



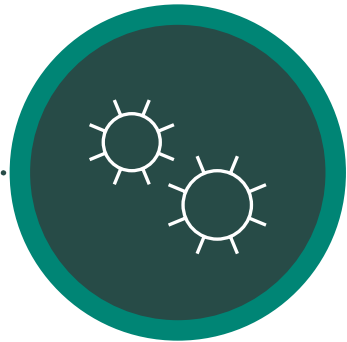
# Industrial IoT for IoT Academy

Courtney Benson, *IoT Specialist*  
Joey Lorch, *IoT Technical Specialist*



# Top Benefits of IoT in Manufacturing

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Increases the  
efficiency of  
operations



Increases  
production  
capacity



Allows employees  
to be more  
productive

# The Team



**Wendy**

Business Analyst

- Actionable insights and interactive reports
- Integrated data platform



**Spencer**

VP of Global Operations

- Real-time visibility of global operations
- Streamline operations and reduce costs



**Miguel**

Plant Manager

- Real-time visibility of plant operations – machines, people, and product quality
- Improve productivity



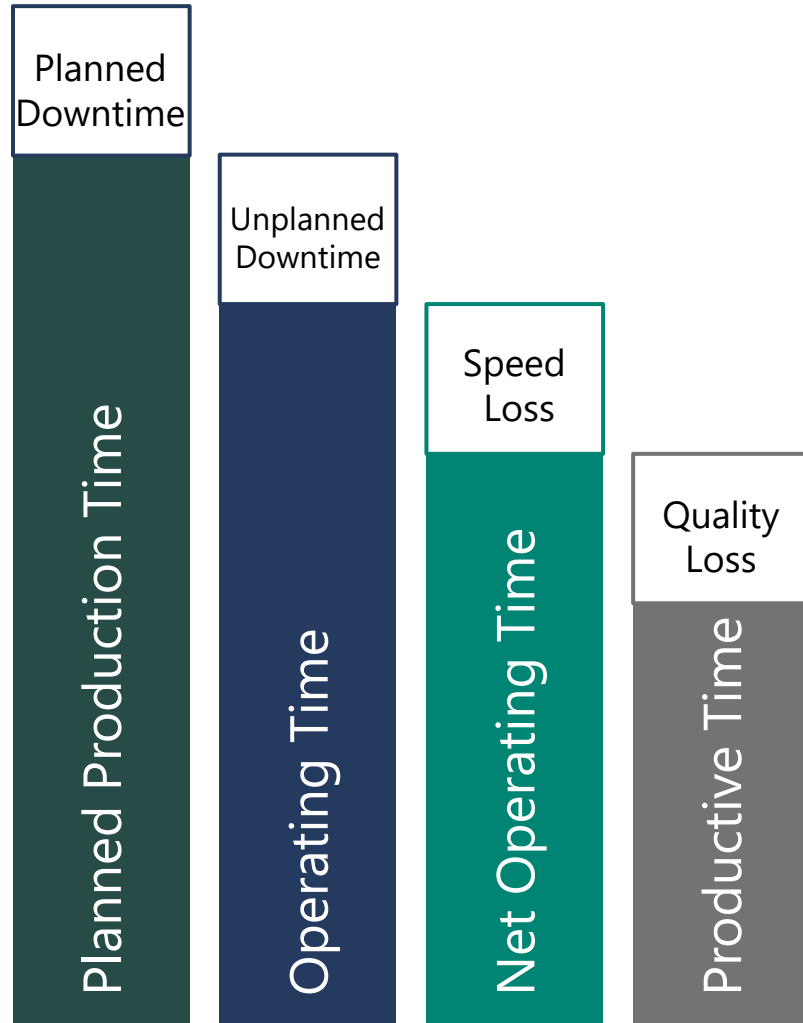
**Sean**

Maintenance Supervisor

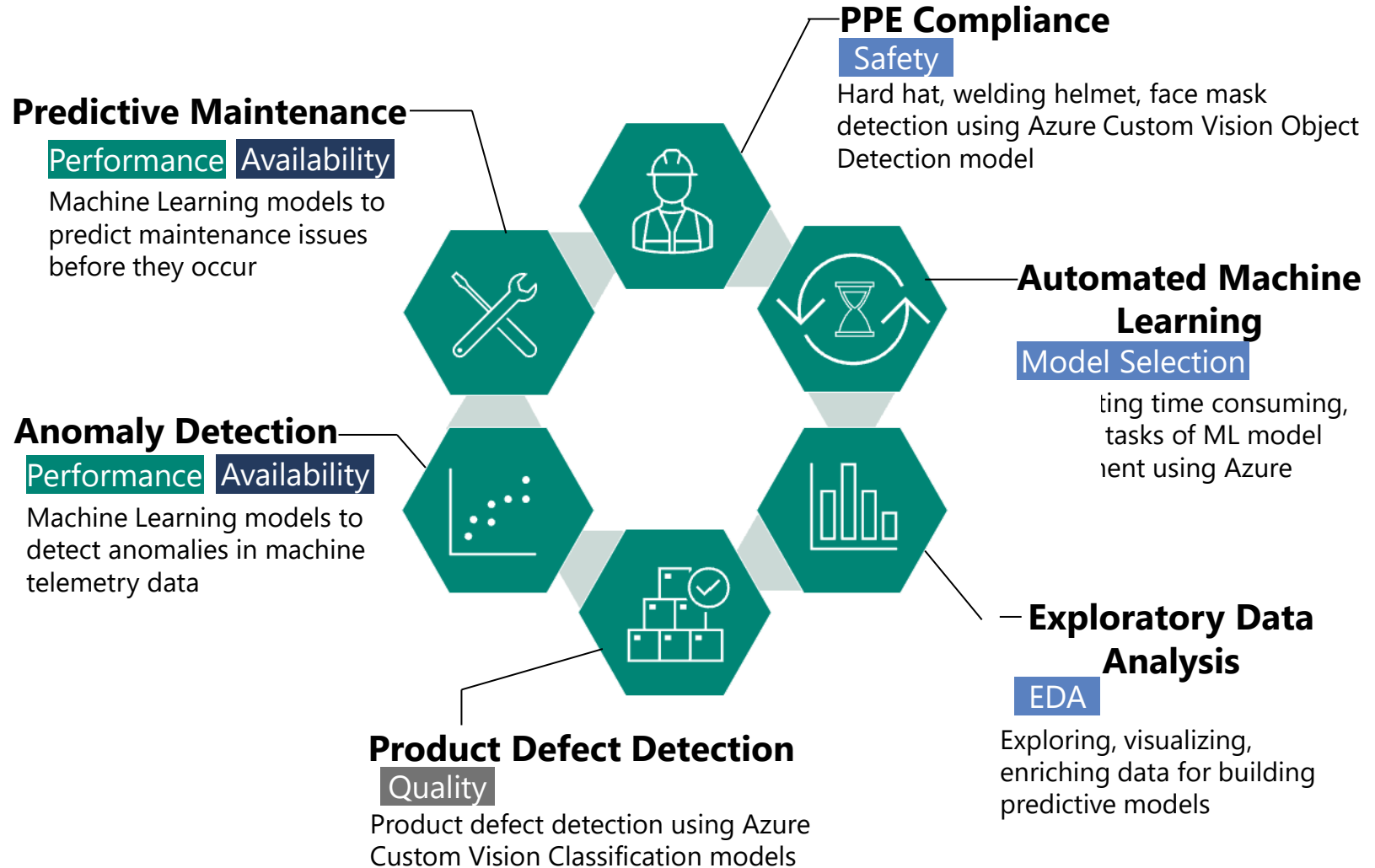
- Minimize downtime
- Diagnose issues faster

Demo

# AI enabling Intelligent Manufacturing & Worker Safety



$$OEE = \text{Availability} \times \text{Performance} \times \text{Quality}$$



Architecture

# Diagrams

## Azure IoT Services for Manufacturing

- [IoT Hub](#)
- [IoT Edge](#)
- [Nested Edge](#)

## Industrial Device Connectivity

- [Standalone](#)
- [OPC-UA](#)

## Partner Solutions

- [Thingworx on Azure](#)

