Microsoft

Building Intelligent Edge Solutions

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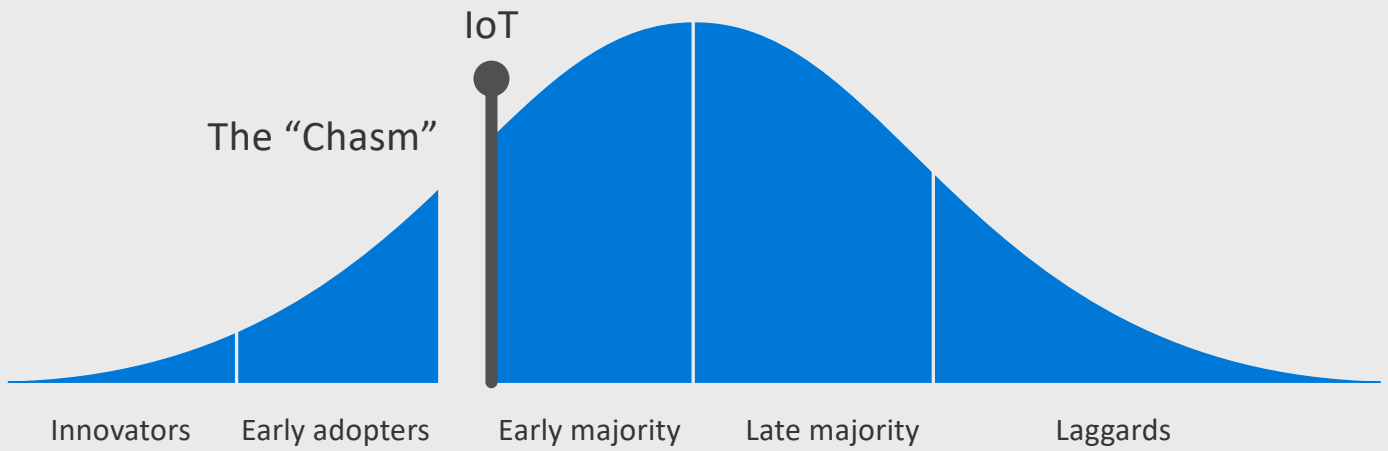
IoT Solution Architect

