



IoT in Action

#IoTinActionMS



Architecting the Intelligent Edge

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IoT Solution Architect, Microsoft

IoT in Action





Partners make **more** possible





BSQUARE

Matthew Inglis
VP of Engineering



"Reducing energy consumption is a key part of our business, and is vital for our clients to be competitive"

—Symon Tomlinson, IoT Product Delivery Manager, Arcus Facilities Management

Arcus manages over 1,400 retail facilities throughout the UK

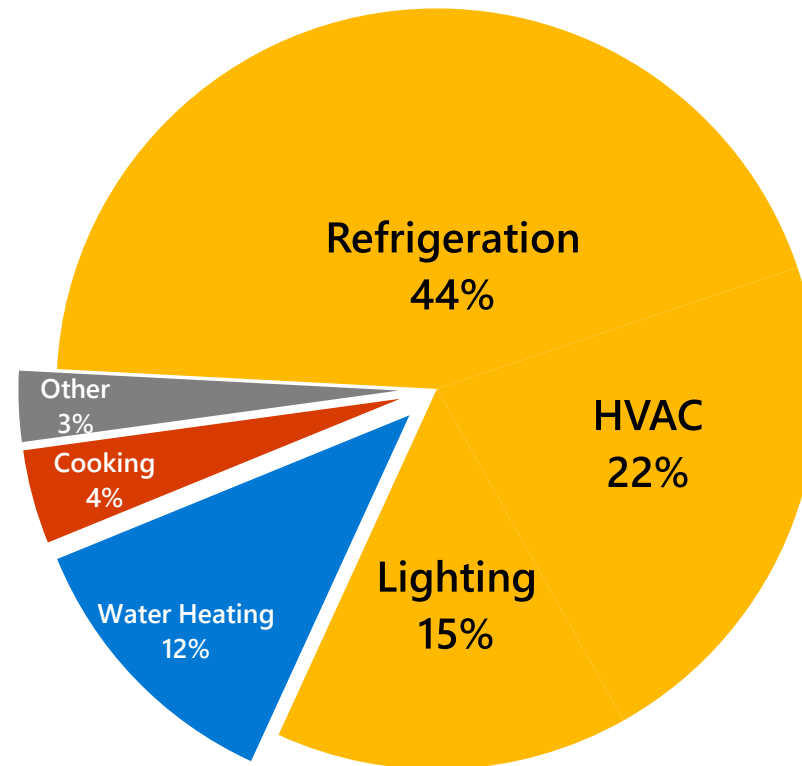


The challenge

- Managing components as a system is challenging
- No solution for managing all locations as a portfolio

Average energy cost per
US grocery store* \$200,000

81%
\$160,000



Source:

<https://www.energystar.gov/sites/default/files/buildings/tools/SPP%20Sales%20Flyer%20for%20Supermarkets%20and%20Grocery%20Stores.pdf>

