Microsoft

Architecting the Intelligent Edge

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IoT in Action

TS5
TS6
TS7

IoT @ Symonds House


















IoT in Action

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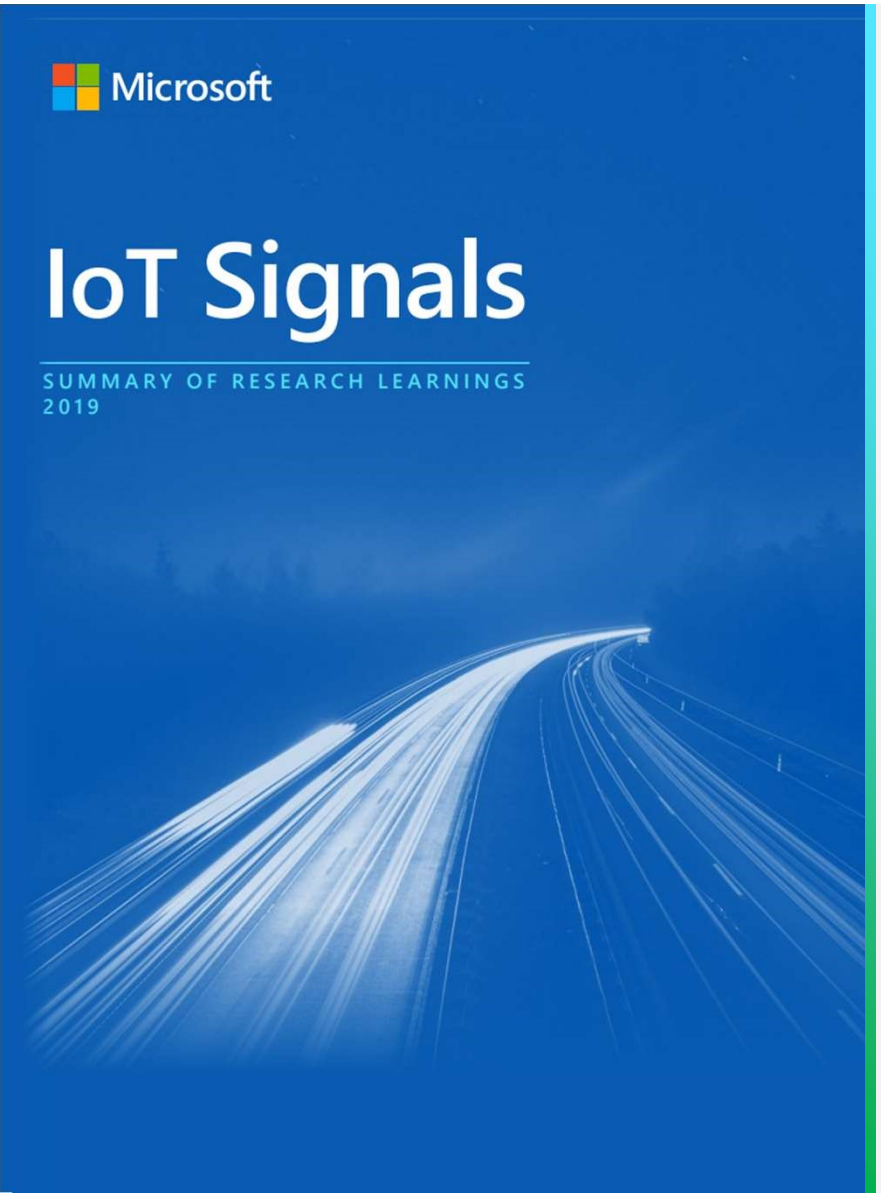
Slide 2

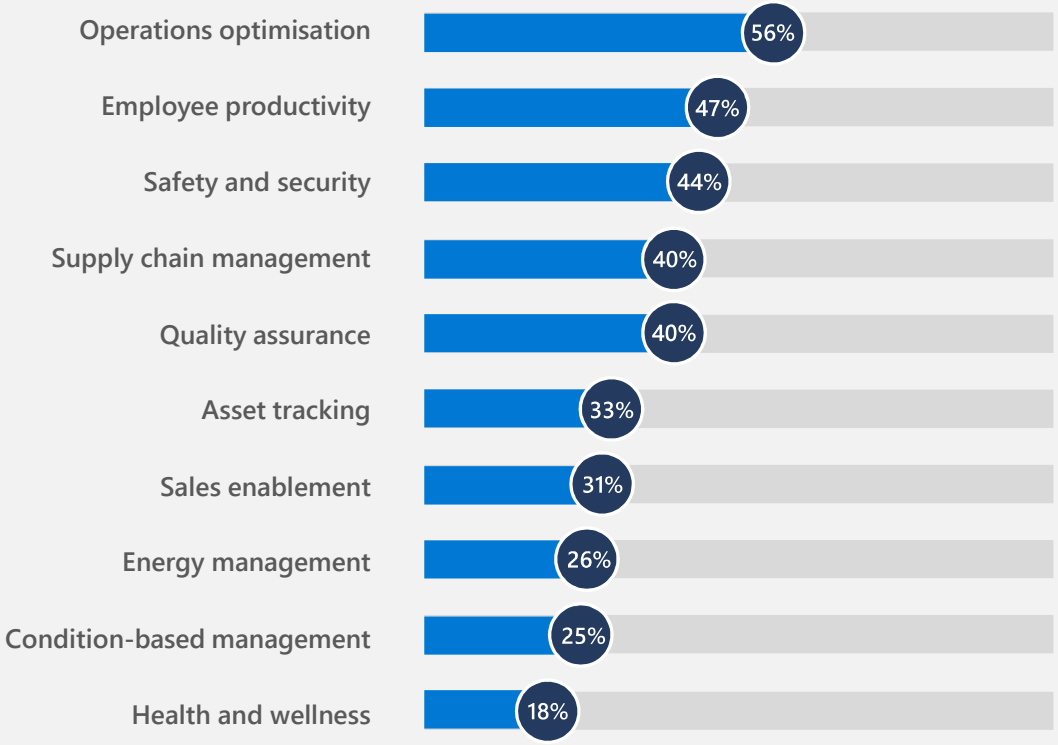
TS5 Changed the order - Chimene what we are talking about today last
Tim Symonds, 11/3/2019

TS6 AS you have the last point - do you want to do the segway?
Tim Symonds, 11/3/2019

TS7 Your style
Tim Symonds, 11/3/2019



Reasons for IoT adoption



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Challenge #1

Connecting devices – IoT Plug & Play

Challenge #2

Tech Complexity - IoT Central

Challenge #3

More IoT traffic creates more data

IoT in Action

We had a similar challenge in the past...