## ML Optimization

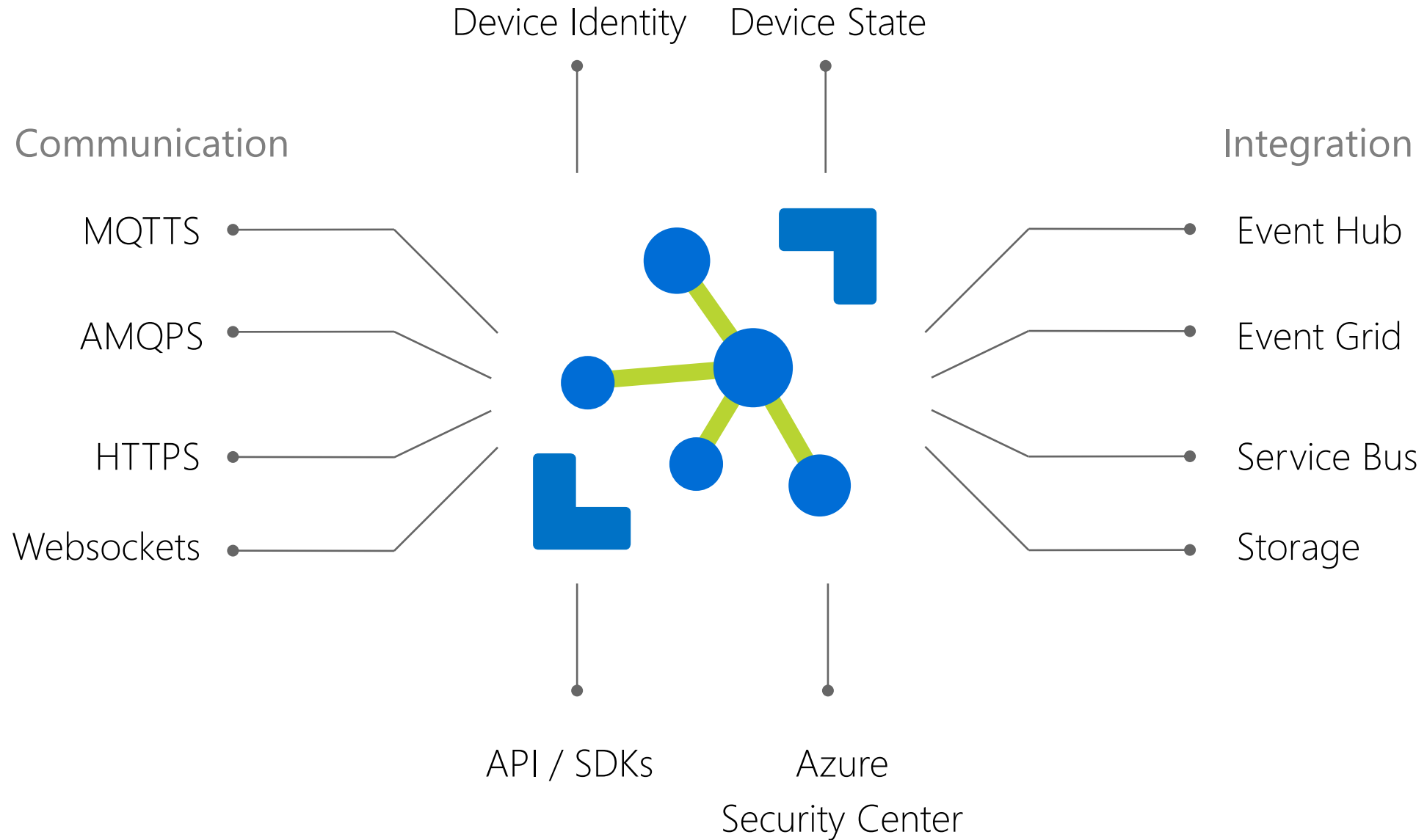
- [ML on IoT Edge](#)

## Scaled Deployments

- [Production-ready Industrial Deployments](#)