Tallinn, 29/05/2019

The Revolution Is Now



80 Billion

Connected “things” by 2025 - *IDC*

180 Zettabytes

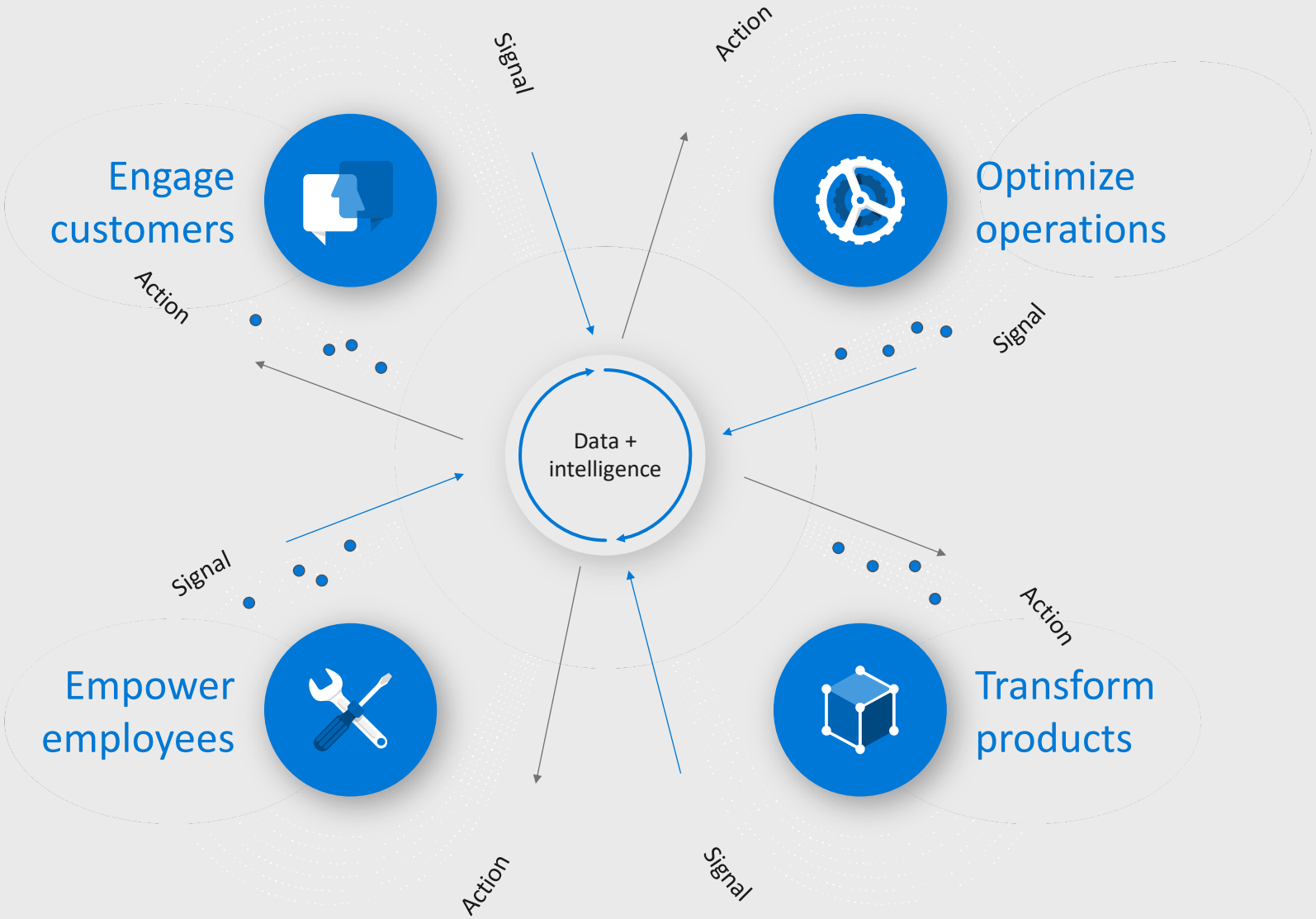
Digital data by 2025 - IDC

$457 Billion

Global IoT market by 2020 - Gartner

Innovation at Work: Real IoT Use Cases

IoT Enables a Digital Feedback Loop



Microsoft is simplifying IoT

Microsoft is simplifying IoT

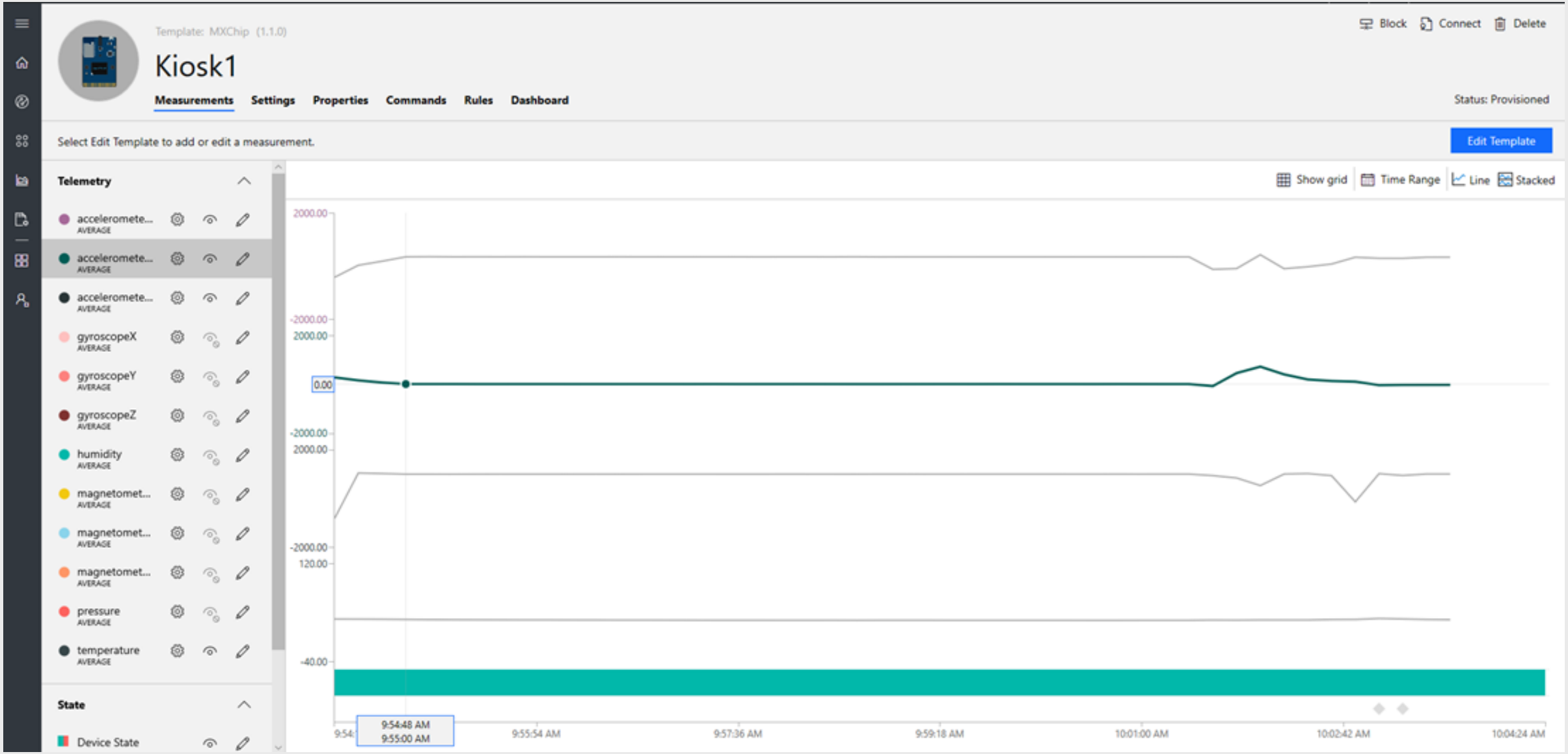
- Easier to build secure, scalable solutions from device to cloud