BSQUARE

PARCUS

Solution features



Manage portfolio of stores



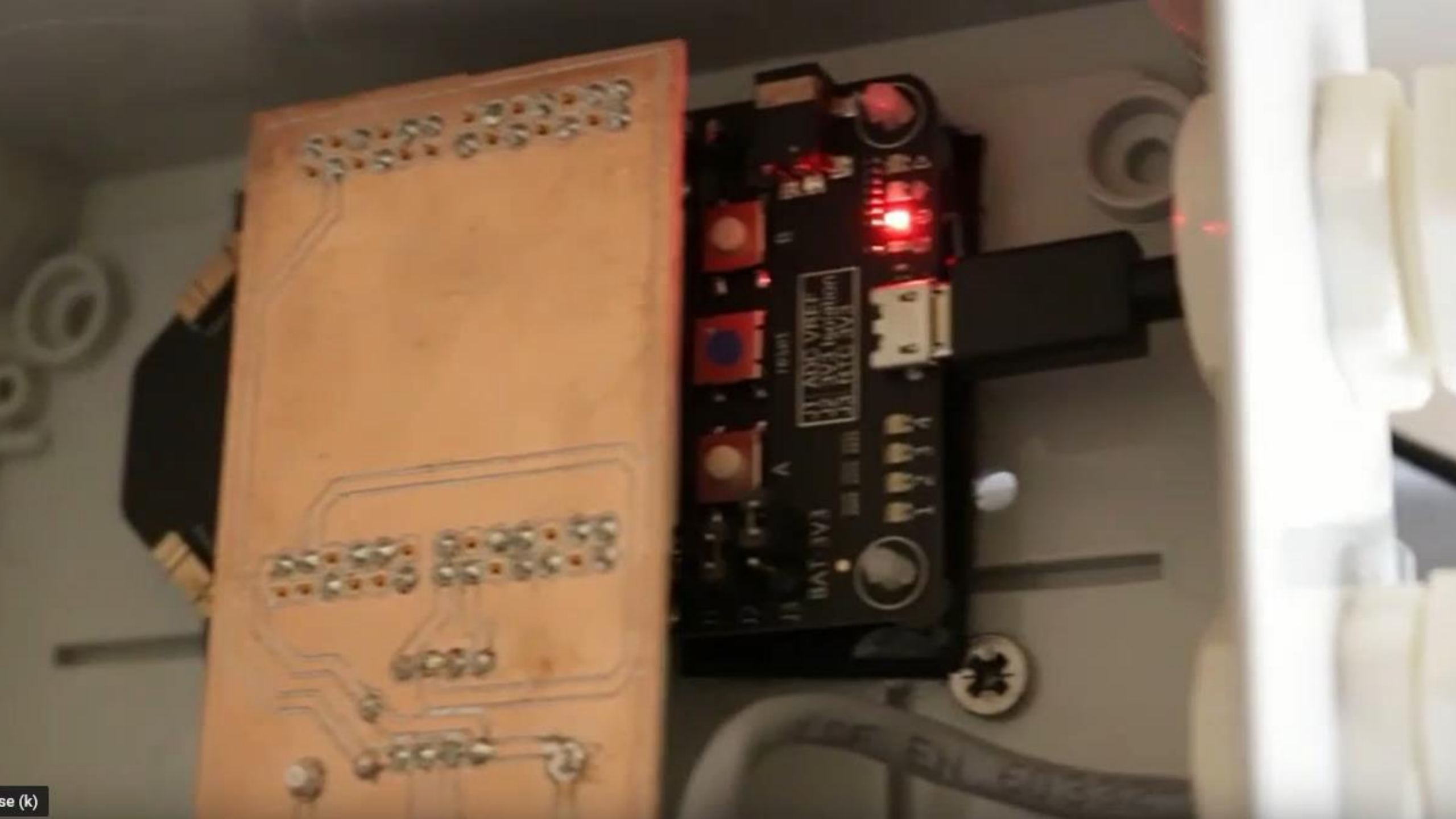
Ingest multiple data sources



Graphical rules engine



Flexible deployment with RESTful APIs





Filter series...



ALL PINNED UNPINNED VALUE NAME

- readings.rpm
- readings.power
- readings.electronicsTemp
- readings.motorTemp

Showing 4 series of 4 total from readings.rpm, readings.power, readings.electronicsTemp, readings.motorTemp



REFRIGERATION ⓘ

Pack WO's

CPT WO's

M&E ⓘ

Hot water WO's

Lighting WO's

WEATHER

Temperature (°C)

Rainfall (mm)

BARNES HIGH STREET
LOCAL

A4226

BARNES LOCAL

A4818

BASINGSTOKE

A0167

BATTERSEA PARK
ROAD LOCAL

A4021

BATTERSEA
RIVERLIGHT LOCAL

A6486

BEACONSFIELD

A0739

DEVELOPMENT

FANS

Last updated a minute ago

NOW

LAST 7 DAYS

LAST 30 DAYS

SPEED (RPM) (0)



355

740.68
AVG

769.32
AVG

SPEED (RPM) (1)



352

898.92
AVG

874.43
AVG

POWER (W) (0)



2

17.92
AVG

18.24
AVG

POWER (W) (1)