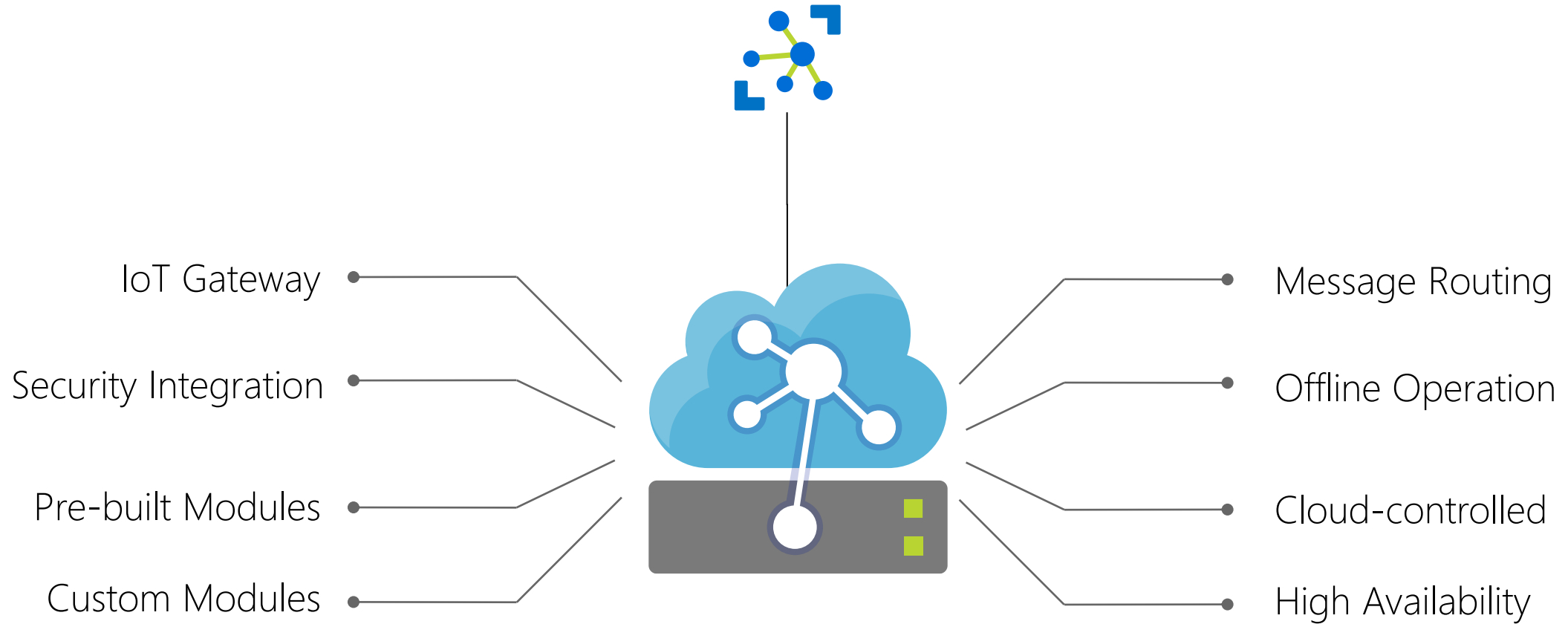


# IoT Hub



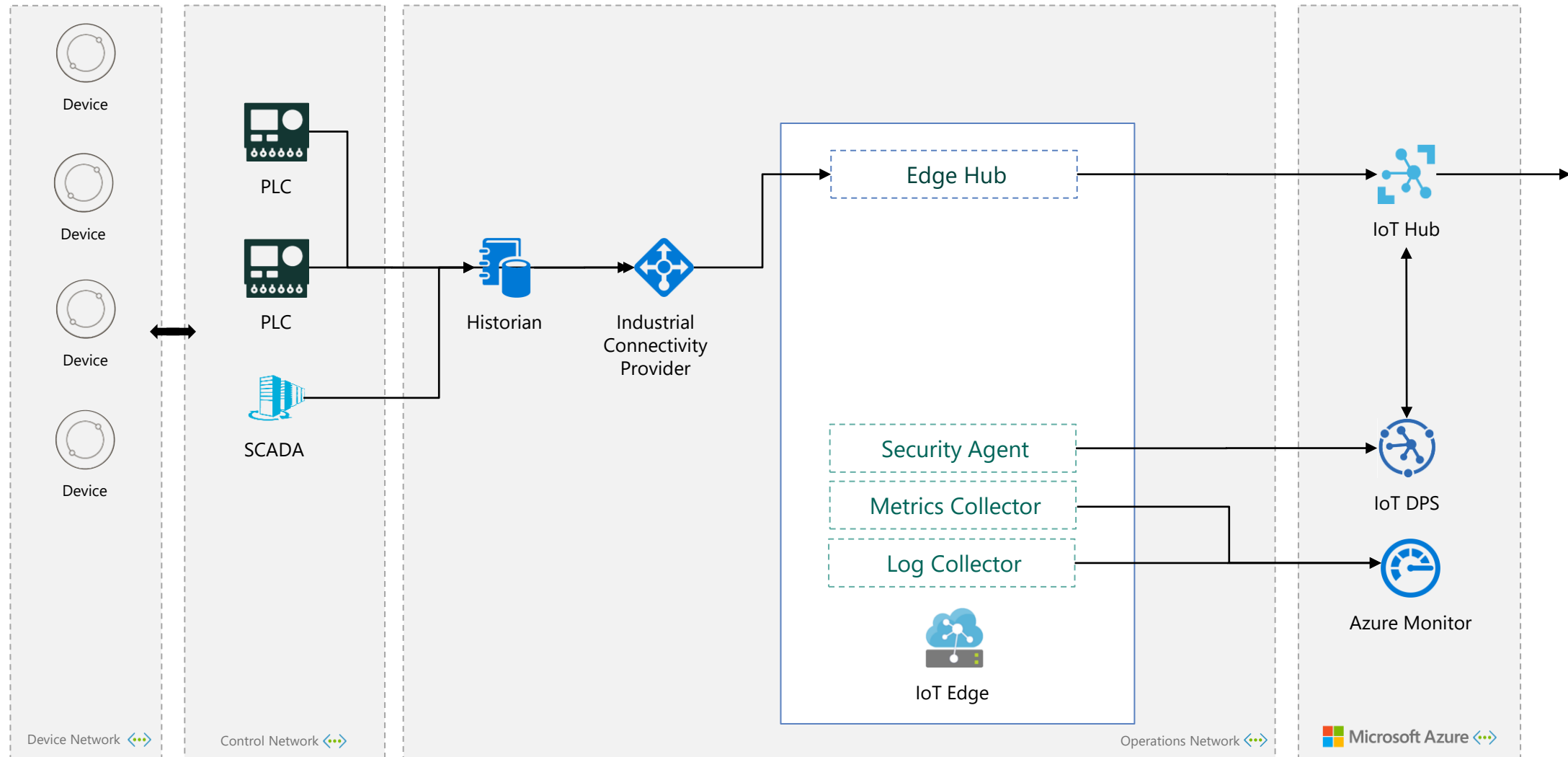


# IoT Edge



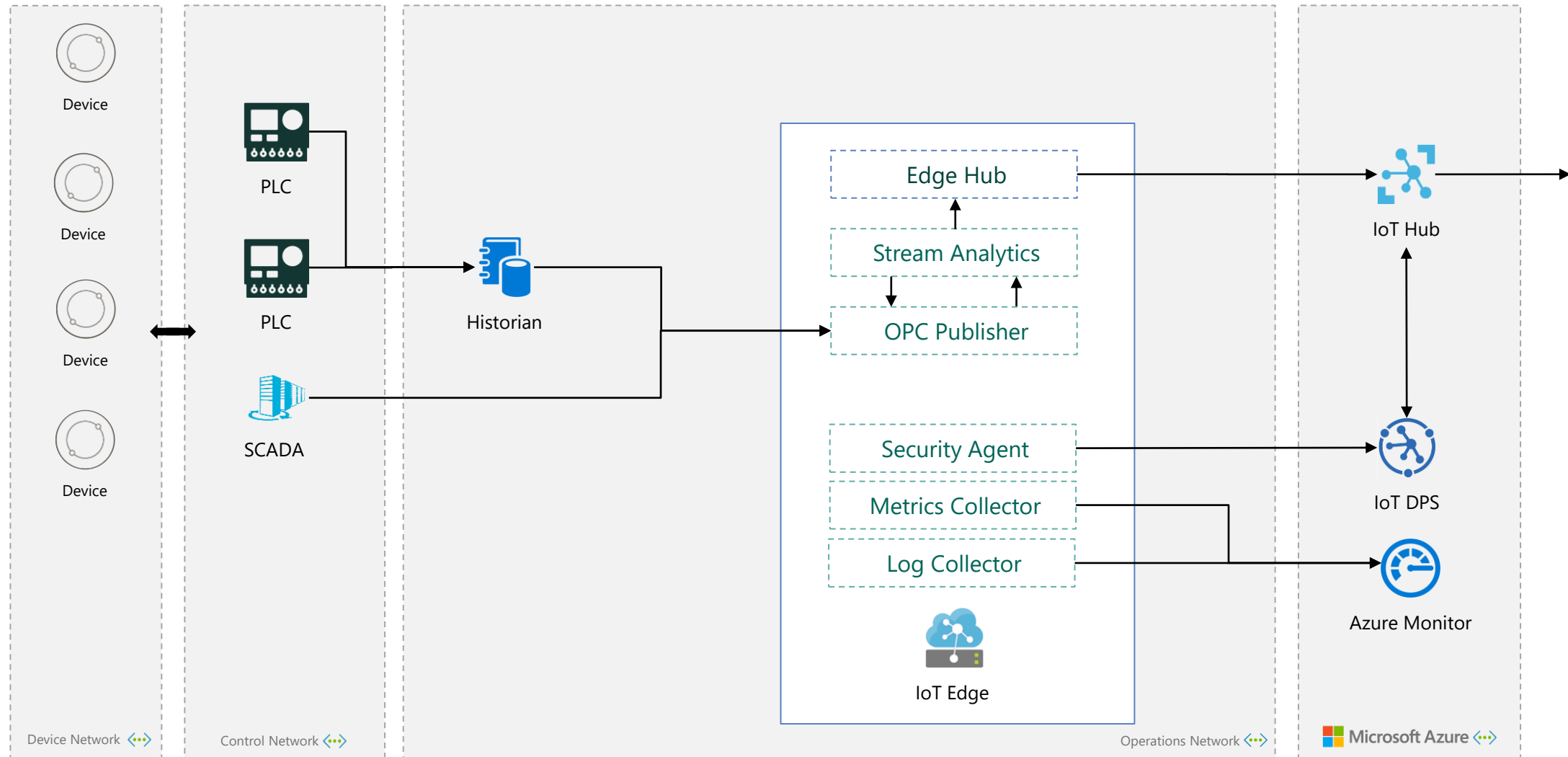
