

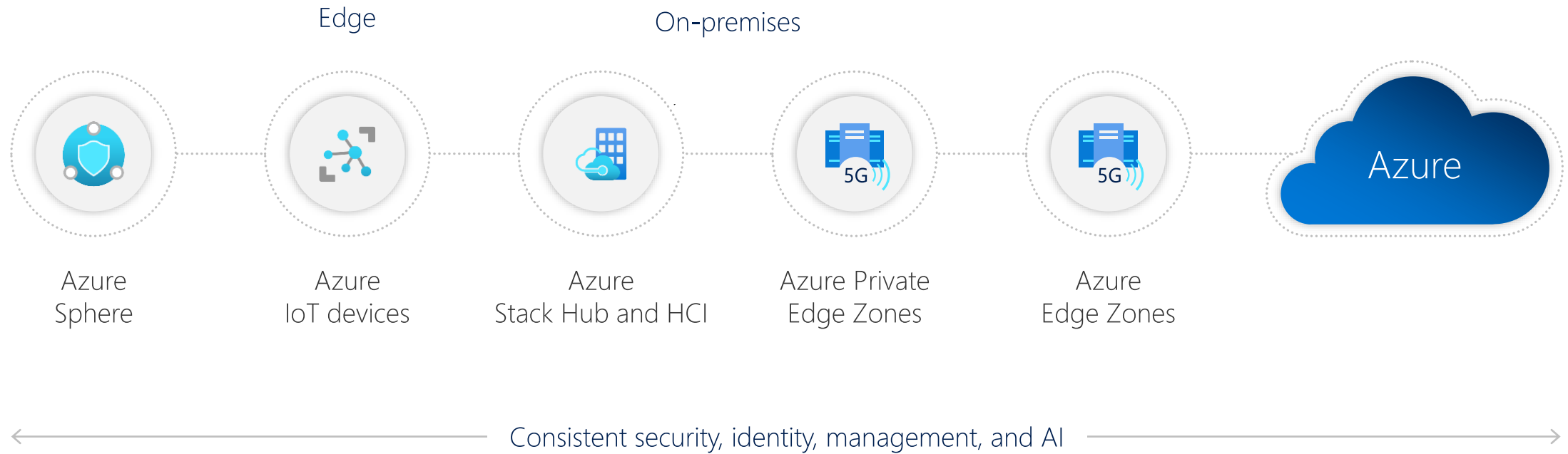
An aerial view of a city at night, with a network diagram overlay. The diagram consists of several circular nodes, each containing a white icon: a Wi-Fi symbol, a car, two people, a shopping cart, a gear, a camera, and a cloud. Dotted lines connect these nodes to specific buildings in the city. Solid white arcs connect the nodes to each other, forming a mesh network. The background is a dark blue sky with stars and a cityscape with illuminated buildings.

Azure Edge Zones

Ultra-low latency edge computing

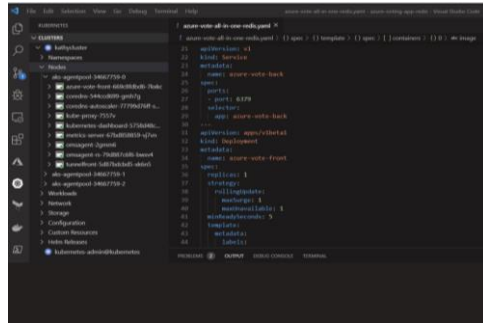


Azure from Cloud to Edge



Same DevOps tools and pipeline

Same tools to author and deploy applications in the cloud and the edge



Source code in Git Repository

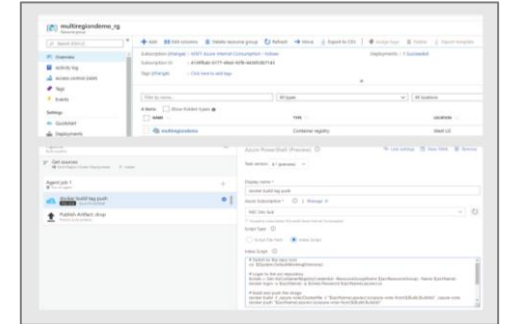
Develop

1



2

Package



Azure Kubernetes Service (AKS)