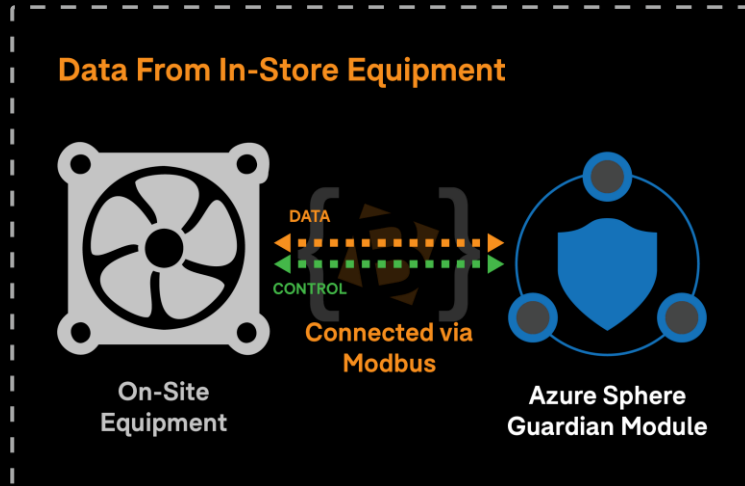


2

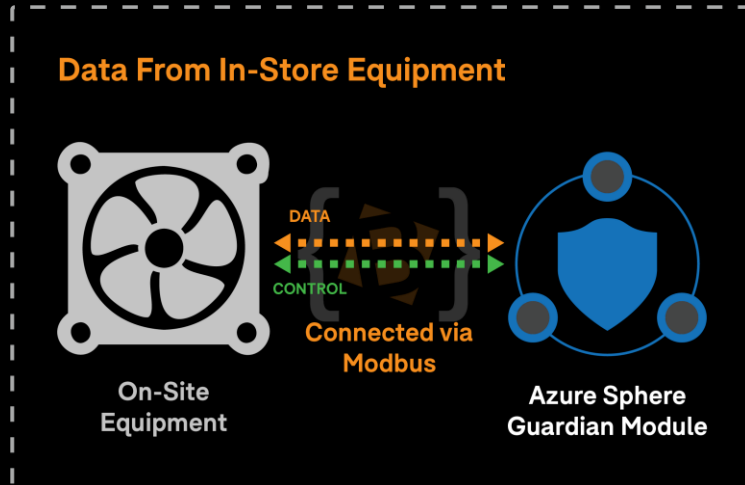
22.08
AVG

21.05
AVG