# Industrial Device Connectivity

Standalone Industrial Connectivity Provider + Edge



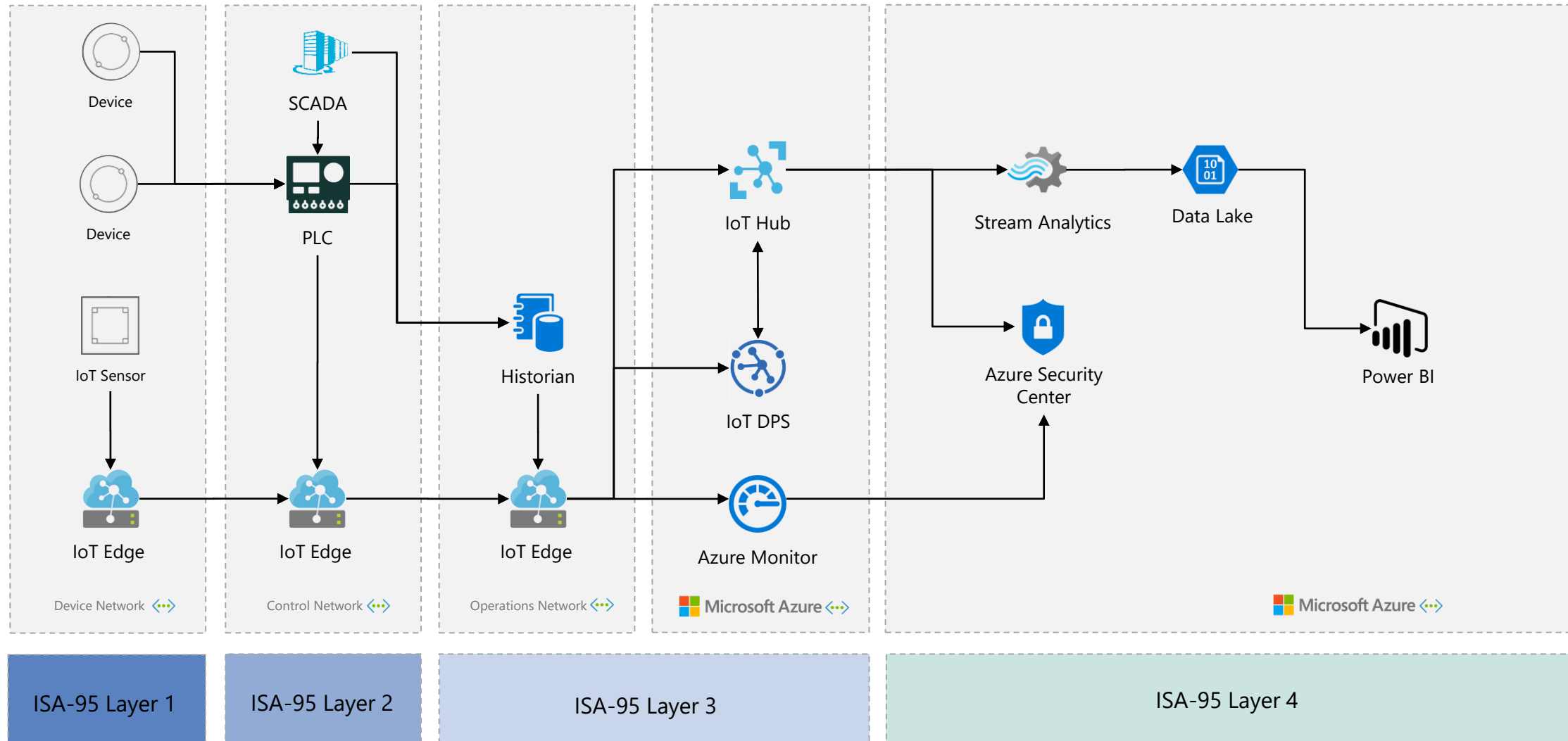