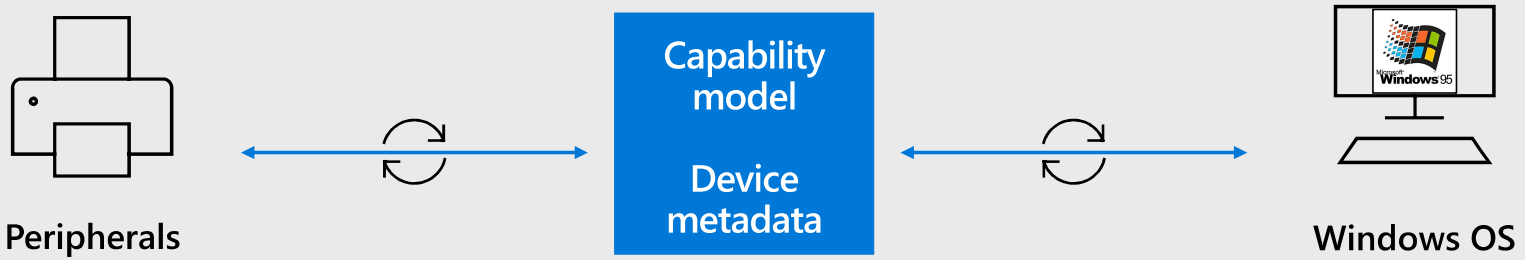
Challenge #1

Peripherals

Windows OS

That was solved with Windows Plug and Play

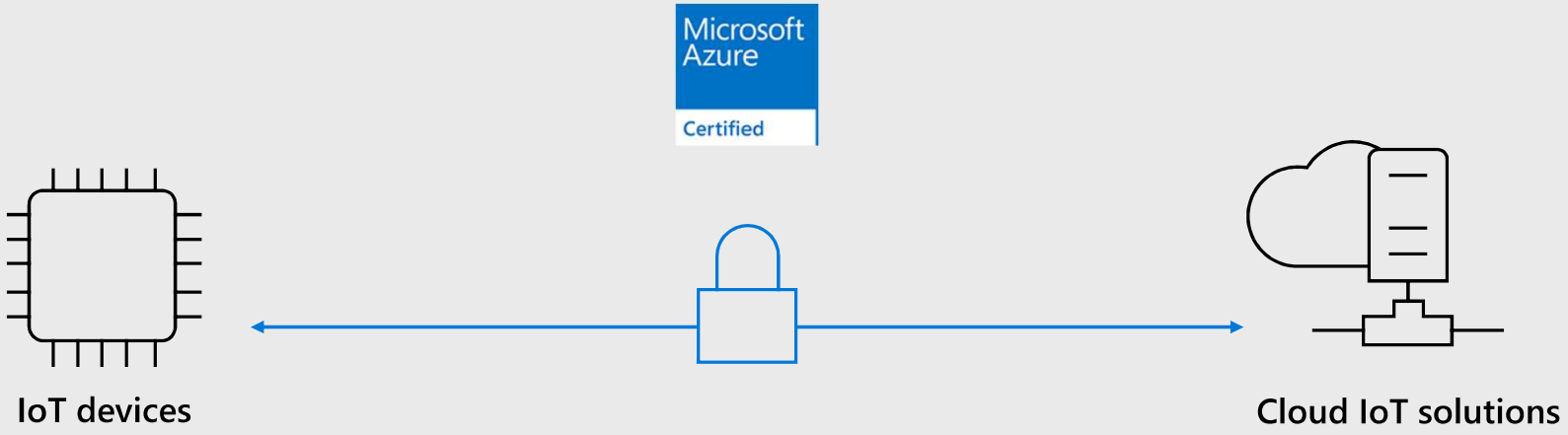
Challenge #1



Devices published their capability models and adhered to them
Windows used the capability model to know how to interact with them

IoT today

Challenge #1 ✓



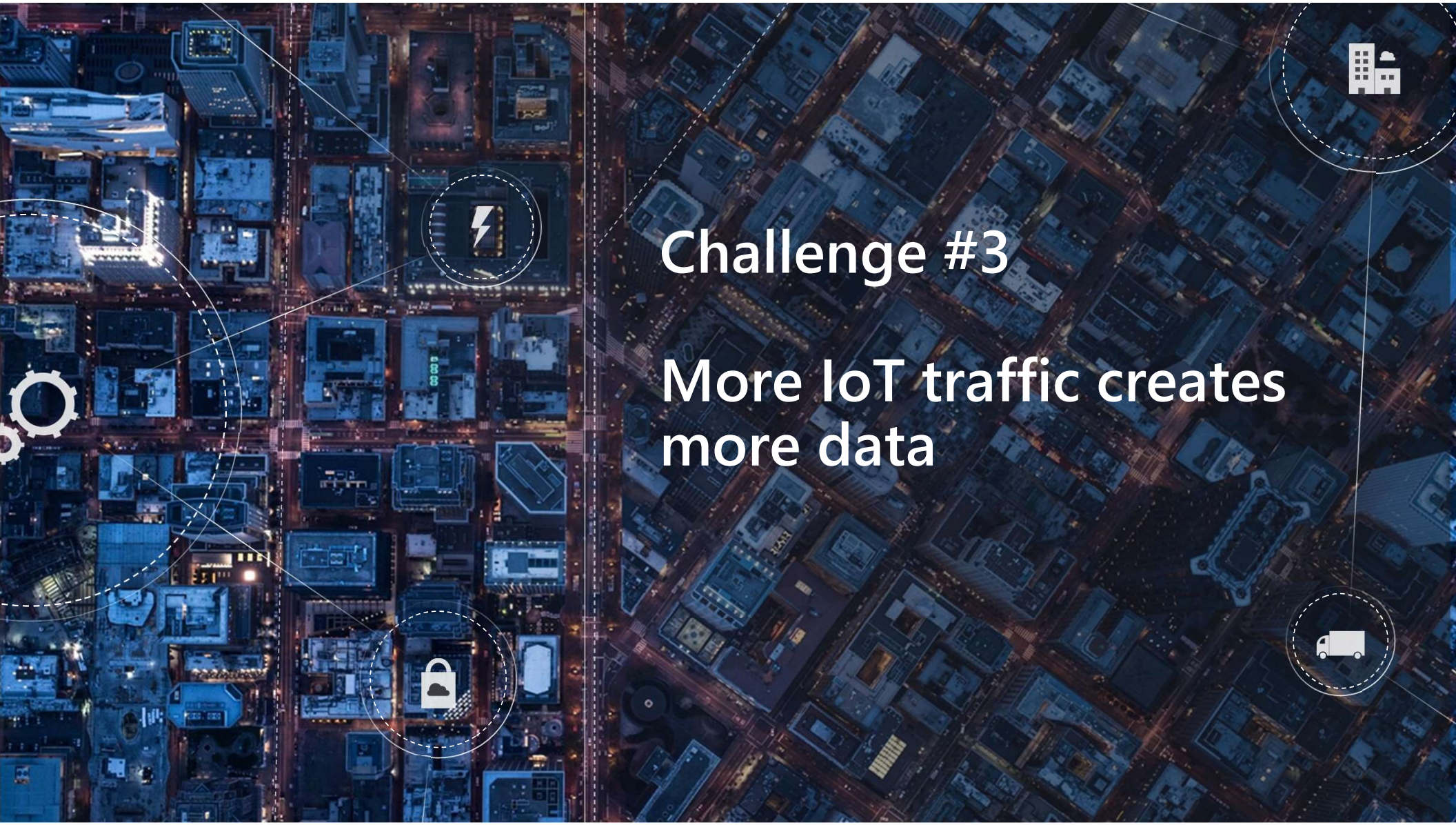
Tight coupling between software on device and IoT solution in the cloud

IoT Central

Challenge #2

- SAAS – Industry Templates
- User and identity management
- No code/Low code
- Device management
- Analytics & dashboards
- TSI – Azure Maps
- Alerts and actions

