Microsoft

Simplifying IoT with Cloud and Edge

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IoT it not a technology revolution..

..it is a **business revolution**
enabled by technology

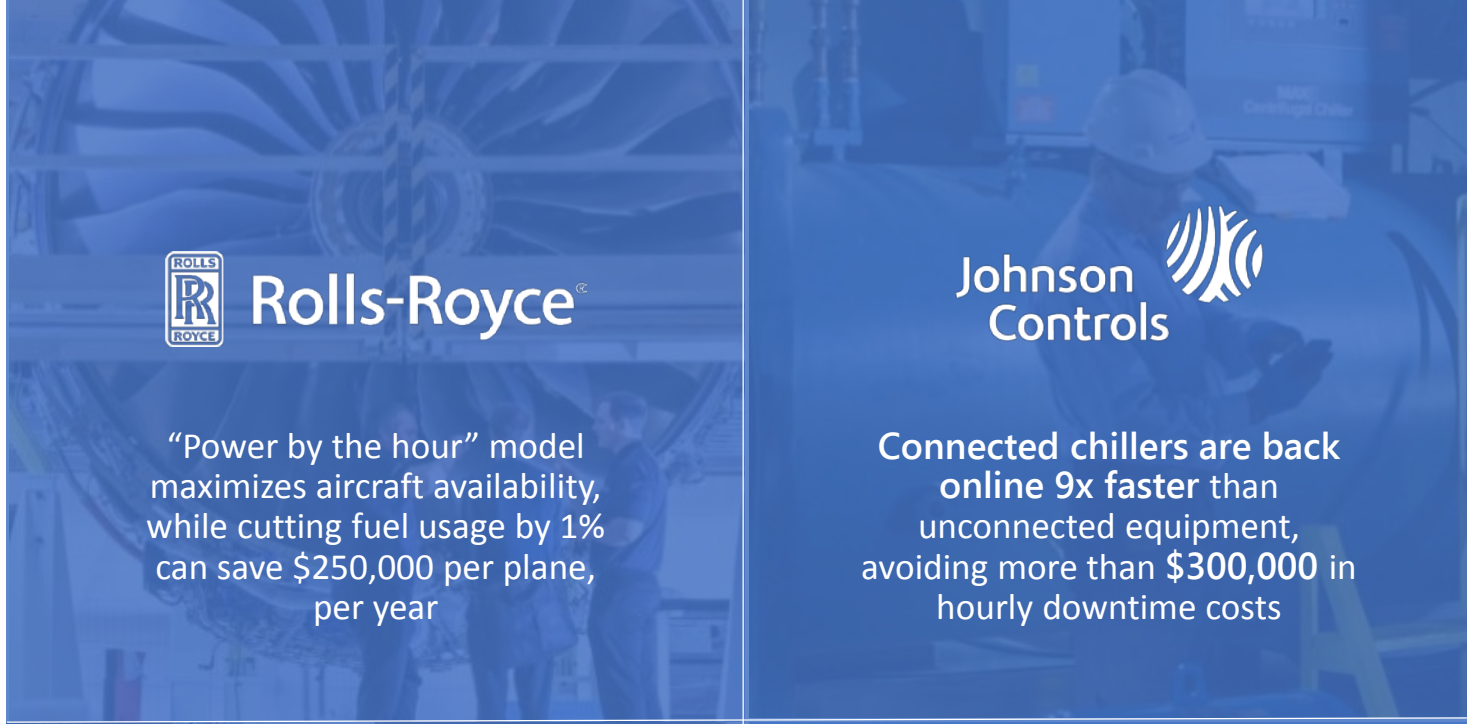
Creating value through real business impact

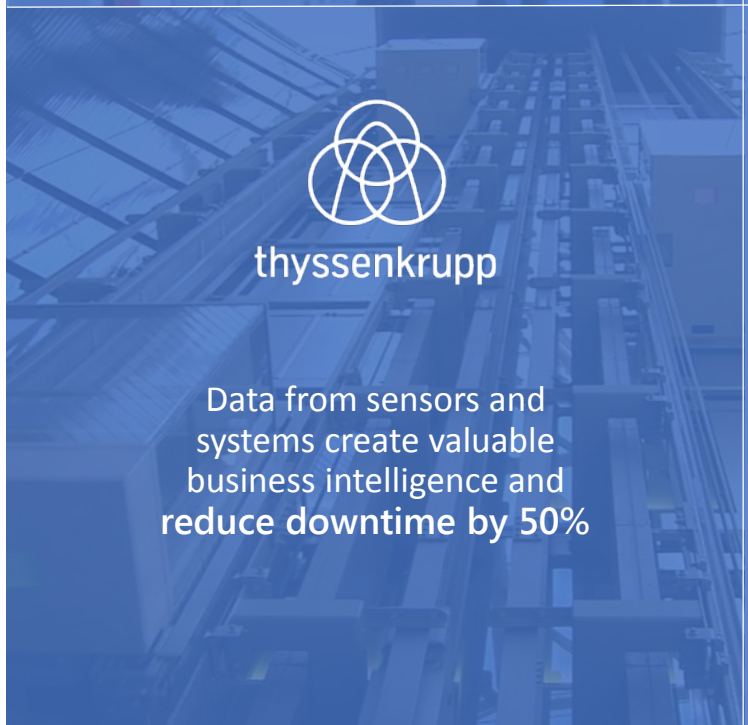
$100M

average increase in operating income among the most digitally transformed enterprises