# Industrial Device Connectivity

## Microsoft OPC-UA Connectivity Provider on Edge



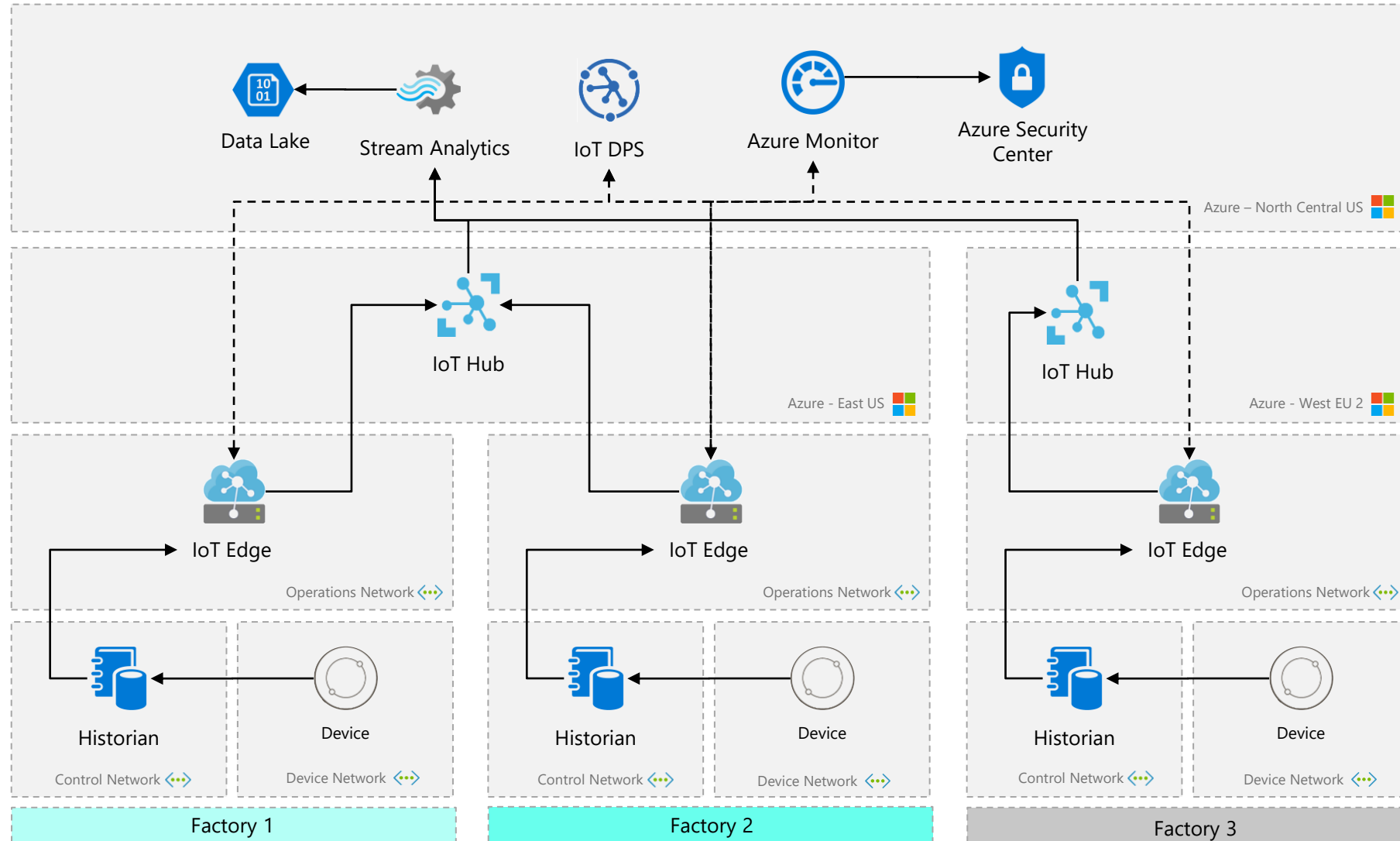
# Nested Edge

Nesting IoT