IoT Edge


Challenge #3
More IoT traffic creates more data

Microsoft

Architectural Design Sessions

IoT in Action

TS4

Slide 11

TS4 Should we move this in front of the ADS slides?
Tim Symonds, 11/2/2019

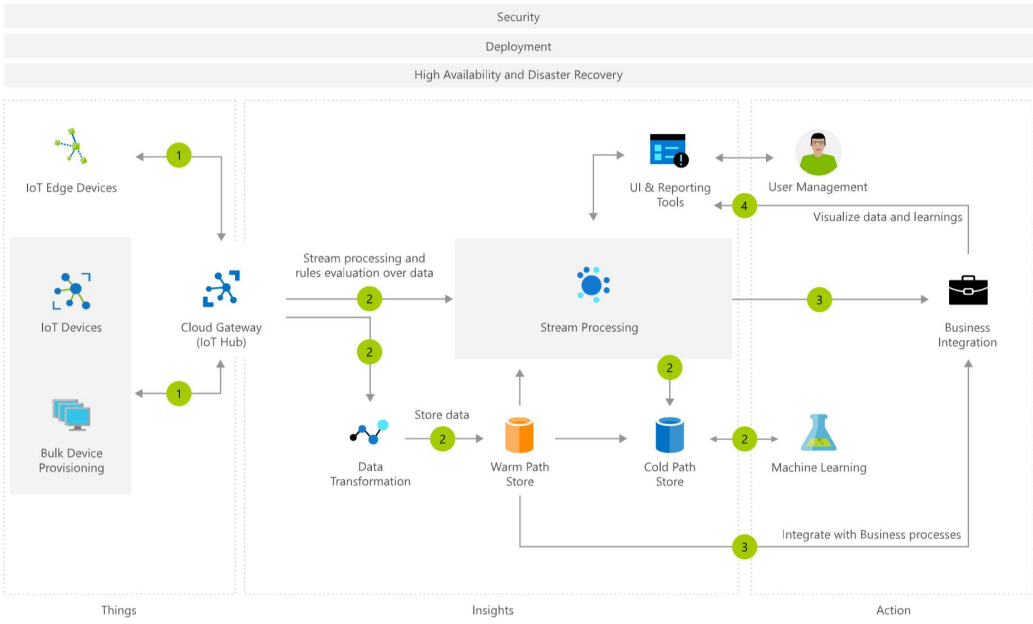
Azure IoT Subsystems

1. Devices send telemetry records or events to the cloud gateway

2. The following steps happen in parallel:
   - Steam processing & rules evaluation is done for device telemetry records & events.
   - Device telemetry data is transformed (if needed).
   - Device data telemetry is stored.

3. Business process integration is executed.

4. Device information is visualised & displayed in the UI.



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Challenges for teams

Organisational

Teams often work in a bit of a ‘silo’

Mismatch in skills to move beyond experimentation

Limited ROI on investments

More need for structure in projects

Development teams not working at same release cycle

Technology / Process

Going from experimentation to production

Scale from local prototyping to larger data sets / compute.

Device deployment and management

Monitoring devices in production

Lineage, auditing and explanability

Architectural design sessions with Microsoft

How you benefit

Get direct assistance
from Azure Experts

Learn how to develop
successful Azure deployments

Accelerate deployment
of Azure solutions

What these programs provide

DISCOVERY

Help defining your business vision
and goals and assessing your
architectural needs

SOLUTION ENABLEMENT

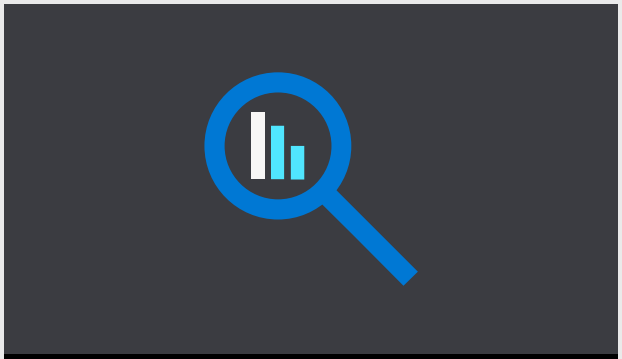
Proven practices, design principles,
and tools for your business applications

DEPLOYMENT

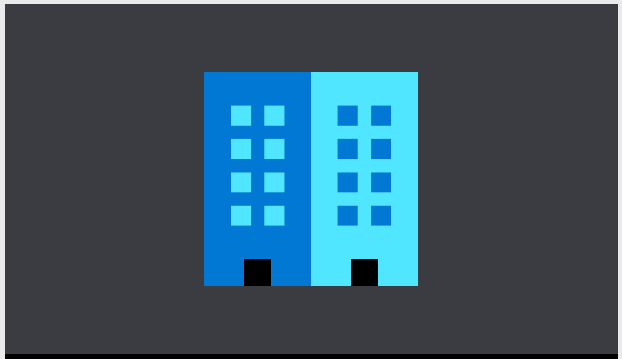
Collaboration with your
in-house resources and partners
to successfully deploy your
Azure solutions to production

Making it happen

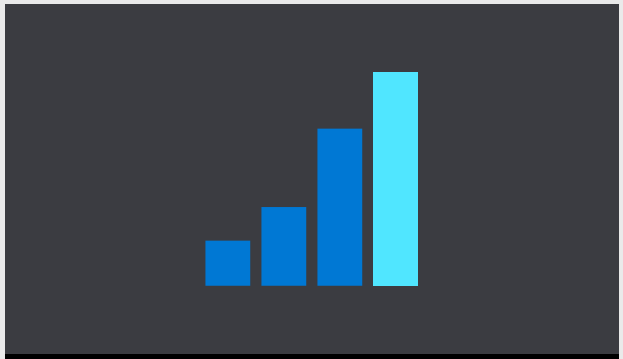
Architectural Design Sessions



Art of the possible workshop



Business transformation workshop



Solution accelerator workshop

Partners make more possible

Jourdan Templeton

CTO

We leverage audio, video and IoT data to build AI solutions for our customers.

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Port Otago
Noise Classification