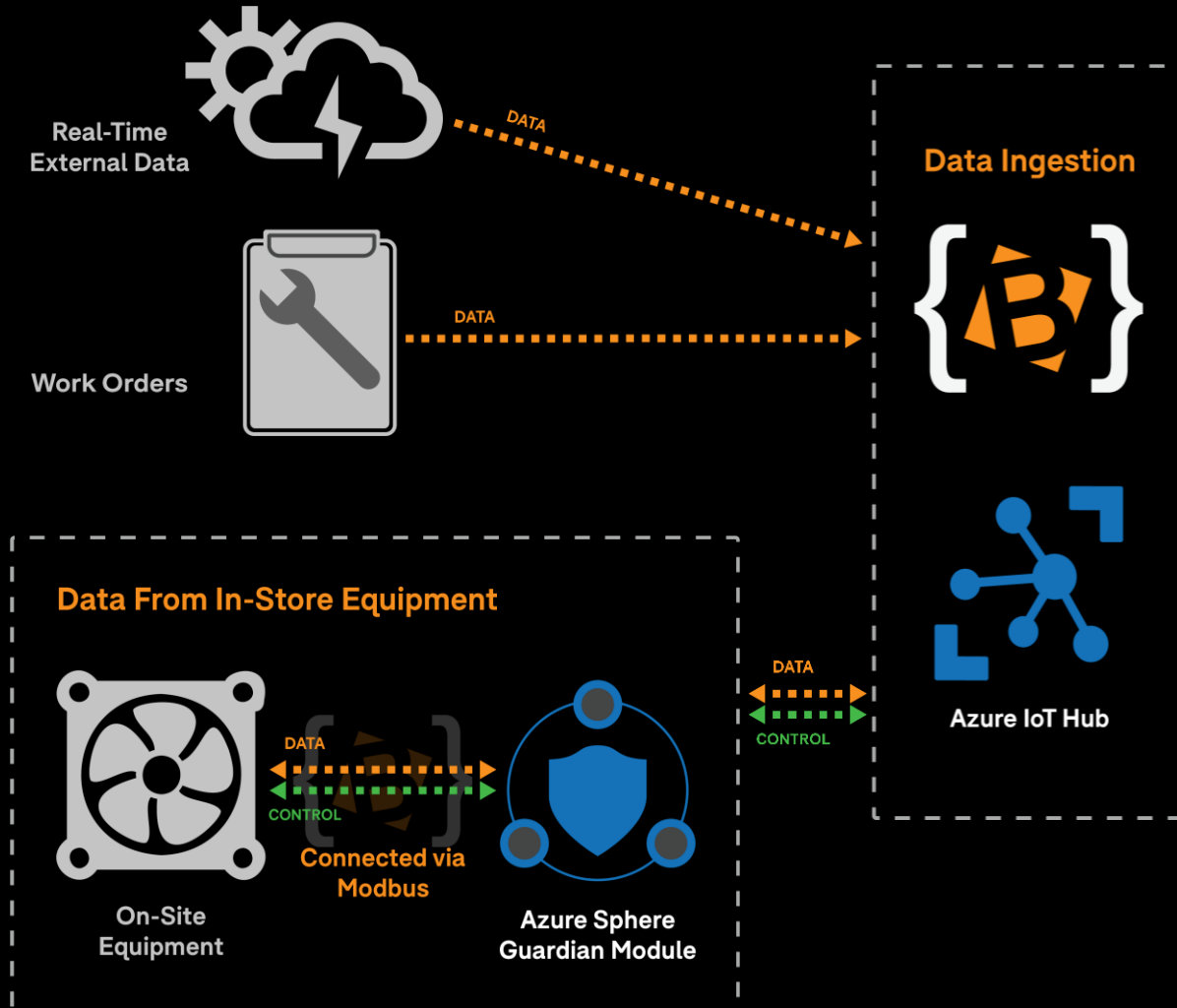
BSQUARE solution architecture



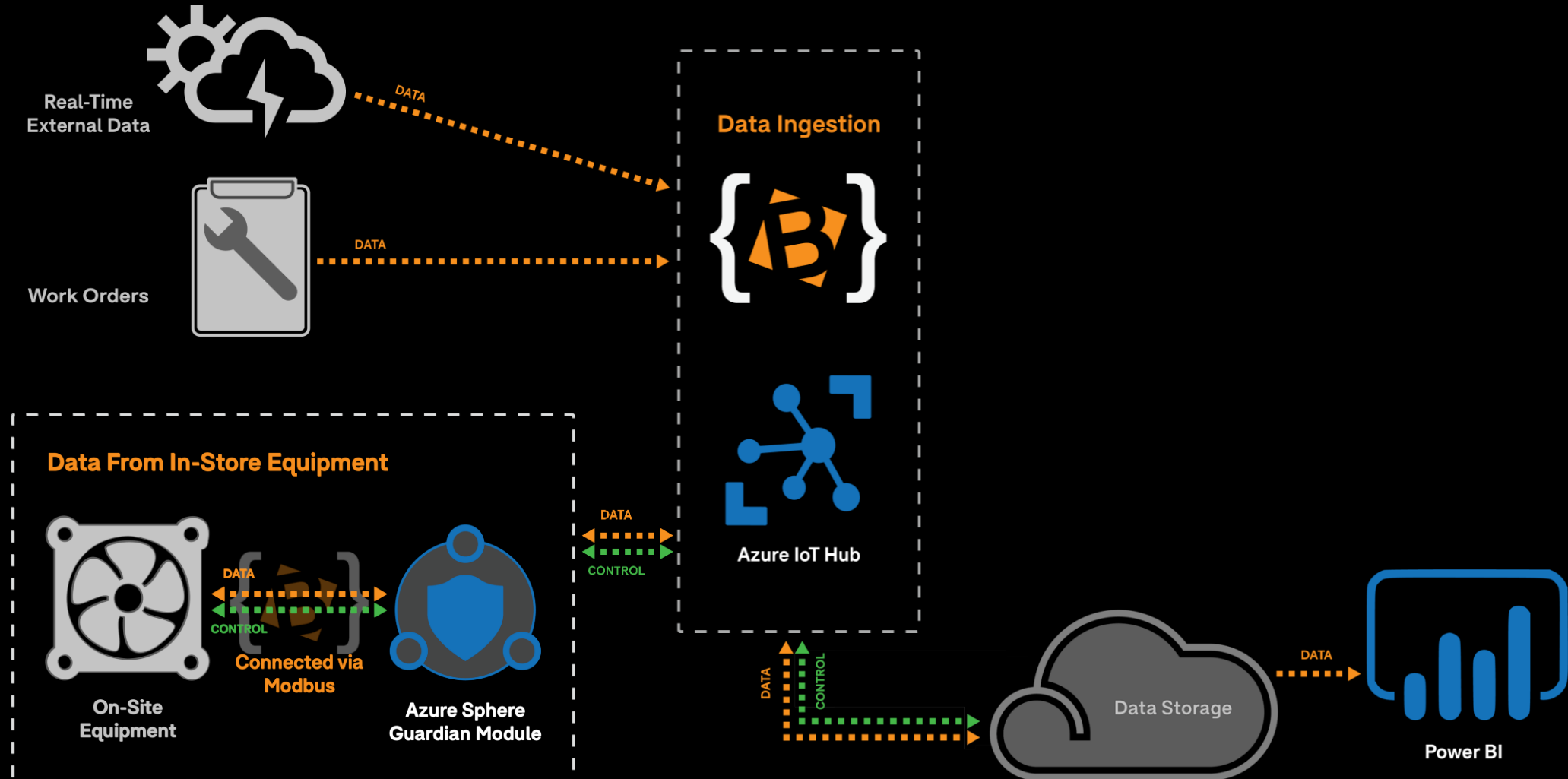