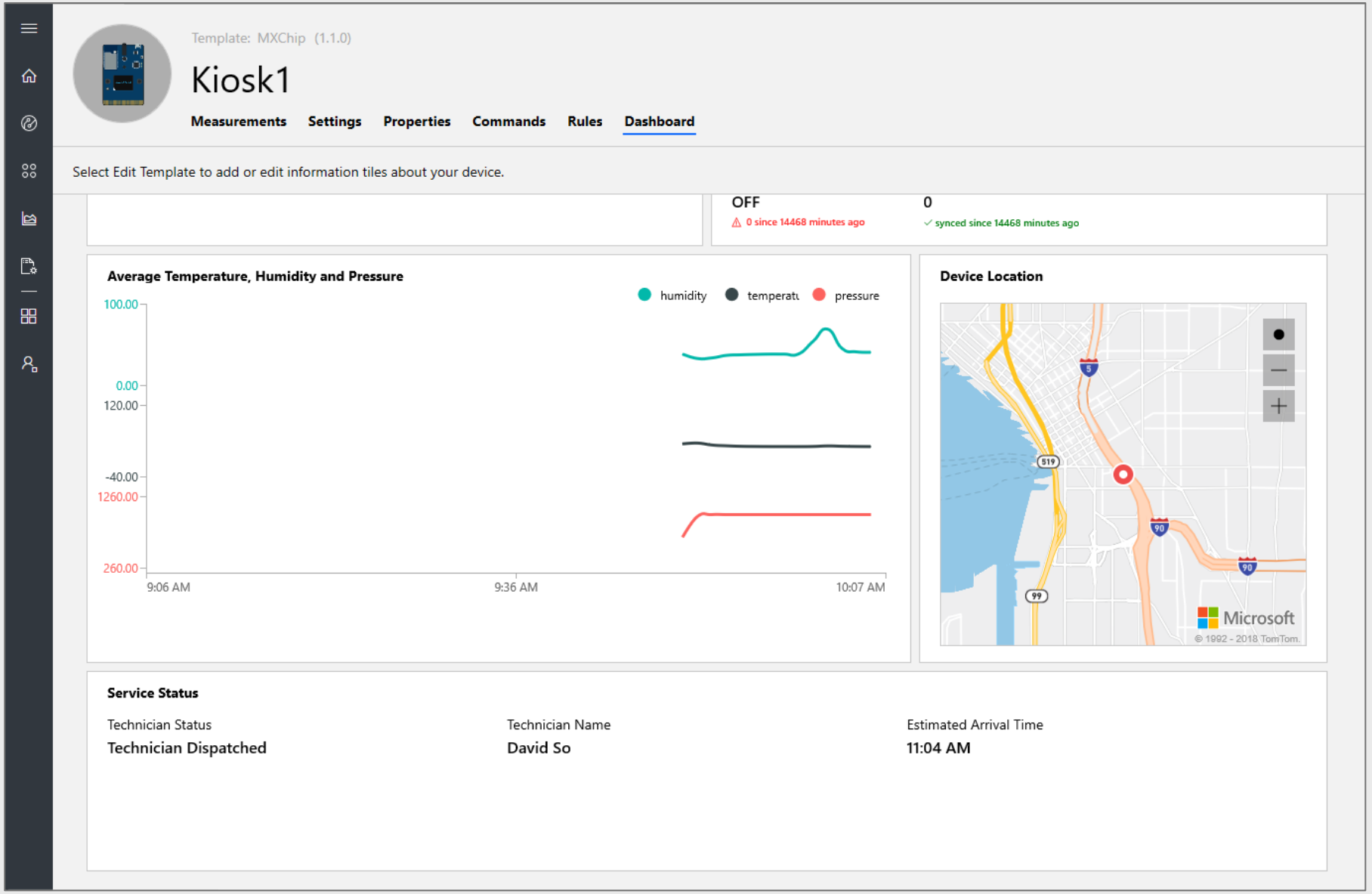
- Easier to provision devices at scale
- Easier to secure devices at scale
- Easier to manage devices at scale

