effectively monitor and manage cell towers from a single centralized platform. Using a blend of AI and IoT, Avnet's Smart Cell Tower Monitoring solution enables the company to address common service interruptions remotely, and empowers them to make better, faster decisions with local analytics and intelligence.

NEXT-LEVEL INTELLIGENCE

A blend of AI and IoT technologies enables the company to monitor cell tower sites intelligently from a centralized location.

DEEPER INSIGHTS

Local analytics and intelligence enabled better operational decisions and more effectively prioritized equipment repairs and upgrades.

OPTIMIZED MAINTENANCE

Common service interruptions were able to be addressed remotely and ahead of time, thus reducing on-site technician visits and chances of human error.

BETTER SECURITY

Cell tower security was significantly improved thanks to advanced intrusion detection and alarming capabilities

Powered by Microsoft Azure

Built on Azure services, IoTConnect includes the enterprise-grade security, connectivity and powerful analytics needed for a best-in-class IoT solution.



Connectivity



Scalability



**Powerful
analytics**



**Artificial
intelligence**



**Security and
management**



Next steps

- We'll connect you with the sales team for IoTConnect: iot@avnet.com
- Learn more about Avnet [IoTConnect](#)
- Learn more about Avnet [Smart Cell Tower Monitoring Solution](#)

AVNET[®]



Avnet Smart Solutions

Get a head start on your IoT initiative with ready-made solutions built on IoTConnect.



