Azure Edge, IOT and AI
The new compute paradigm is solutions that spans cloud and edge

- IoT
- Edge Computing & 5G
- AI
- Digital Twins
High speed and low latency of 5G fuels demand of new services ("in yellow areas")

- Sensor networks
- Remote updates
- Digital advertising
- Live/On demand TV
- Fixed wireless
- Broadband everywhere
- Home & office
- Wearables
- Emergency notifications
- Basic remote control
- Connected cars
- Remote medical control
- Virtual reality monitoring
- 3D robotic control
- Agriculture
- V2X
- Automated factories

Source: EY, GSMA
Microsoft’s intelligent edge + cloud product landscape

**Microcontroller**
- Azure RTOS & Azure Sphere

**IoT Devices**
- Azure IoT Device SDK

**Edge Devices**
- Azure IoT Edge

**Edge Appliances**
- Azure Stack Edge & Azure Edge Zones

**Edge Appliances**
- Azure IoT Device SDK

**Endpoint devices such as appliances, vehicles, or factory machines that connect, interact and exchange data**
- 1300+ devices, 300+ partners - all certified to work great with Azure IoT Services
- Cross-platform and open source: Windows IoT, Linux, Android, iOS, RTOSs and more

**Devices that aggregate, process & provide gateway capabilities for IoT endpoints**
- Deploy and manage Azure Services in containers on any IoT device
- AI, AzureML, Azure Stream Analytics and more
- Cross-platform and open source: Windows IoT, Linux

**Integrated appliances that provide a subset of cloud edge roles, such as ML-inferencing**
- Azure Stack Edge: AI-Enabled, Storage and compute Azure Edge appliance
- Scalable solutions that provide a full cloud stack, including IaaS and PaaS capabilities
- Edge and Disconnected Scenarios
- Regulatory Requirements
- Cloud app model on-premises

**Hyperscale Cloud**
- Cloud Regions

- First-party cloud regions
- Full Range Hyperscale Cloud Services
- Tiered Service availability: Heroes > Hubs > Satellites
- Open Source Based Services & Tools

**Most specialization**
- Fewest services

**Full Spectrum of Cloud + Edge Form Factors**
- Intentional & Appropriate Azure Service Availability

**Fewest form factors**
- Most services
Azure IoT

- IoT Edge is opensourced
  - Gateway
  - Secure
  - Message broker
- Workload run as container on edge
- Support both docker and K8s
- Secure connection between edge and azure
- Azure ecosystem
Azure Machine Learning

- Unified E2E customer experiences
- Open to opensource community tooling/standard
- Inference endpoint on edge gateway
Azure Stack Edge and Edge Zones

- Rich customer experience and capabilities on edge
- Customers can deploy & manage K8s clusters from Azure
- Edge and cloud are integrated for IoT and ML
Azure ARC

- Unified control plane
- Multi-cloud, on-prem and edge support
- E2E experiences for devops, SREs, mgmt. business, etc.
Unified Edge Framework

Proximity (compute & storage)
Responsiveness (5-20ms latency)
Mobility
Akraino PCEI Blueprint
Thank you