- Easier to find insights from your IoT devices

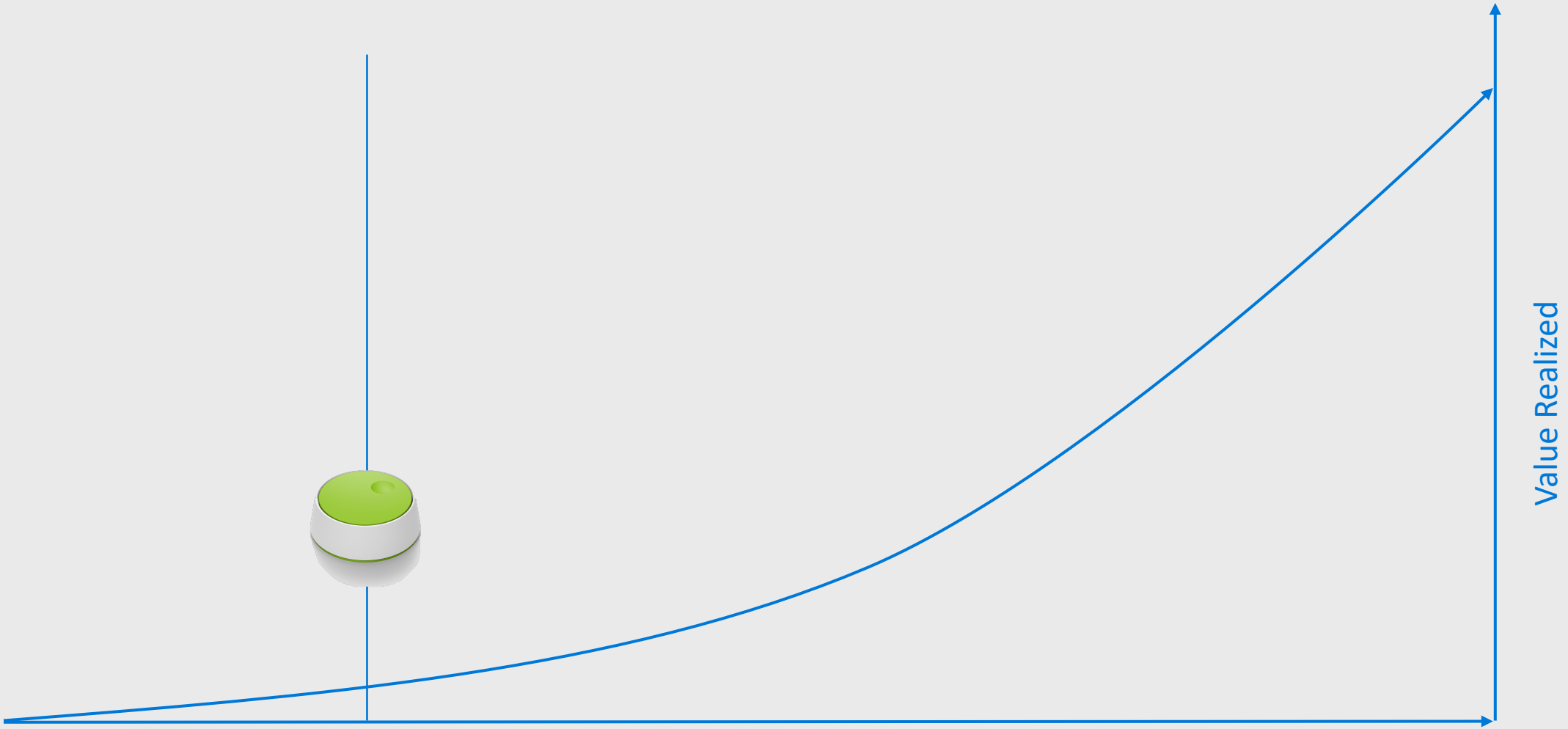
- Easier to run cloud services on devices

- Easier to benefit from IoT


Template: MXChip (1.1.0)
Kiosk1
Block
Connect
Delete
Measurements
Settings
Properties
Commands
Rules
Dashboard
Status: Provisioned
Select Edit Template to add or edit a measurement.
Edit Template
Telemetry
accelerometer... AVERAGE
accelerometer... AVERAGE
accelerometer... AVERAGE
gyroscopeX AVERAGE
gyroscopeY AVERAGE
gyroscopeZ AVERAGE
humidity AVERAGE
magnetometer... AVERAGE
magnetometer... AVERAGE
magnetometer... AVERAGE
pressure AVERAGE
temperature AVERAGE
State
Device State
Show grid
Time Range
Line
Stacked
2000.00
-2000.00
2000.00
0.00
-2000.00
2000.00
-2000.00
120.00
-40.00
9:54:48 AM
9:55:00 AM
9:55:54 AM
9:57:36 AM
9:59:18 AM
10:01:00 AM
10:02:42 AM
10:04:24 AM


Template: MXChip (1.1.0)
Kiosk1
Measurements
Settings
Properties
Commands
Rules
Dashboard
Select Edit Template to add or edit information tiles about your device.
OFF
0 since 14468 minutes ago
0
synced since 14468 minutes ago
Average Temperature, Humidity and Pressure
humidity
temperatı
pressure
100.00
0.00
120.00
-40.00
1260.00
260.00
9:06 AM
9:36 AM
10:07 AM
Device Location
519
5
90
90
99
Microsoft
© 1992 - 2018 TomTom.
Service Status
Technician Status
Technician Dispatched
Technician Name
David So
Estimated Arrival Time
11:04 AM

Scenario #1: Notification of Unsafe Conditions



Seeed ReButton

IoT development tool

- Momentary button
- Multiple click scenarios
- Indicator LED
- Wi-Fi enabled
- Extensible with Grove sensors