Azure DevOps



Docker container

Deploy

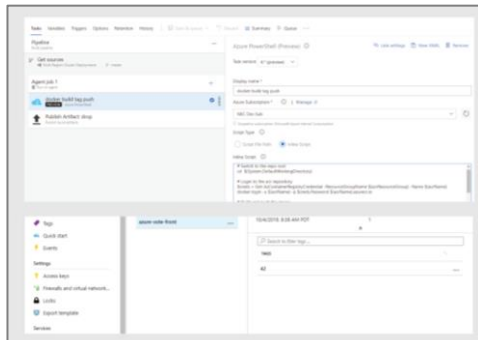
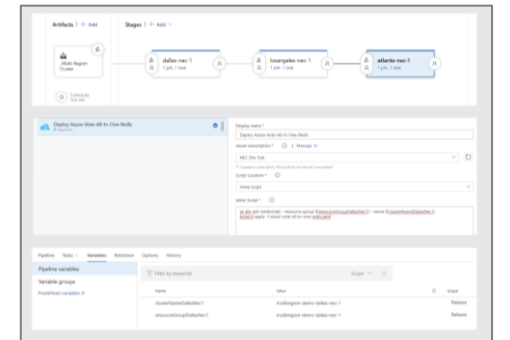
4



Container registry

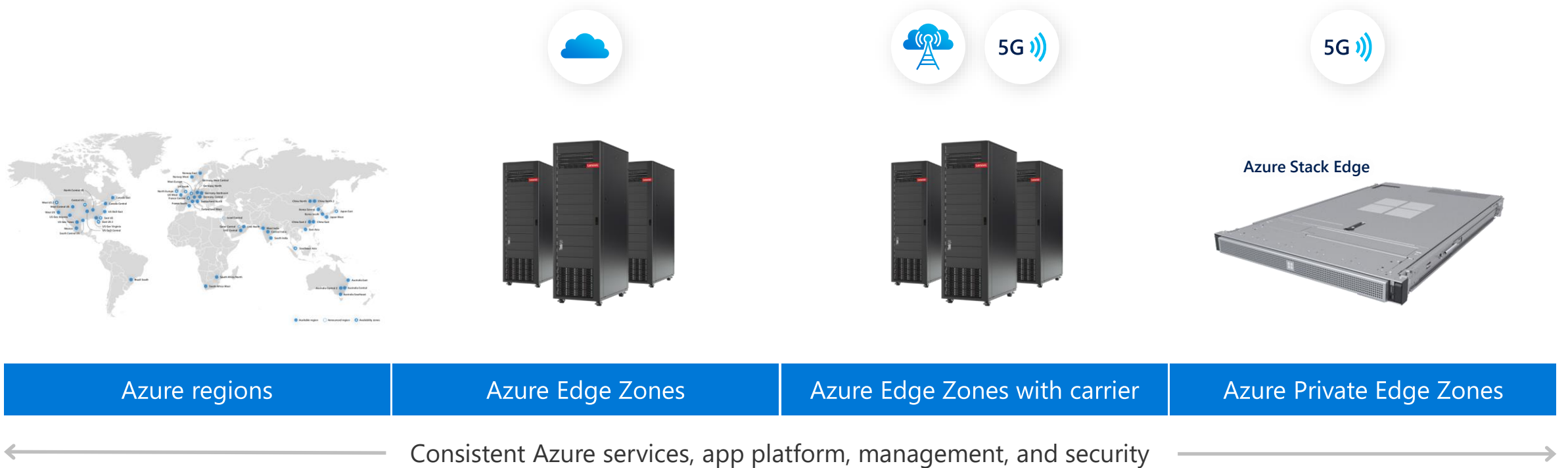
3

Push



Azure Edge Zones

Ultra-low latency compute—enabling new scenarios with Azure, 5G, and carrier partners