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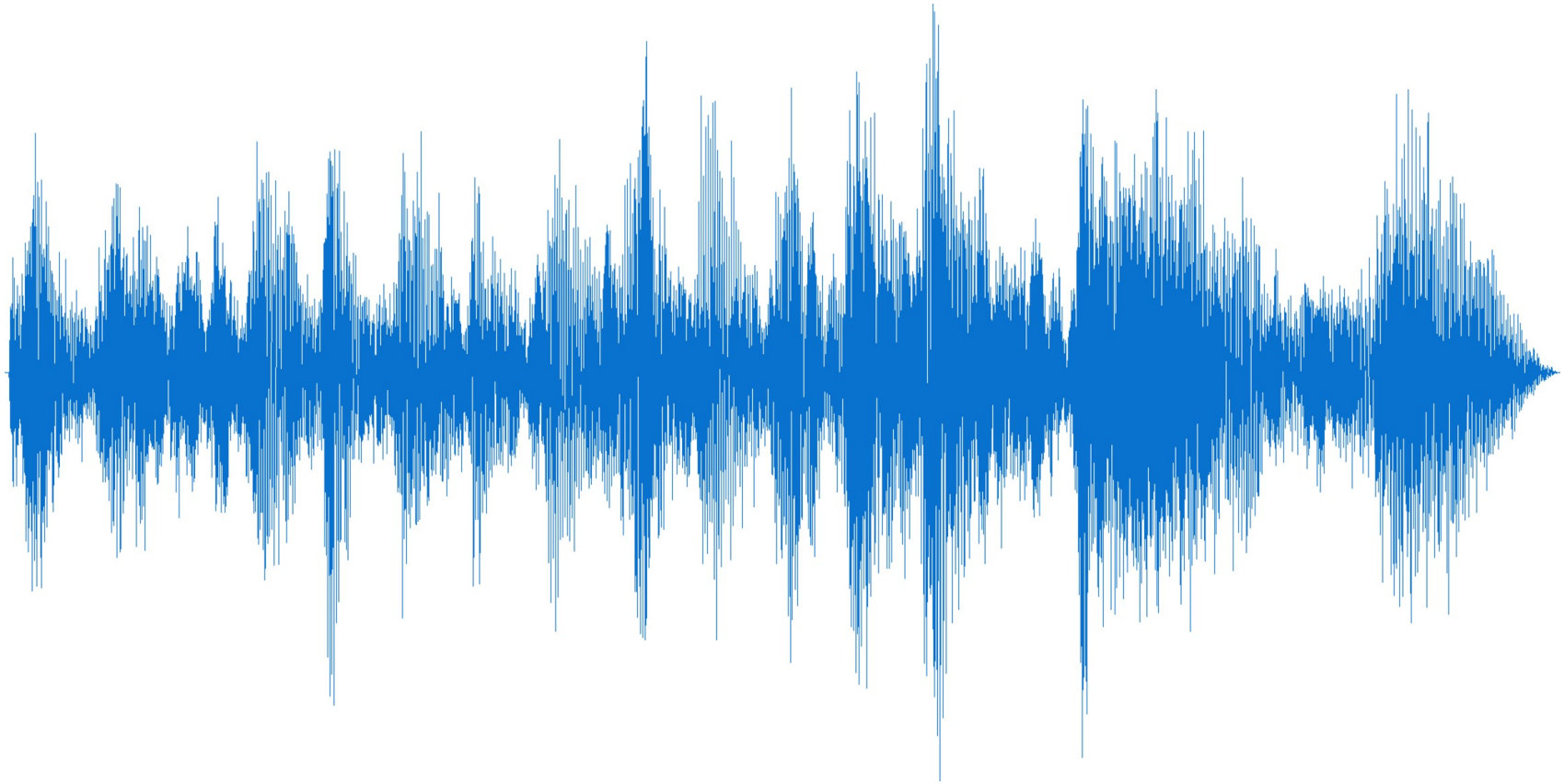
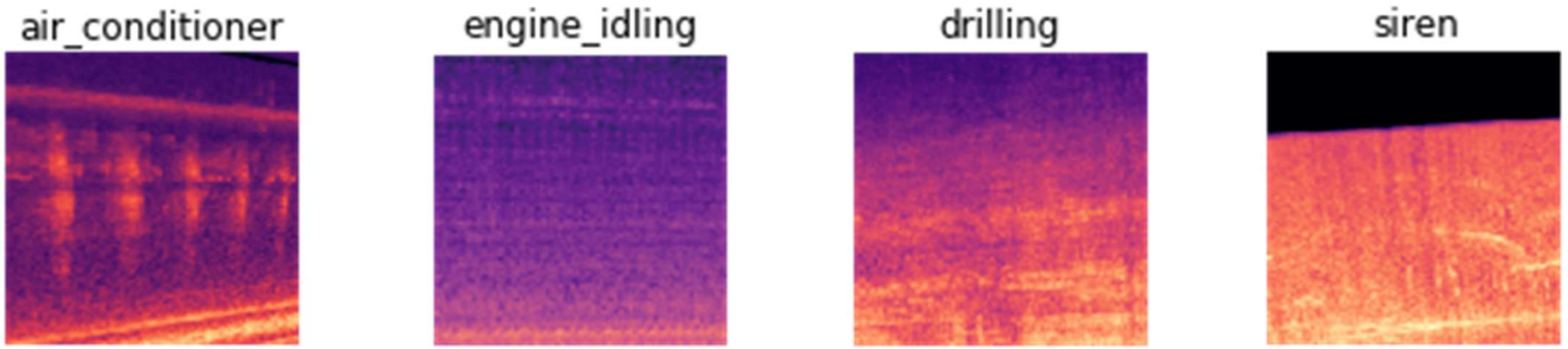
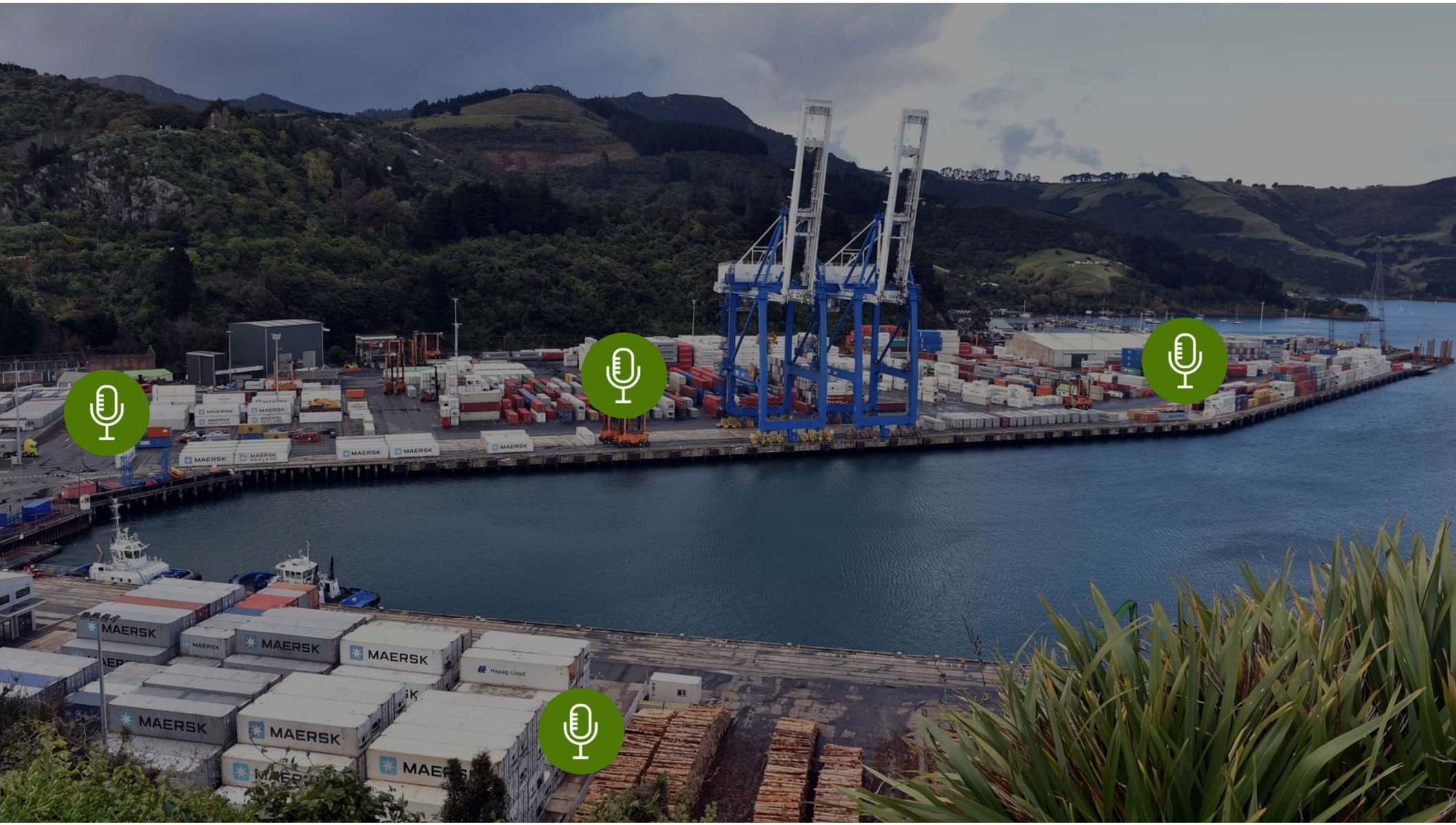
Digital Signal Processing



Computer Vision on Audio

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Winner
AZURE INNOVATE AWARD
AWARE
GROUP
PORT OTAGO