seeed studio
The IoT Hardware Enabler

http://www.seeedstudio.com

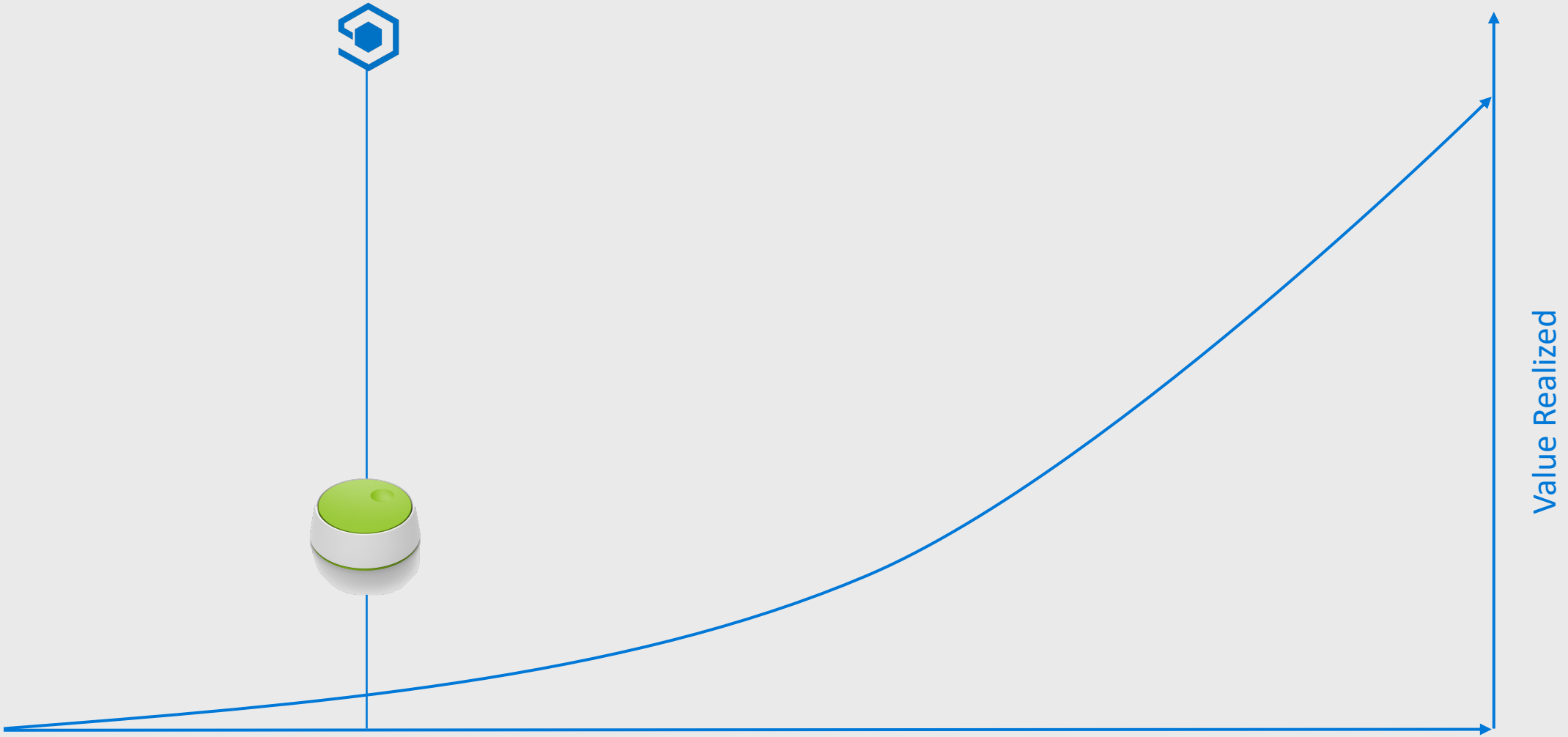
Scenario #1: Notification of Unsafe Conditions