Services supported on Edge Zones

Core Infrastructure Services: Deploy virtual machines, networks and containers

3rd Party Services: Azure Marketplace



Azure Virtual
Machines



Azure Virtual
Networks



Azure Kubernetes
Service



Virtualized
Network Functions



Marketplace
Applications*

Containerized services: Containerized edge versions of Azure PaaS services



Azure IoT Edge



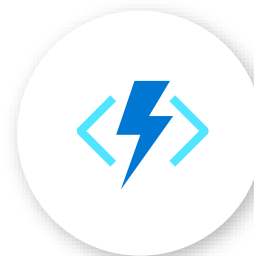
Azure Cognitive
Services



Azure Machine
Learning



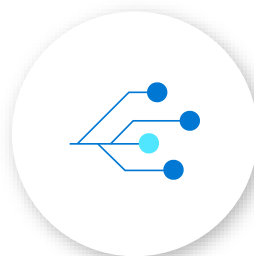
Azure Stream
Analytics



Azure
Functions



SQL Database
Edge



Event
Grid

Or write your own: Deploy your own or 3rd party software in VMs or Linux containers

Azure Edge Zones: Carrier Ecosystem



Edge Zones use cases



Use Case: Real Time Drone Tracking

Distributed sensor network

Low latency real time tracking

Reduced costs and form factors



The proliferation of drone use is disrupting many industries, from security & privacy to the delivery of goods.



AT&T, Microsoft and Vorpai Collaboration

Enabling us to **track** thousands of drone in **real-time** to keep the skies a safe place

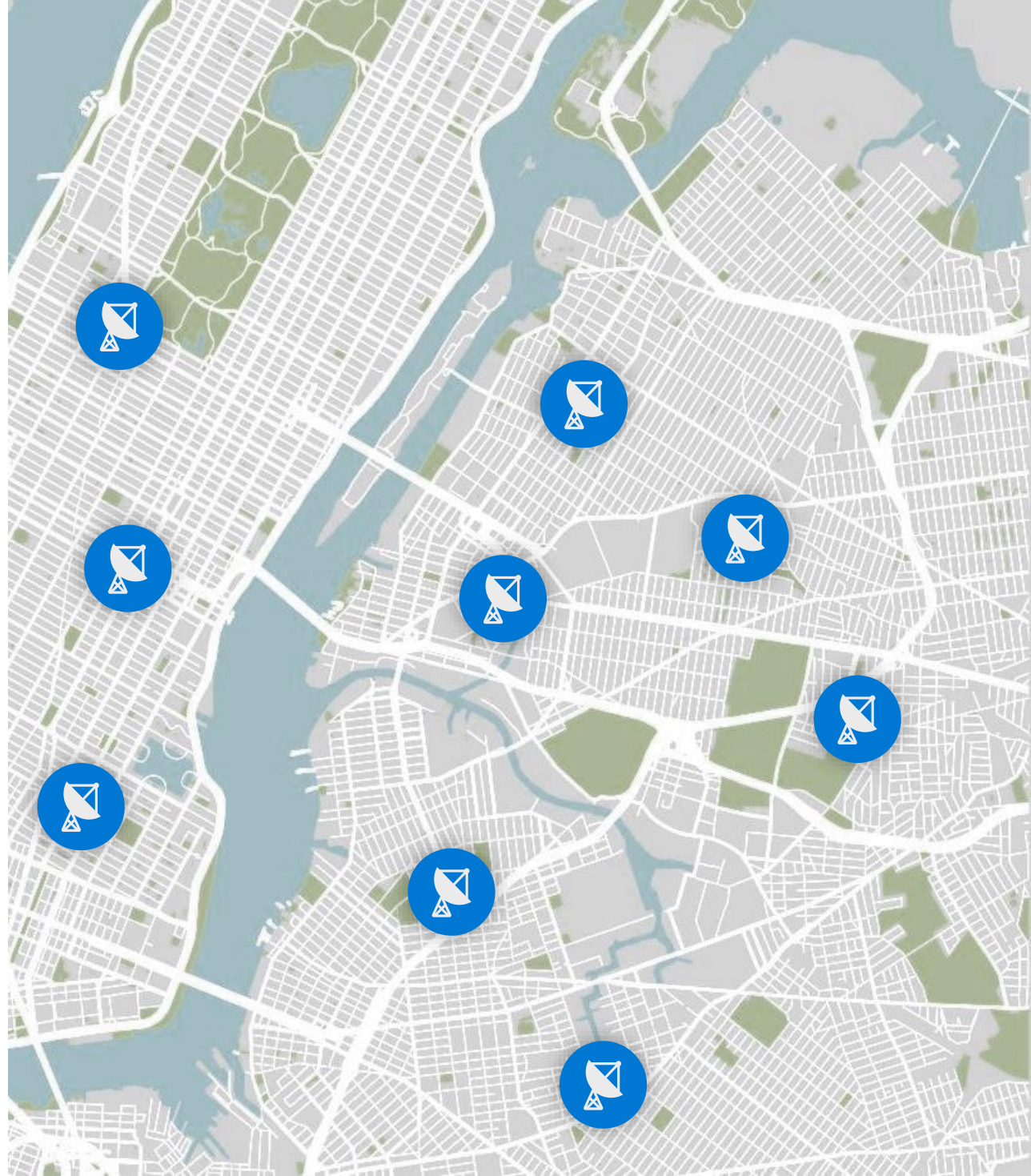
Vorpai provides the **solution**.
Microsoft and AT&T provide the **infrastructure**.