Audio Classification Demo

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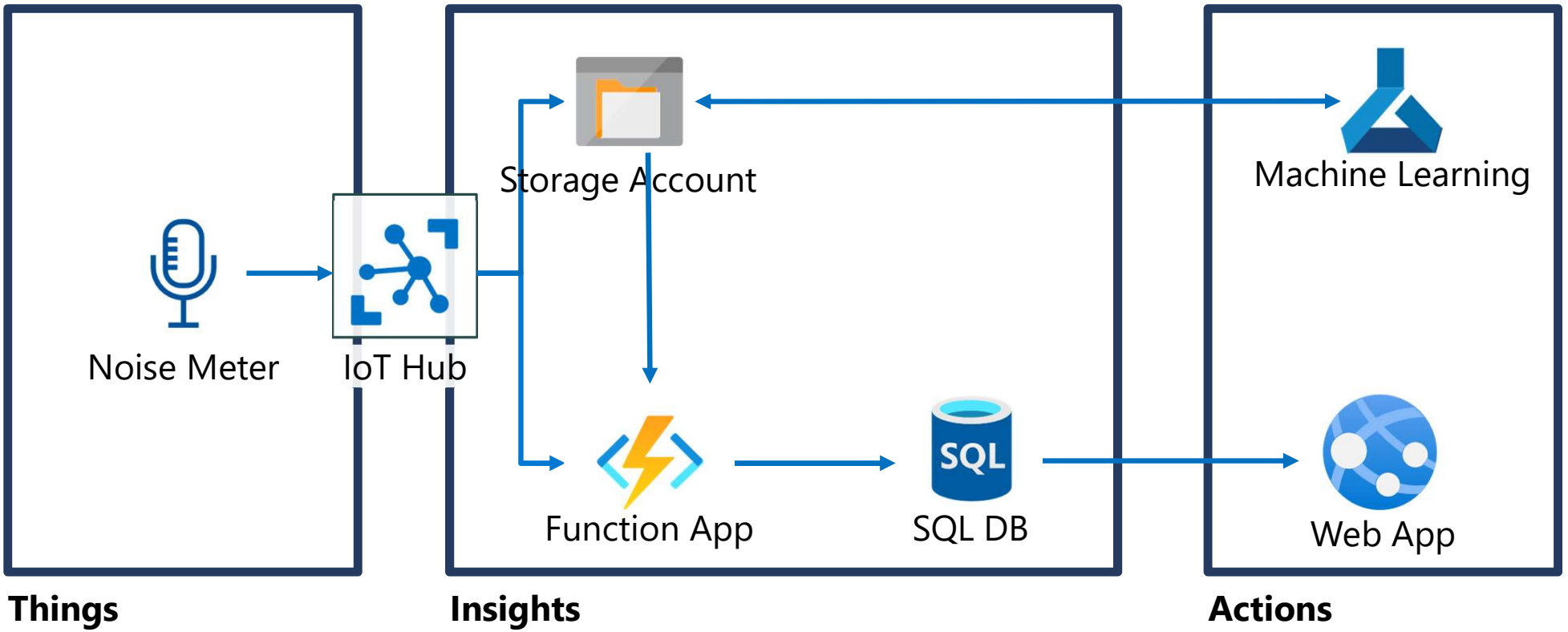
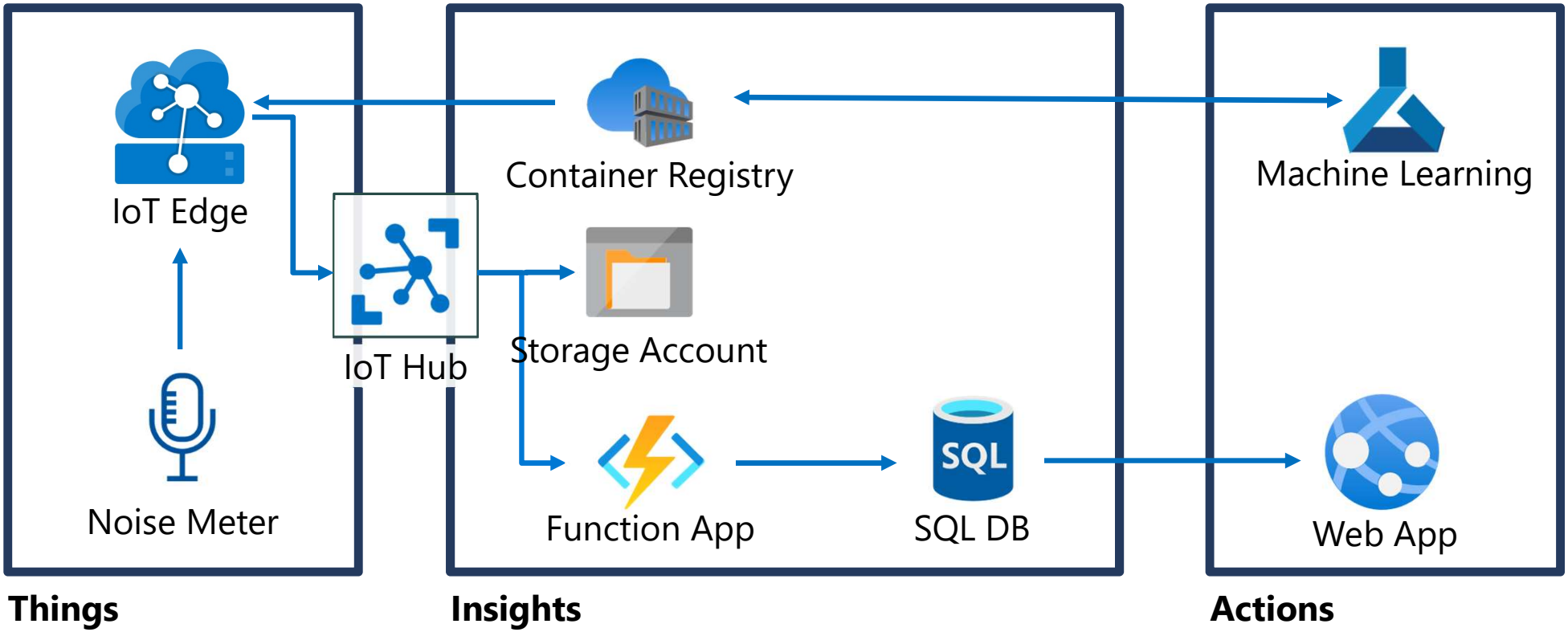
Architecture v1



Architecture v2



Let’s work together.