Edge nodes for security isolation, compliance, and efficiency



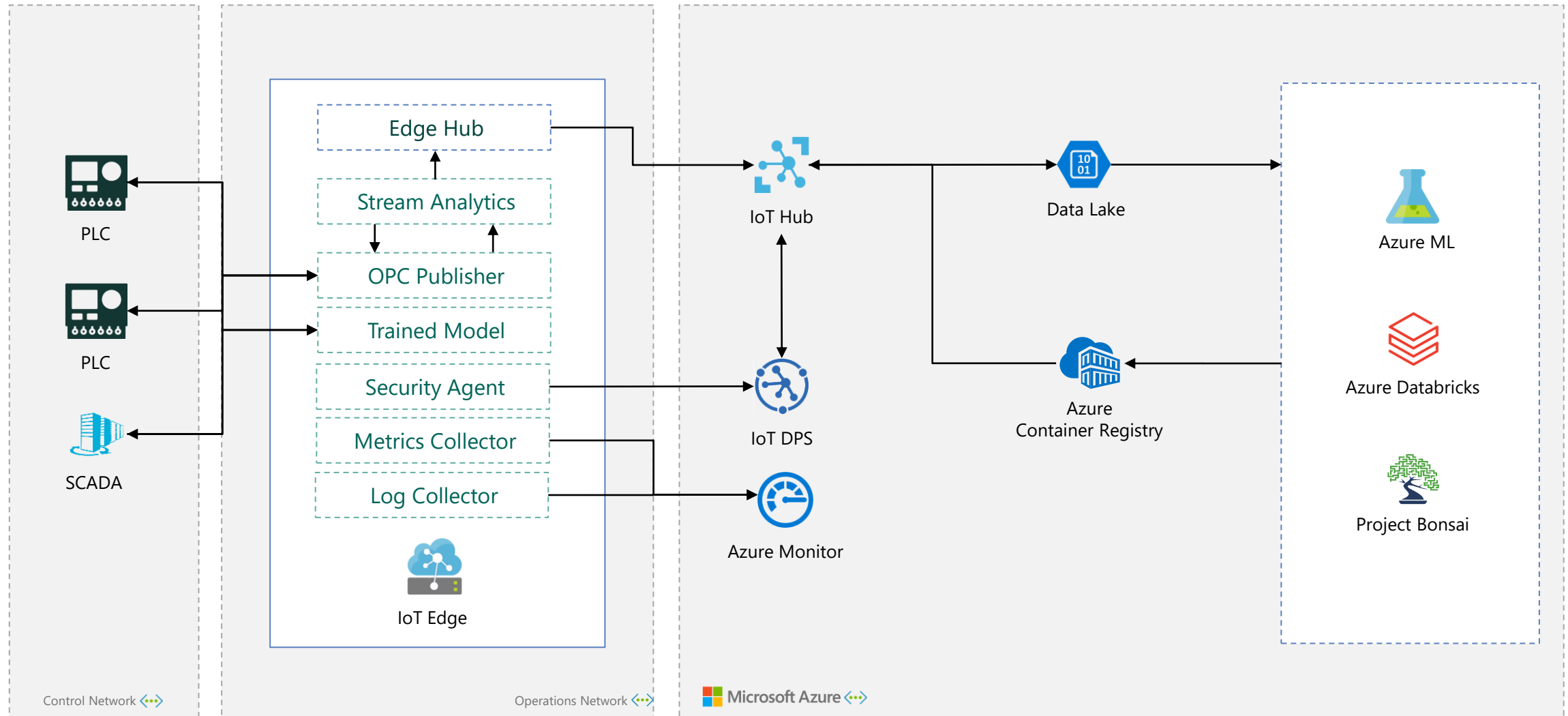
# Production-ready industrial deployments