Microsoft



AT&T



Immersive Gaming

Players compete in real-time on their phones, desktops or consoles.

- Better on mobile
- Scalable synchronization
- Branded experiences



©Microsoft Corporation
Azure



Azure Private Edge Zones

Applications and compute services on-premises

Azure-managed VMs and K8S clusters

Run applications from the Azure marketplace on-premises

Run Virtualized Network Functions

Virtualized Network Functions (VNFs) such as mobile cores, RAN, routers, firewalls and SD-WAN gateways as services

Run applications and networks side by side

A rich ecosystem of implementation and technology partners integrated and available



Run applications, VMs, containers and network functions side by side on-premises on Azure Stack Edge.

Use Cases:



IoT



Smart factories



Smart agriculture



Security



Robotics



Warehousing

Azure Private Edge Zones: Enabling Private Mobile Networks



Devices



SIM



RAN



Azure Stack Edge



Kubernetes VMs IoT Edge



Microsoft
Azure



Internet



Private Edge Zones use cases







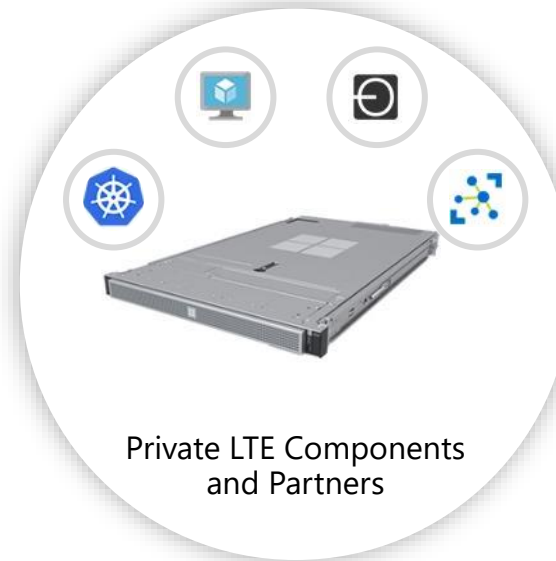
Attabot



Radio



Packet Core



Cloud



gemalto



SIERRA WIRELESS



COMMSCOPE



metaswitch



Microsoft Azure



Mixed Reality Immersive Training

- Procedural 3D rendering
- Personal & equipment safety
- Remote assistance



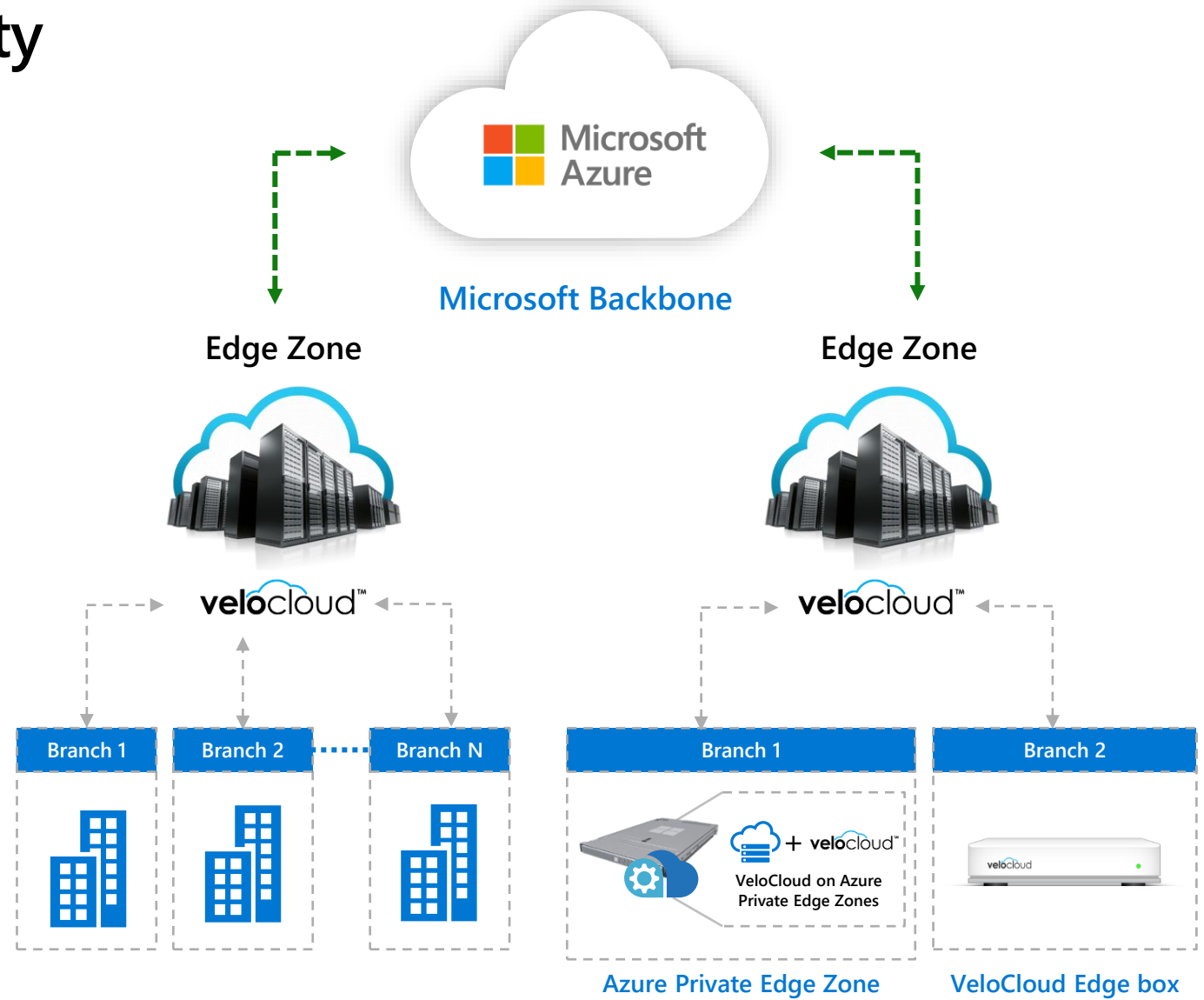
SD-WAN and branch connectivity with VeloCloud

Enterprise grade wide area networks with increased bandwidth, high performance access to cloud, service insertion and extensive network visibility