Find us at the expo area and at:
www.awaregroup.com
info@awaregroup.com

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Microsoft Azure

Azure IoT

Transforming your business

Version 09-17-19 v1

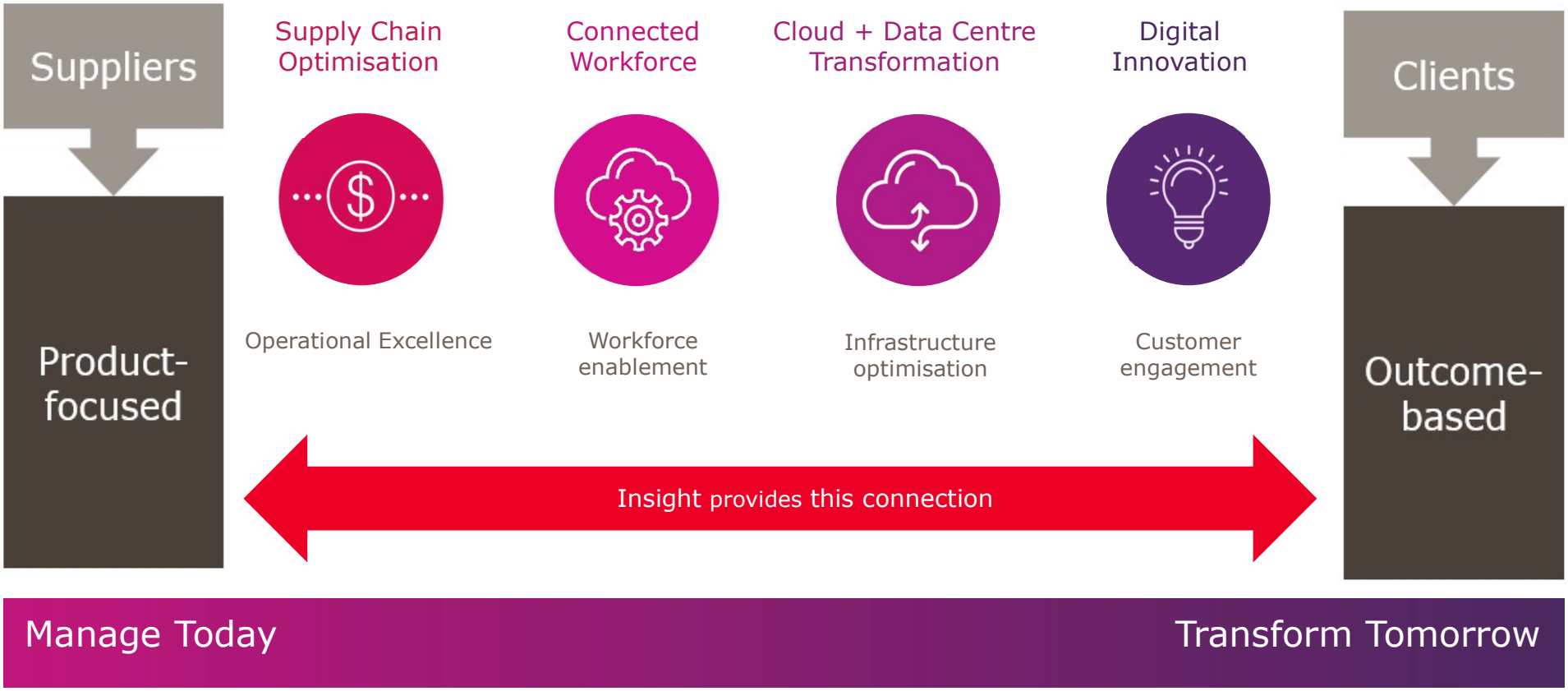
Insight®

Richard Lee

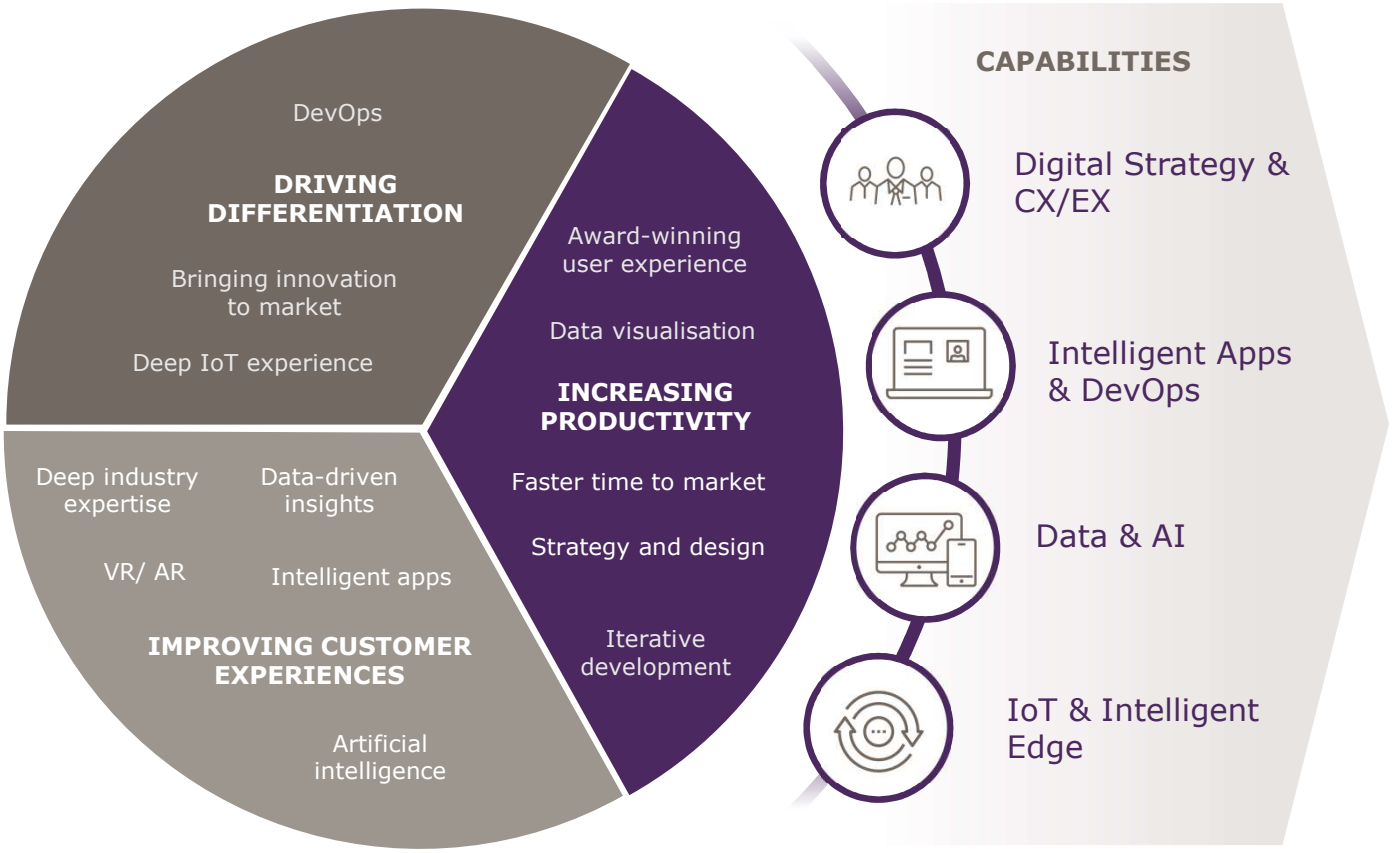
Principal Consultant

IoT in Action

We help you achieve your goals



Our approach



What’s standing in the way of situational awareness?

A gap in communicating and monitoring situations

Currently, there are no reliable ways to detect threatening situations and communicate specific details about those threats to large numbers of people at the same time.

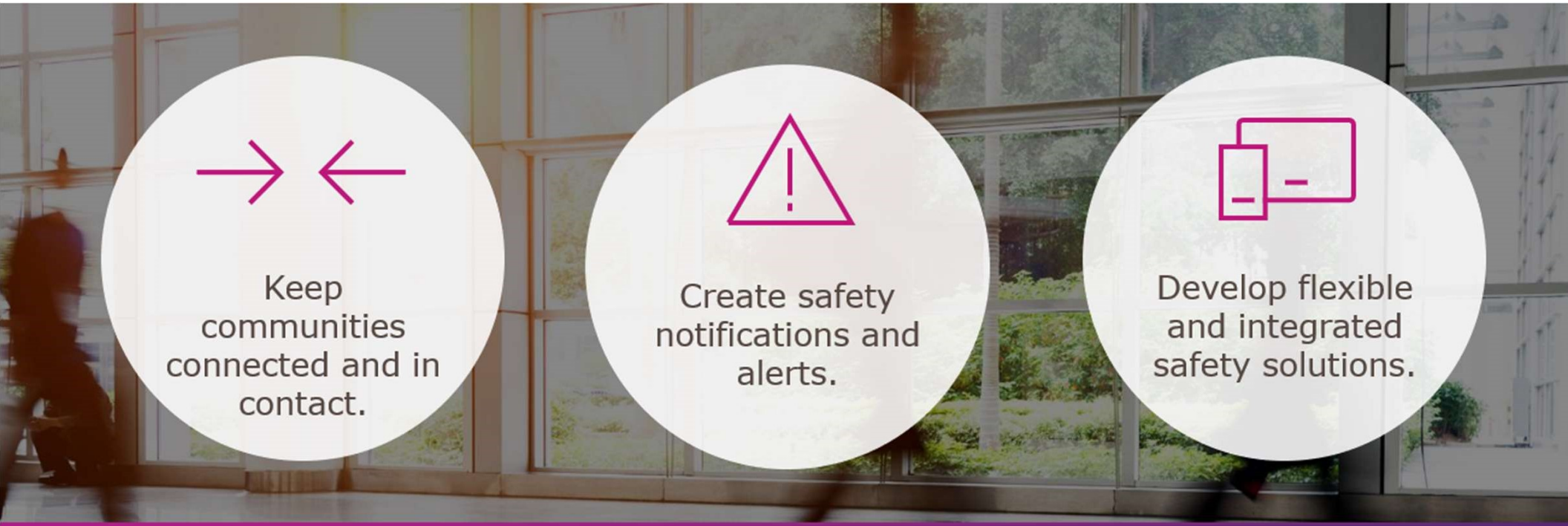
No two-way communication

Because it’s difficult to manage and control mass communication, security operations are often challenged to make judgement calls to mitigate or resolve situations. Additionally, there are no formal channels of communication between authorities and the general public.

A lack of standardized processes

When it comes to public safety, it’s imperative to put standardized procedures in place to maximize safety, help people remain calm and informed, and target efforts to resolve issues quickly.