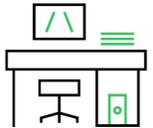
Smart Building



Smart Healthcare



Smart Fleet Management



Smart Office



Smart Connected Worker



Smart Warehouse



Smart Retail



Smart Asset Monitoring



Smart Factory



Smart Diesel Generator Monitoring



Smart Cell Tower Monitoring

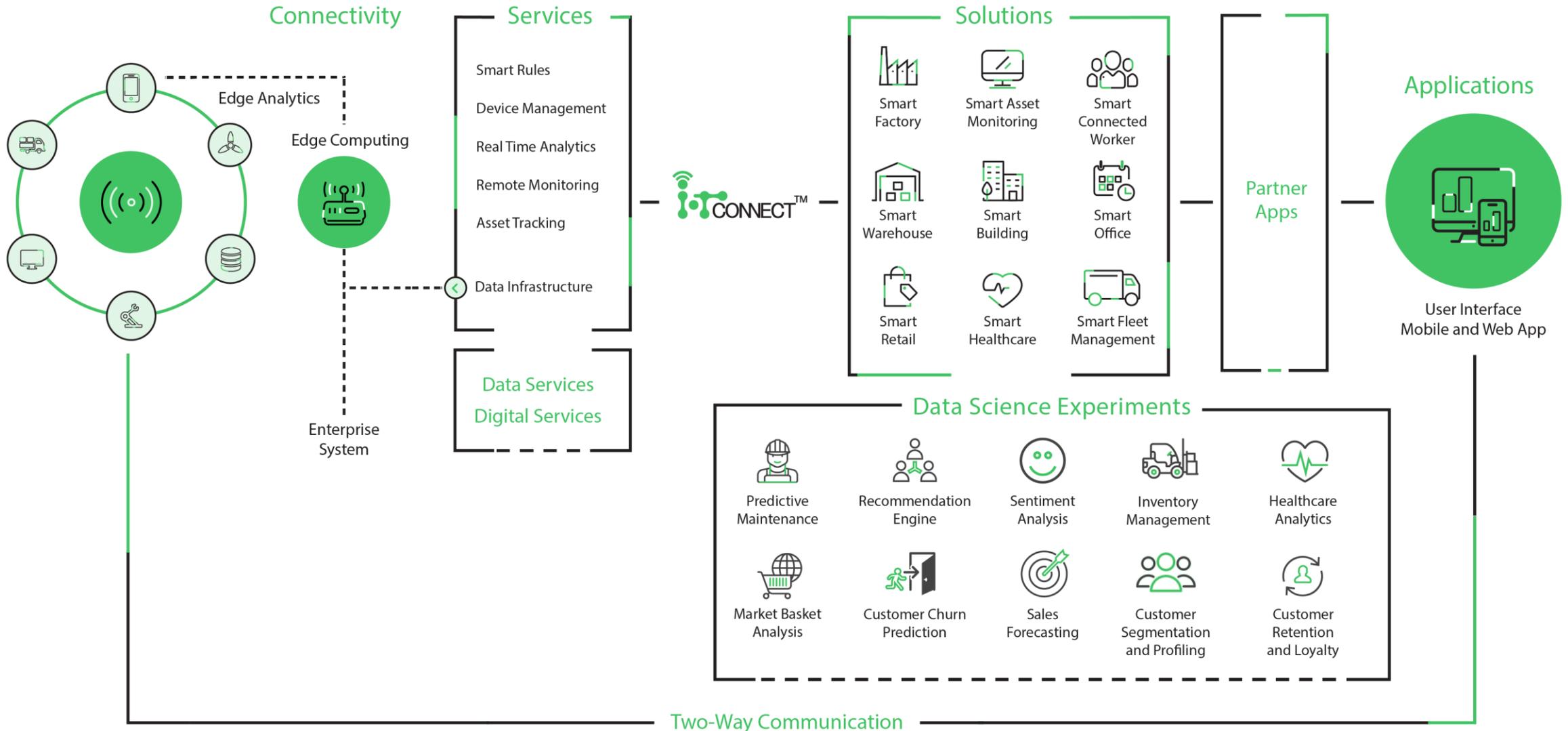


Smart Facility Monitoring



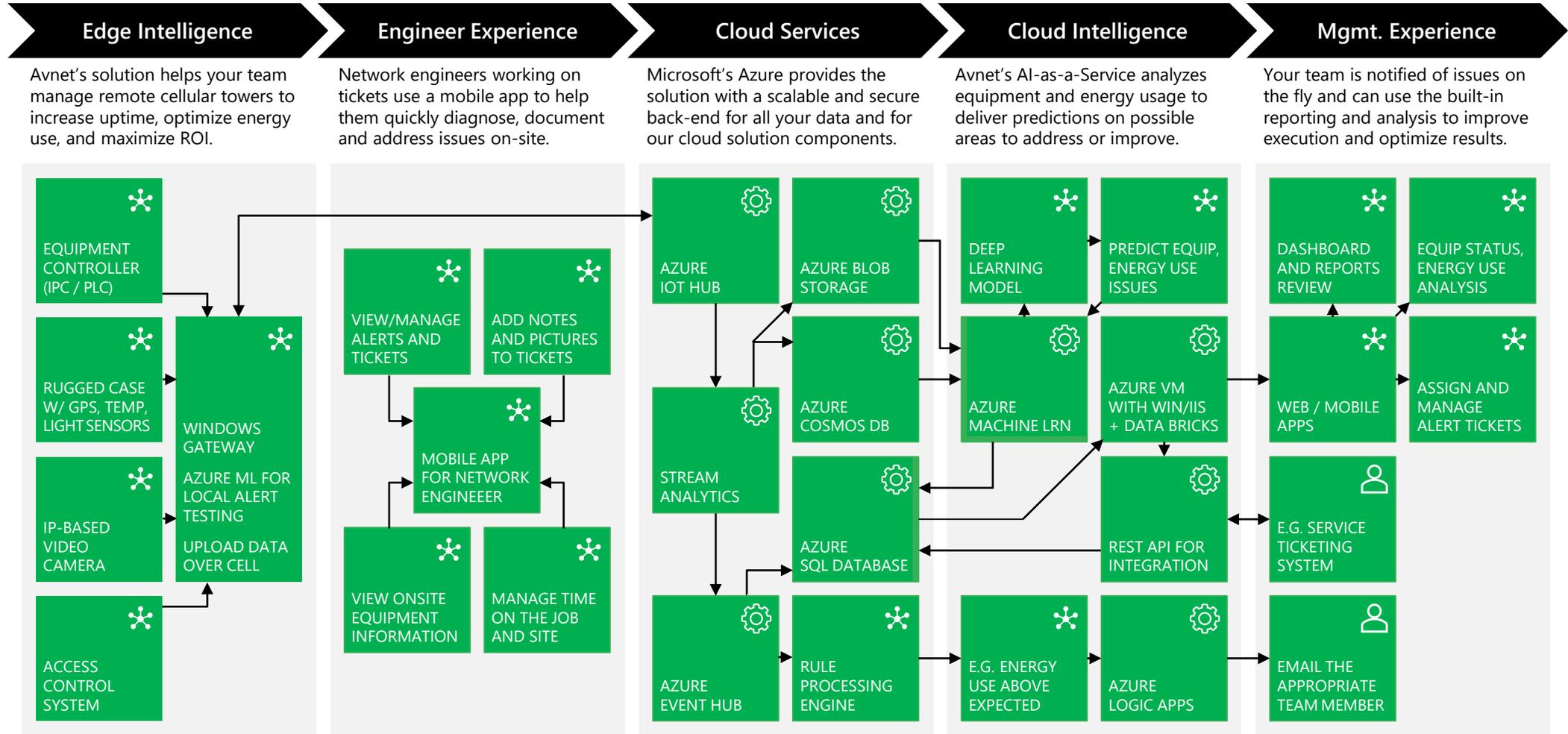
Smart Energy Monitoring

End-To-End IoT Offerings



Remote Mgmt. of Cellular Towers with AI

Avnet Reference Architecture



- CELLULAR TOWER
- COMM'S EQUIPMENT
- ONBOARD LIGHTING
- GENERATOR / FUEL TANK
- UPS / BATTERY POWER BACKUP

- OPERATIONS MANAGER
- AREA NETWORK OPERATOR
- NETWORK ENGINEER

Partner component
 Azure service
 Customer component

Avnet Edge-to-Enterprise IoT Services

Consult

Develop

Deploy

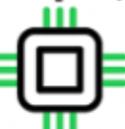
IoT Advisory Services

- IoT Transformation Roadmap Strategy
- IoT Audit and Readiness Assessment
- Proof of Value (POV) Programs



IoT Device Design and Build Services

- Product Development
- Manufacturing
- Integration
- Technology Selection
- Inventory Management



IoT Cloud and Digital Services

- Cloud and Analytics
- AI and Cognitive
- Machine Learning
- UI / UX and Visualization
- Web and Mobile Apps Development
- Device Management
- IoT Connectivity

IoT Lifecycle Services

including:

- Field Implementation and Maintenance
- Sensor, Device and Hardware Installation
- Data Integration with Any Enterprise Apps
- Infrastructure Performance Optimization and Monitoring
- Firmware and Security Patch Management
- Technical Assistance Center



IoTConnect Platform

- Robust and Secure IoT Cloud
- Remote Device Management
- Real Time Analytics and Smart Rules
- Avnet Smart Apps

Avnet Smart Apps



Smart Factory



Smart Healthcare



Smart Office



Smart Asset Monitoring



Smart Building



Smart Warehouse



Smart Connected Worker



Smart Retail



Smart Fleet

Data Science

- Predictive Maintenance
- Recommendation Engines
- Customer Churn Prediction
- Customer Loyalty and Retention
- Inventory Management
- Fraud Analytics
- Healthcare Analytics