Seeed Button

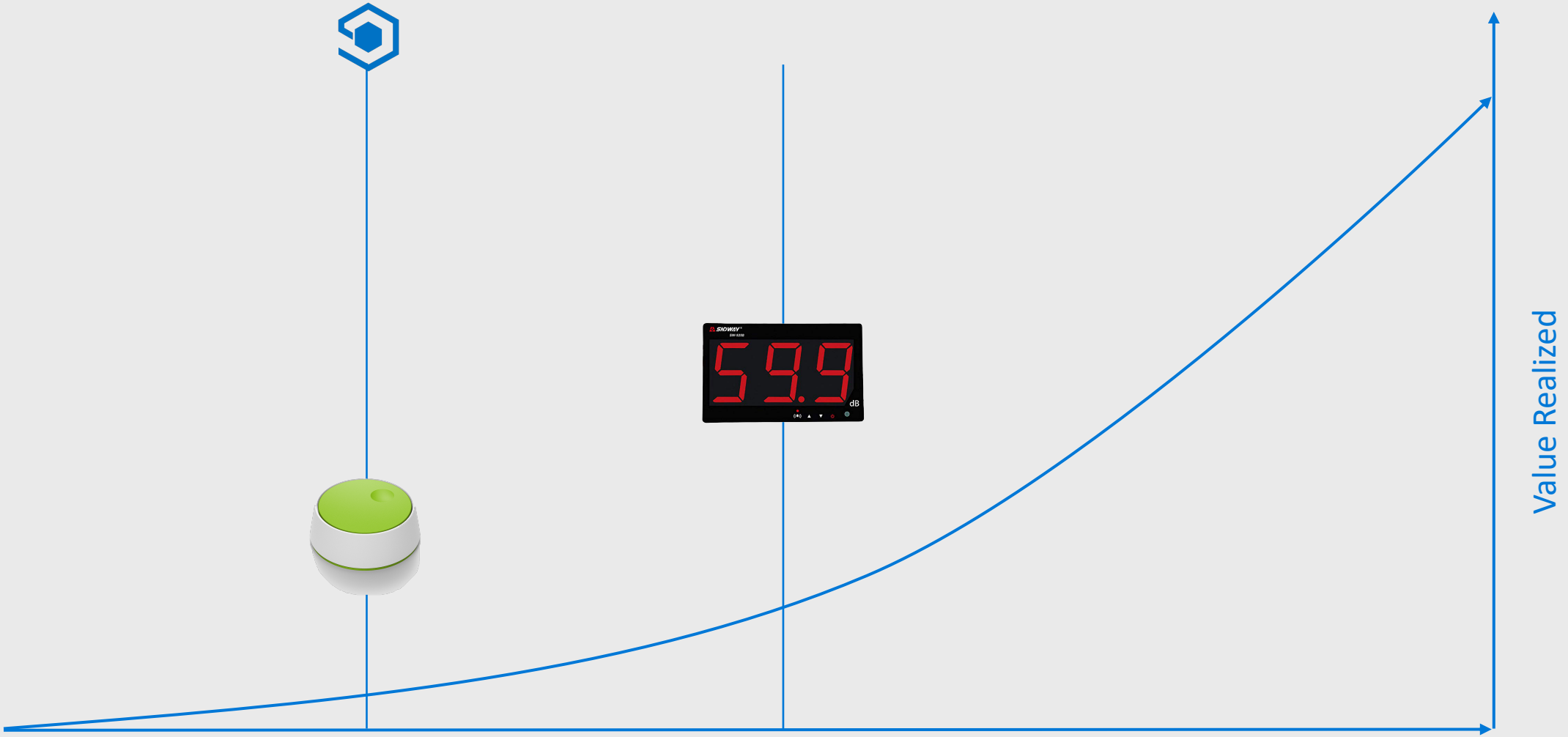
Azure IoT Central

Microsoft Dynamics 365

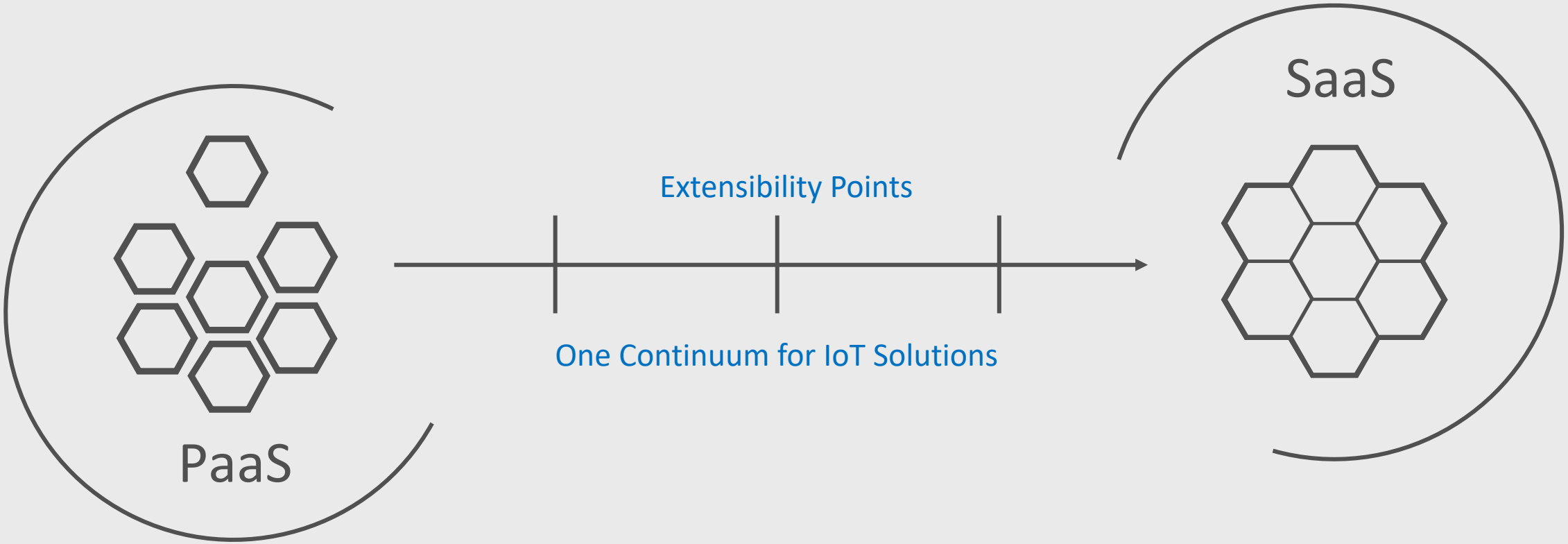
Scenario #1: Notification of Unsafe Conditions