So how can we create situational awareness?



Examples of extending the platform

In-room buttons

Once pressed, alarms send alerts to the Safe Spaces emergency notification system.

Color-coded lights

Signals based on proximity to danger guide people to safety with red, yellow and green illumination.

Sound sensors

Installed sound indicators help you monitor unusually loud noises so you can send someone to investigate.

Interactive floorplans

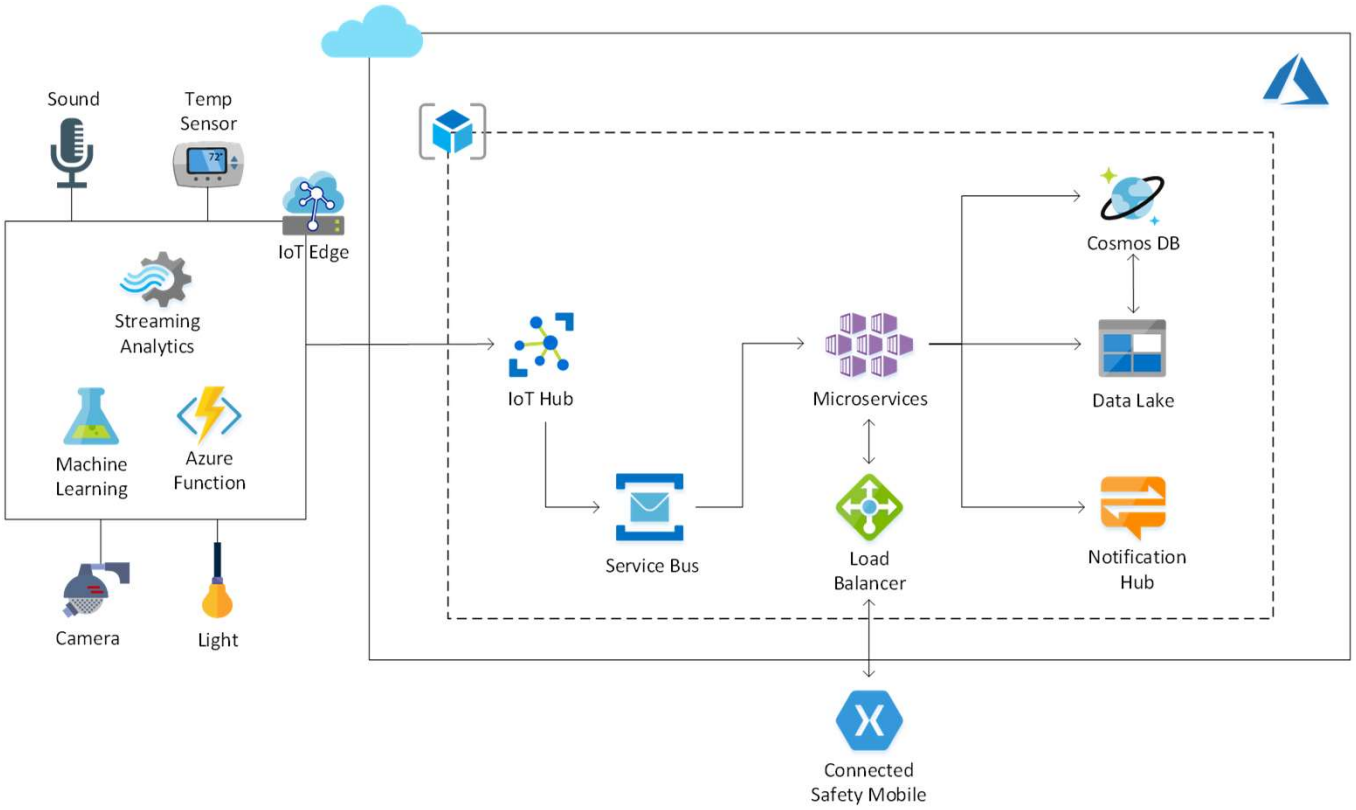
Provide administrators and first responders with immersive building plans for accurate reporting.

Security systems

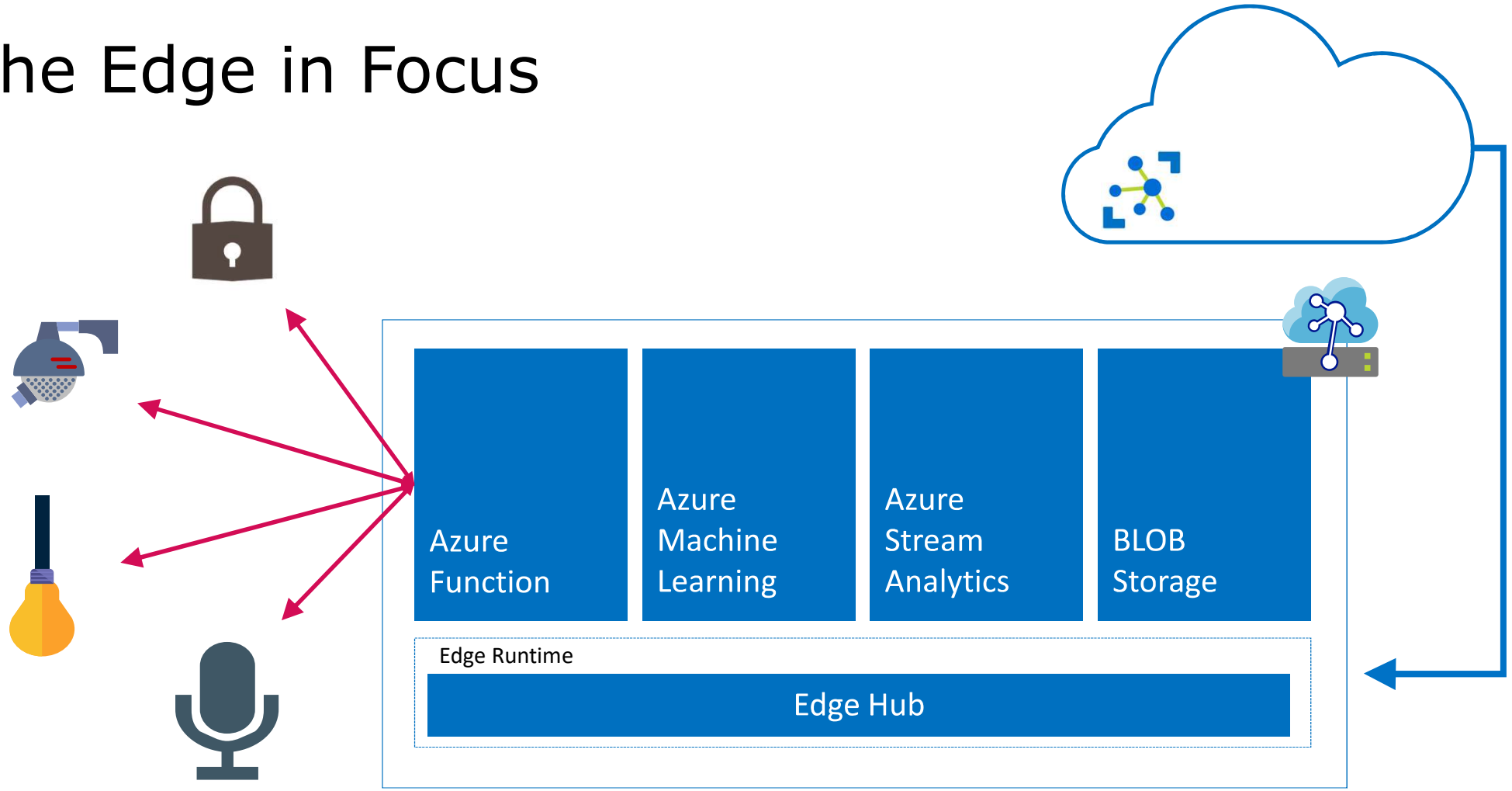
Integrate security camera systems, alarms and access control panels to ensure safety across buildings.