Regional deployments feeding a unified data store over the Azure network backbone



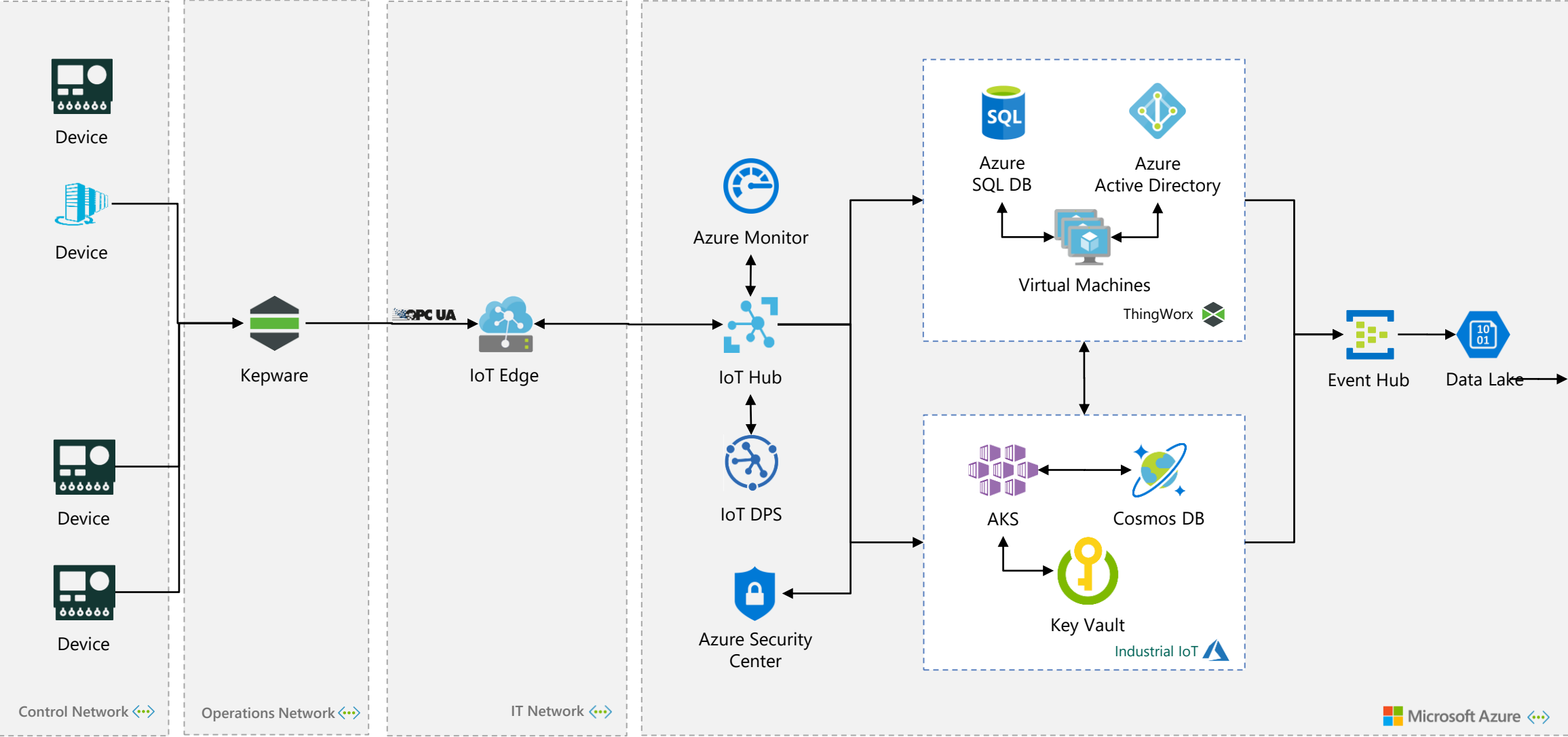
# Industrial ML Optimization

Machine learning on the edge



# PTC ThingWorx on Azure IIoT

## Partner Solutions







Thank you

# Additional IoT resources

## Documentation

[Gartner Magic Quadrant | Industrial IoT Platforms | 2020](#)

[IoT Signals Report | Edition 2 | October 2020](#)

[Industrial IoT Documentation](#)

[Customer and Partner Success Stories | Microsoft Azure](#)

[Buy vs Build with PTC](#)

[8 attributes of successful IoT solutions](#)

## Training

[Introduction to Azure IoT - Learn | Microsoft Docs](#)

[Introduction to Azure IoT Edge - Learn | Microsoft Docs](#)