Scenario #2: Protecting Worker Hearing



Choosing PaaS vs. SaaS



Scenario #2: Protecting Worker Hearing

Things

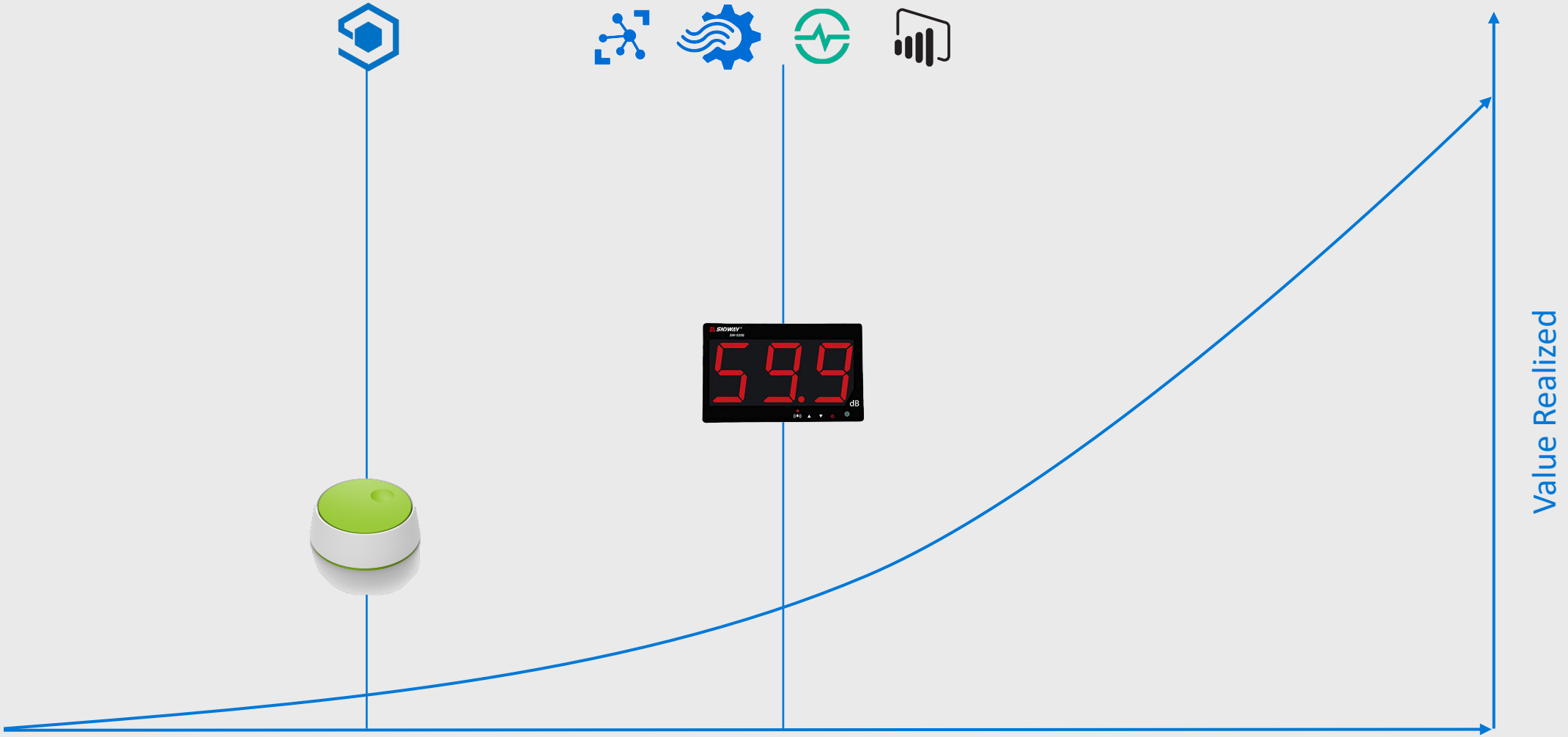
Insights

- IoT Hub
- Azure Stream Analytics
- Time Series Insights
- Power BI

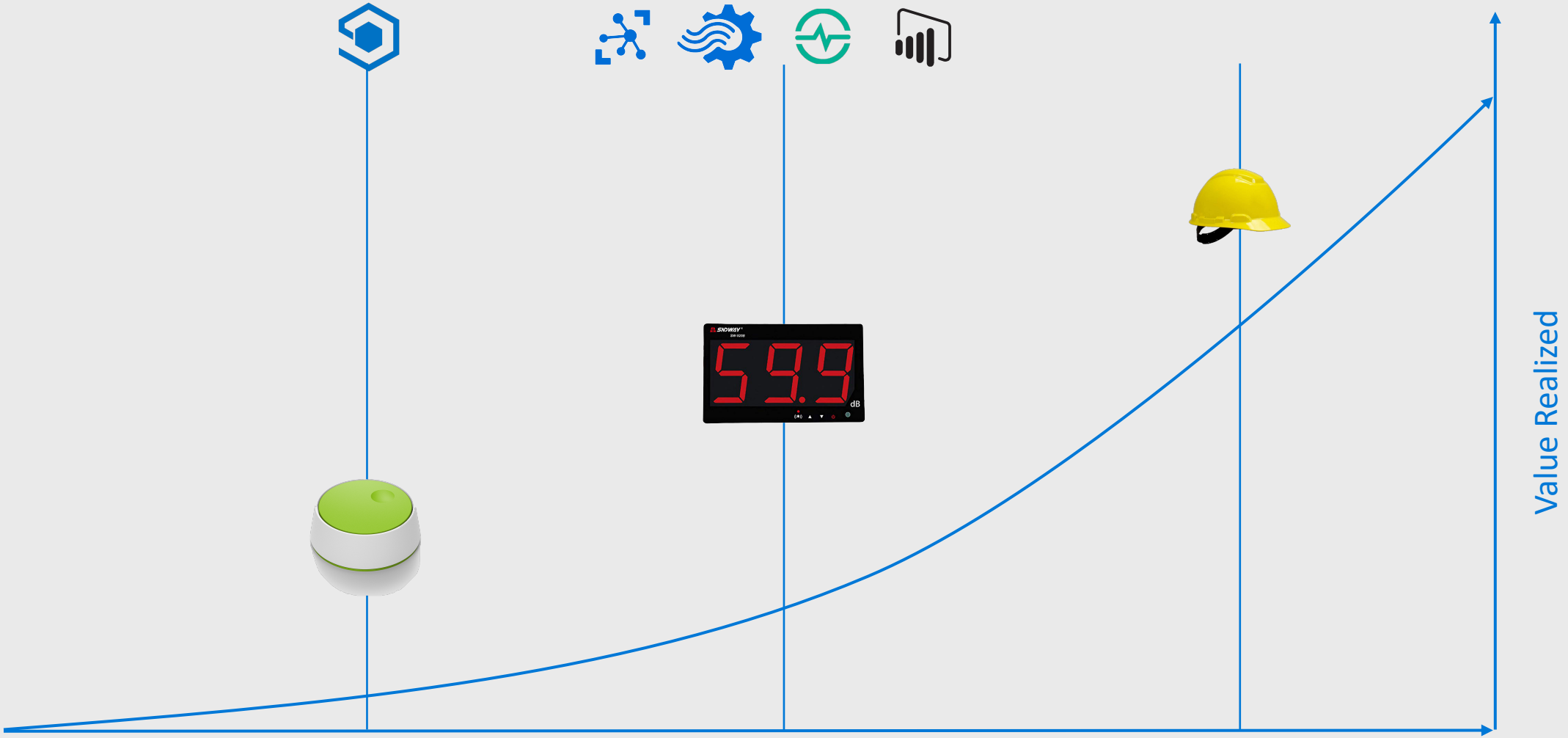
Actions

- Notify worker of danger
- Light signal
- Real-time reporting
- Operational & compliance reporting