DEMO HERE

Overall Architecture



The Edge in Focus



Insight

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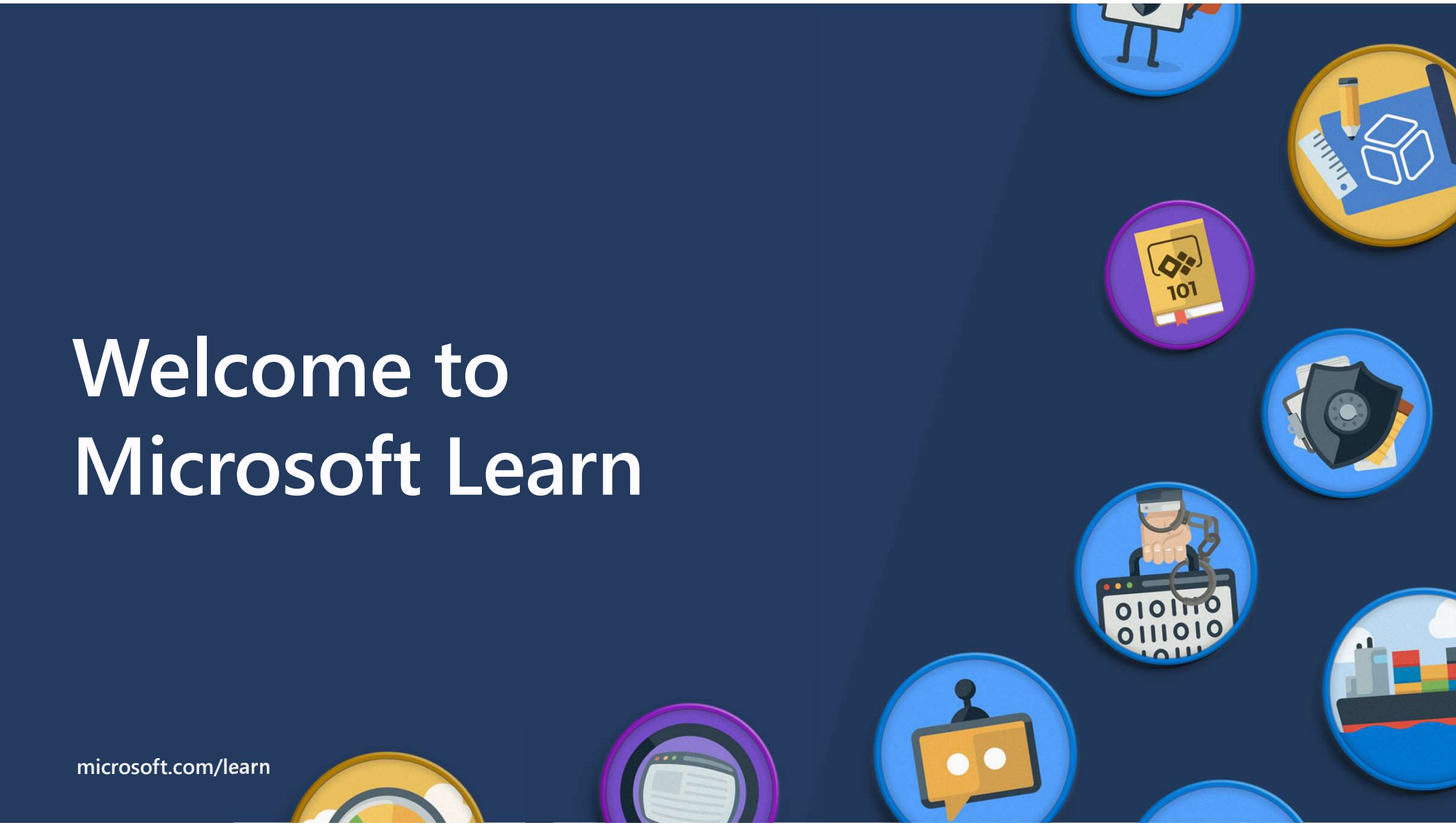
Welcome to Microsoft Learn



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Time investment expectation

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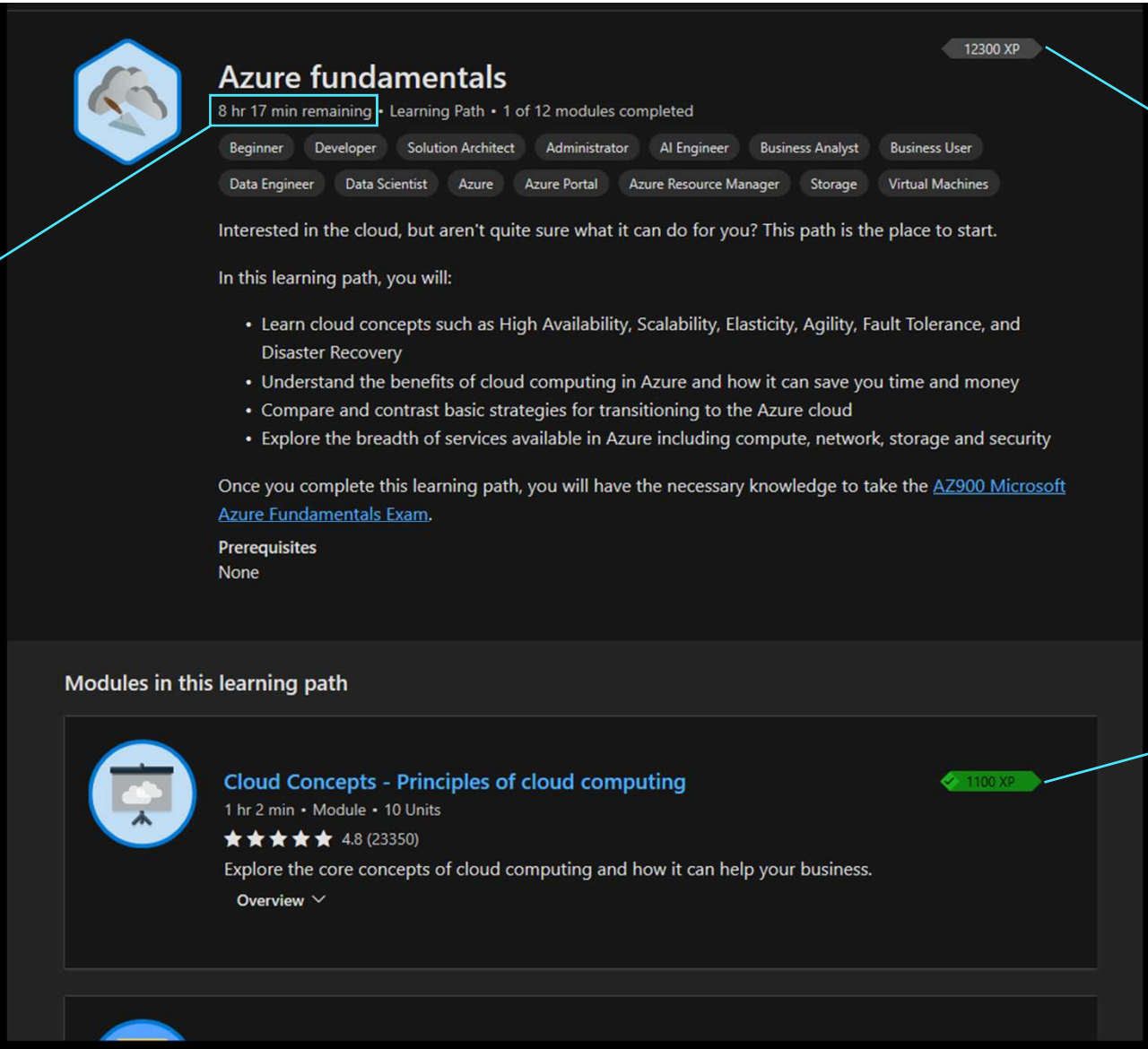

Total XP= 12,300

Module XP= 1,100

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