55%

average gross margin for businesses with leading data and analytics capabilities





Microsoft IoT Influence Model, Keystone Strategy, 2016

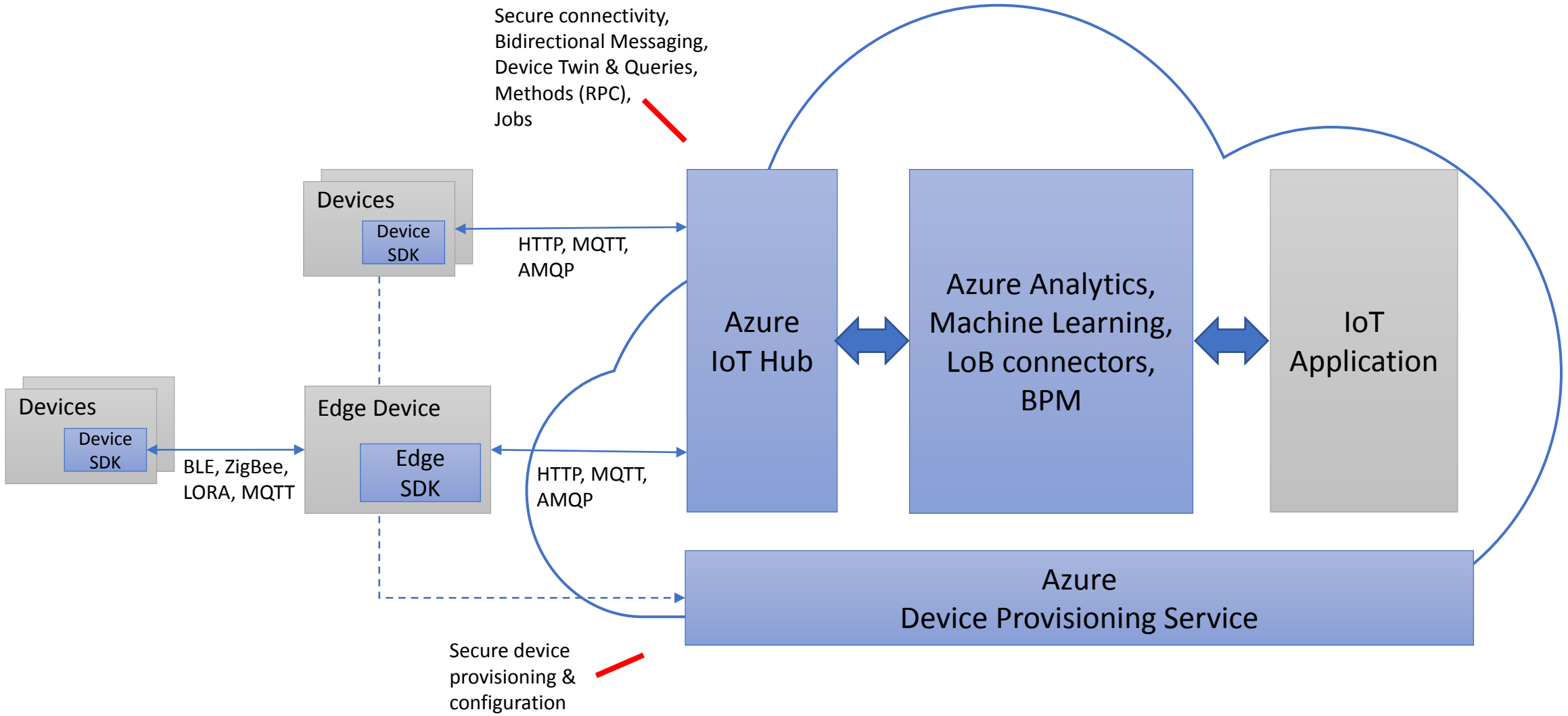
IoT projects can be complex

IoT platforms are designed to reduce this complexity

High barrier to entry

- Diverse ecosystem of devices and capabilities
- Fragmentation in protocols and standards
- Programming models are still emerging
- Cloud application developers are often not great at device app development
  - ..and vice versa
- Device provisioning and lifecycle management
- Different customer segments and expertise

Azure IoT Platform



But..it still takes a village...