Integrated with Microsoft backbone

Centralized management across branch networks managed through Cloud

SD-WAN orchestrator in Edge Zone or the Azure

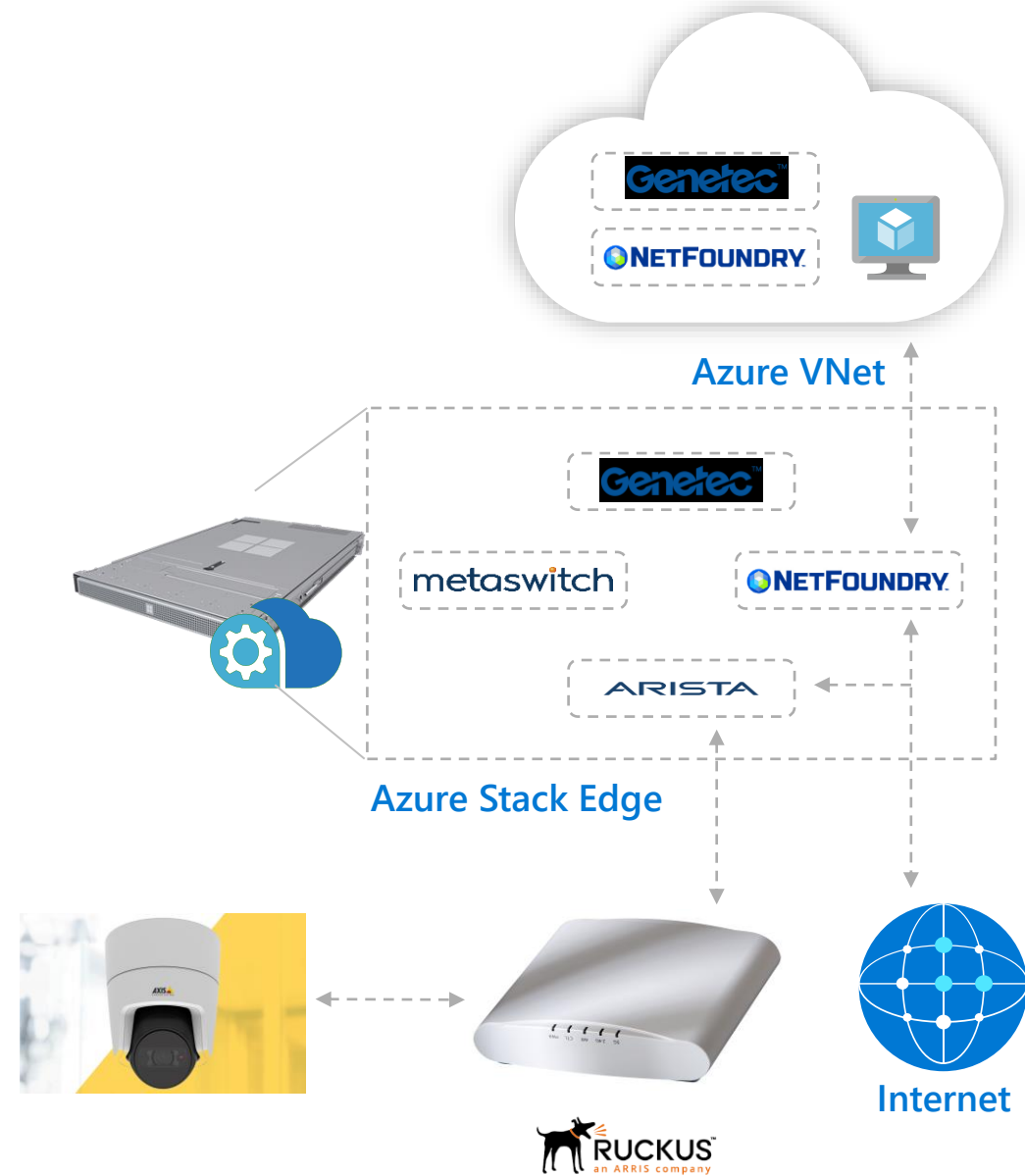


Security Surveillance as a Service

Best of the breed VNFs across the category

Application (Genetec Security Center)
hosted in Edge and Azure

Direct Internet breakout from any user,
device or site to Azure using NetFoundry's
zero trust networking solution



Reimagined retail store

Interactive fortune telling experience

- Tailored to convenience, no cashier/register
- Tuned to customer journey – beginning, middle or end
- Engaging all the senses