Scenario #2: Protecting Worker Hearing



Scenario #3: Ensuring Protective Gear Compliance



Scenario #3: Ensuring Protective Gear Compliance

Things

Insights

- Machine Learning on the Edge
- Vision Artificial Intelligence

Action

- Operational & compliance reporting

Scenario #3: Ensuring Protective Gear Compliance

1st party solution

accelerators

Remote monitoring

Connected factory

Predictive maintenance

Device simulation

your vertical IP

Energy

Smart building/home

Healthcare

Retail

Security and surveillance

Transportation and logistics

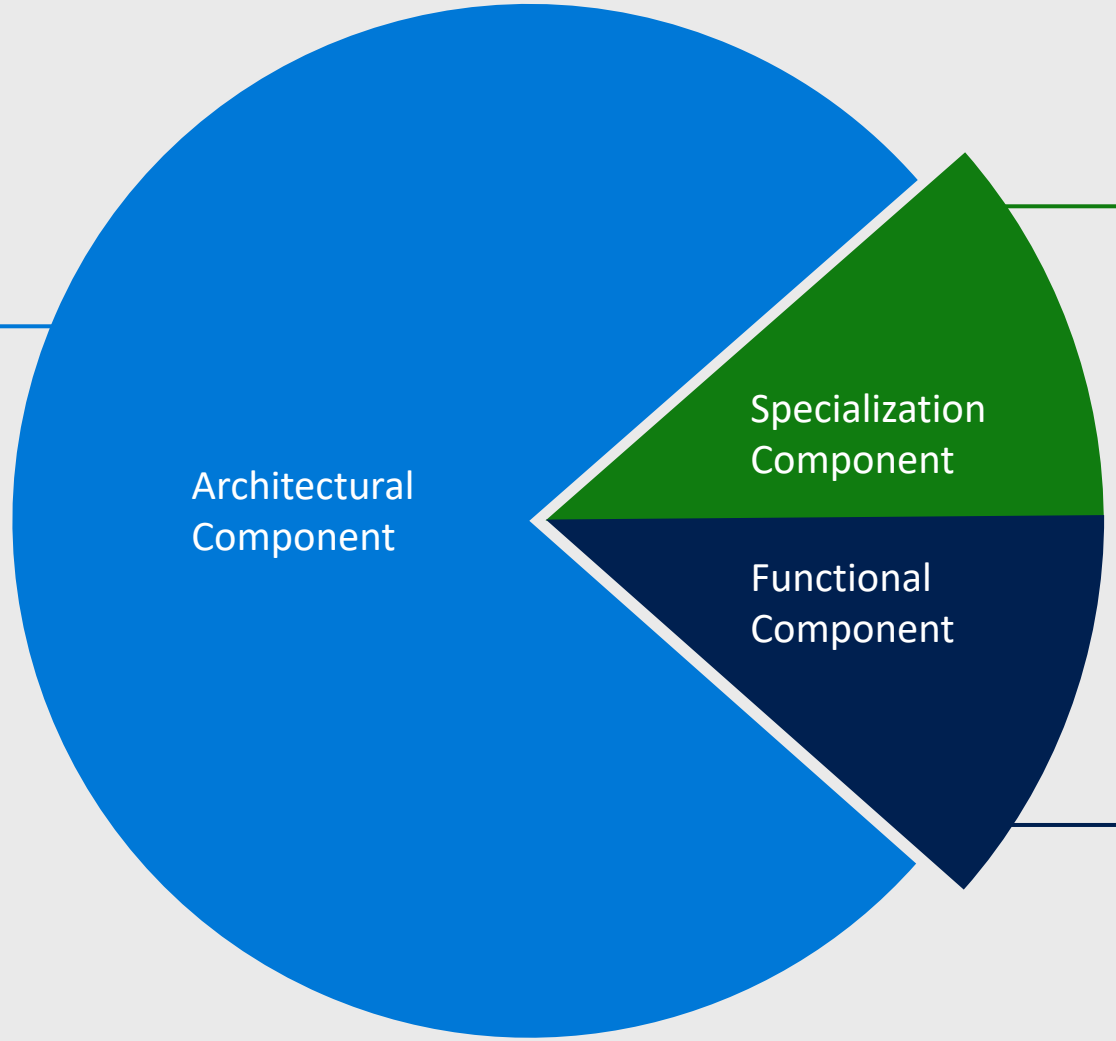
3rd party solution

accelerators

IoT in Action

Microsoft

Anatomy of a Solution built off an Accelerator



Infrastructure for any IoT solution – a generic capability not specific to a solution or use

Partner customization for customers' needs – a solution differentiator

Builds on the foundation making the capability specific to a solution or use case

Thank you!

Microsoft

IoT in Action

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