Customer Segments

Azure IoT Suite

Preconfigured solutions for
common IoT scenarios

Remote Monitoring | Predictive Maintence | Connected Factory

Microsoft IoT Central

Fully managed IoT SaaS
No cloud solution expertise required

Difficult to maintain cohesive security

- System as secure as its weakest link
- Assets in an Iot application can be deployed in untrusted environments
- Multiple actors needs access to the data

Platforms like Azure IoT can help secure IoT applications

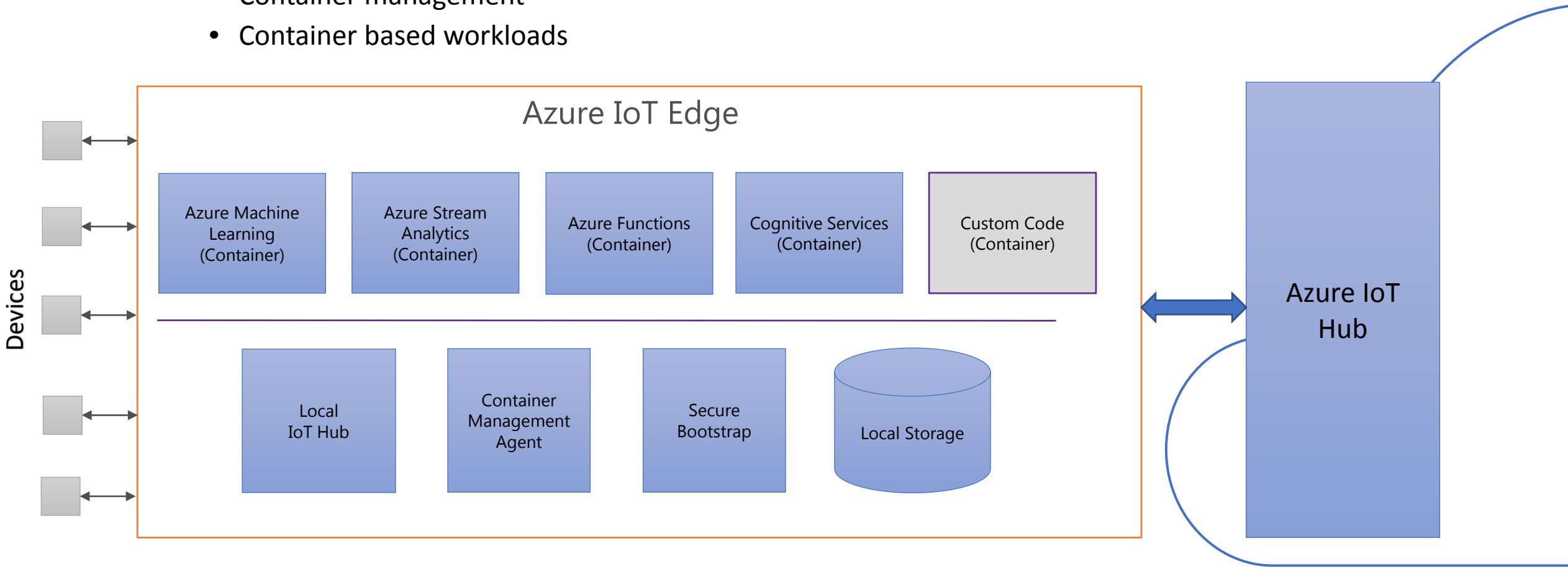
- Easy to consume SDKs and reference architectures for firmware and software attestation with hardware root of trust
- Help identify anomalous behaviors in a single or across a group of devices
- Provide sophisticated authorization & authentication models using role based access control (RBAC) for device assets with out-of-box tooling for OT to manage security policies across breadth of the IoT application
- Security programs that match up IoT application developers to security partners to validate and test app design and implementations

Edge computing

- Protocol transformations from fit-for-purpose protocols to IP
- Unreliable networks
- Constrained network resources
- High latencies

Azure IoT Edge

- Secure bootstrap & software attestation
- Local IoT Hub
- Container management
- Container based workloads
- Local Storage
- HA/DR, Cloud Dev/Test Support



Challenging to scale and maintain availability over time

- Scale in number of devices
- Scale in throughput
- Burst scenarios
- Availability and disaster recovery is almost as important as security

Bread and butter for IoT platforms

- Economies of scale
- Azure IoT
  - Scales horizontally to tens of millions of concurrently connected devices and more
  - Millions of messages per second
  - Strict latency percentile targets
  - Applications can configure throughput at runtime
  - Out-of-box disaster recovery and high availability SLAs

Schneider Electric
Demo

Thank you

Microsoft

ευχαριστώ Salamat Po متشكرم شكراً Grazie благодаря ありがとうございます

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Cám ơn Gracias 多謝晒 Ďakujem תודה நன்றி Děkuji 감사합니다