Thousands of devices

- Smart displays, mirrors, sensors, and virtual assistants

Integrated supply chain

- Real time inventory and pricing
- Backend processing to tune experience

Augmented using cloud services to more experimentation

- Price comparisons, offers, availability
- Customer impact



Commercial IoT

Thousands of robots, devices

Augmented using cloud services

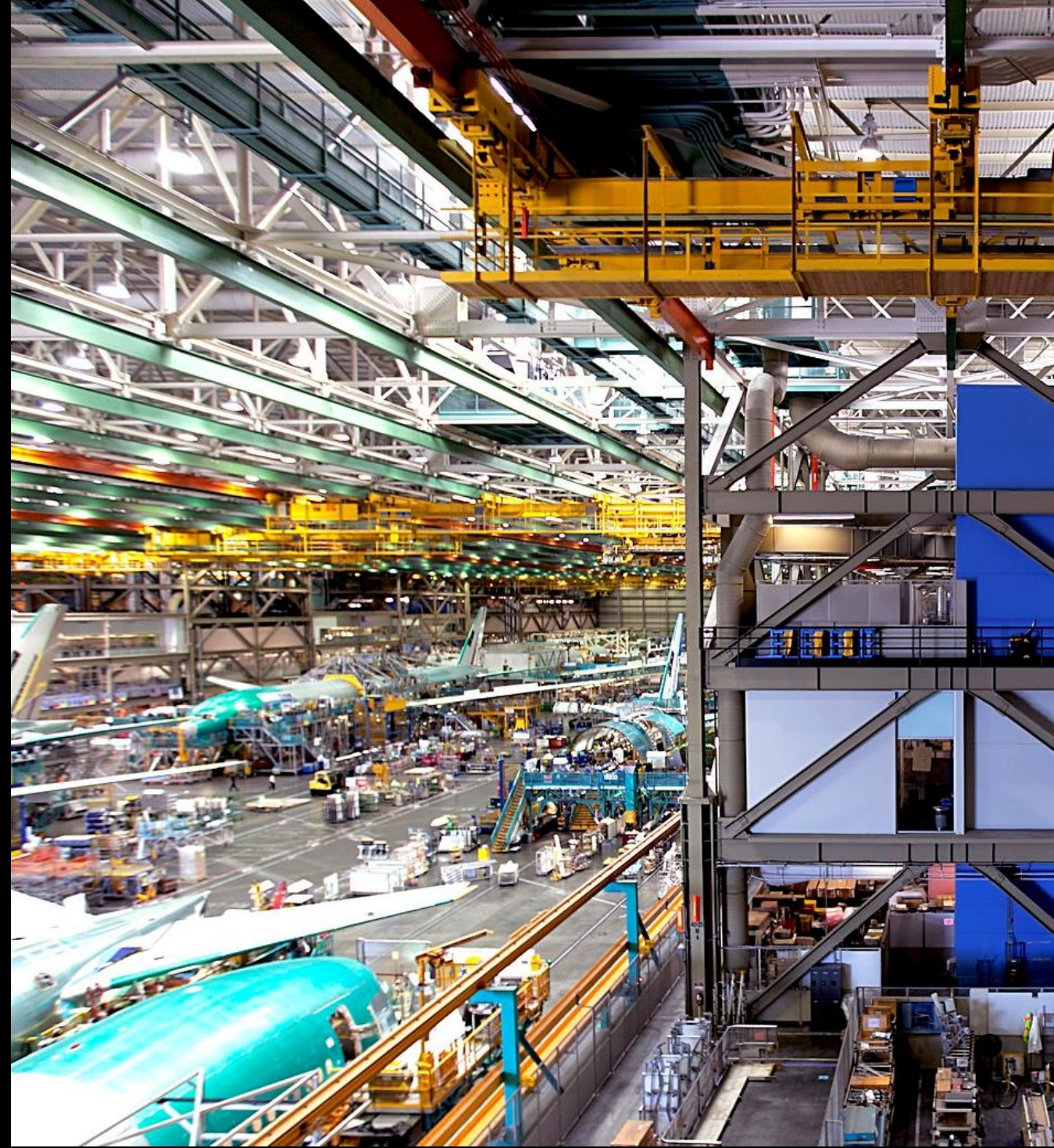
- Quality control
- Remotely updated
- Failures predicted

Factory working connected and disconnected

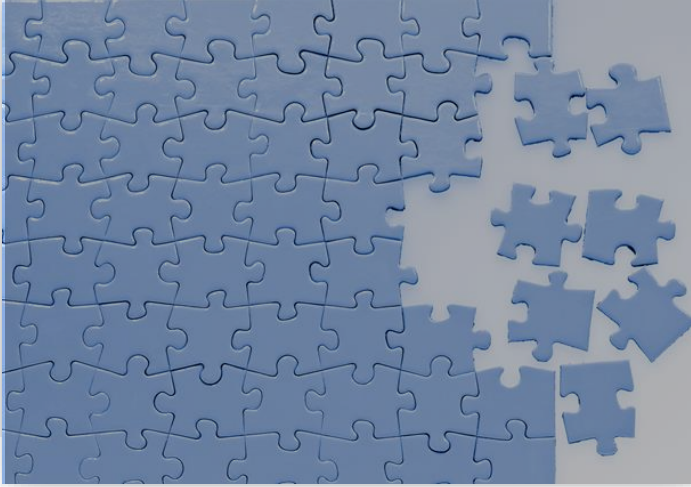
- Reliable, secure, isolated

Enhanced by people

- Power BI dashboards – Efficiencies
- Blueprints



Use cases: Edge compute and IoT solutions



Business applications at your facility

Run cloud managed business application at your facility. Deploy either via Kubernetes containers or virtual machines. Cloud management means you can maintain and update the systems from the cloud and don't need local IT. This lets you put your applications in more places, from offices, to retail stores, to remote facilities



Bridge between on-prem and cloud

Your legacy on-prem systems can't move to the cloud, but you want to integrate with new cloud systems. Cloud deploy edge compute that sits on site and can talk to both systems to build a bridge between them



Take applications into the field

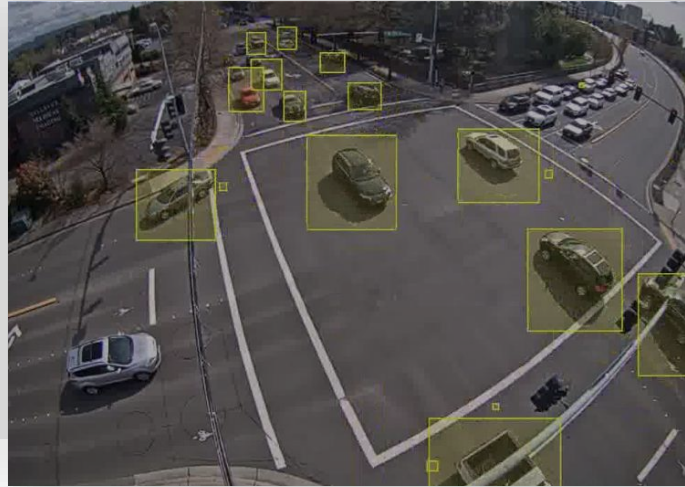
Because Azure Stack Edge can be configured at home base then operate disconnected, you can take the power of cloud computing with you into the field, then sync back up when it comes back to base

Use cases: Machine learning at the edge



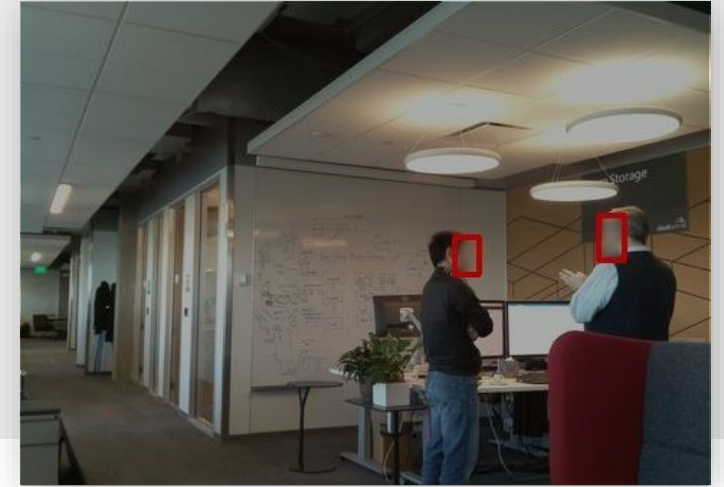
Process at edge for immediate results

Process images and video as they are generated for immediate results. Drone video footage can be analyzed in the field, or quality control issues can be identified right at the factory before the product hits the market



Filter with AI analysis at edge

Constantly monitor traffic camera feeds to detect collisions or "near collisions" and store one minute of video around these events for human analysis and model training. Retrain in the cloud and send an updated model to edge



Remove sensitive data at edge

Automatically blur PII data, e.g., faces or license plates from images and video before they are uploaded and archived in Azure, protecting against privacy issues if you have a legal requirement around storing PII in the cloud

Use case