BSQUARE solution architecture



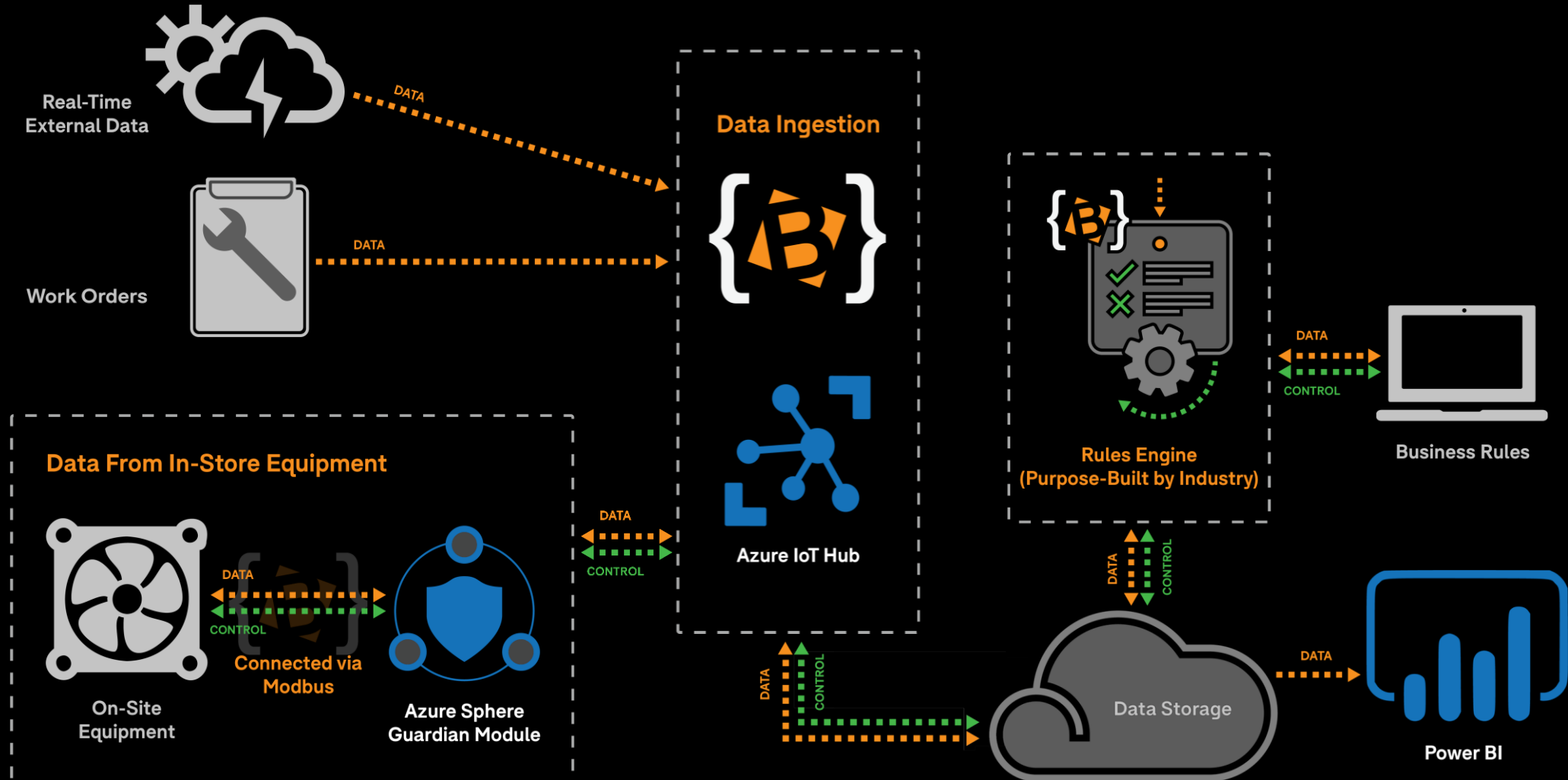
BSQUARE solution architecture



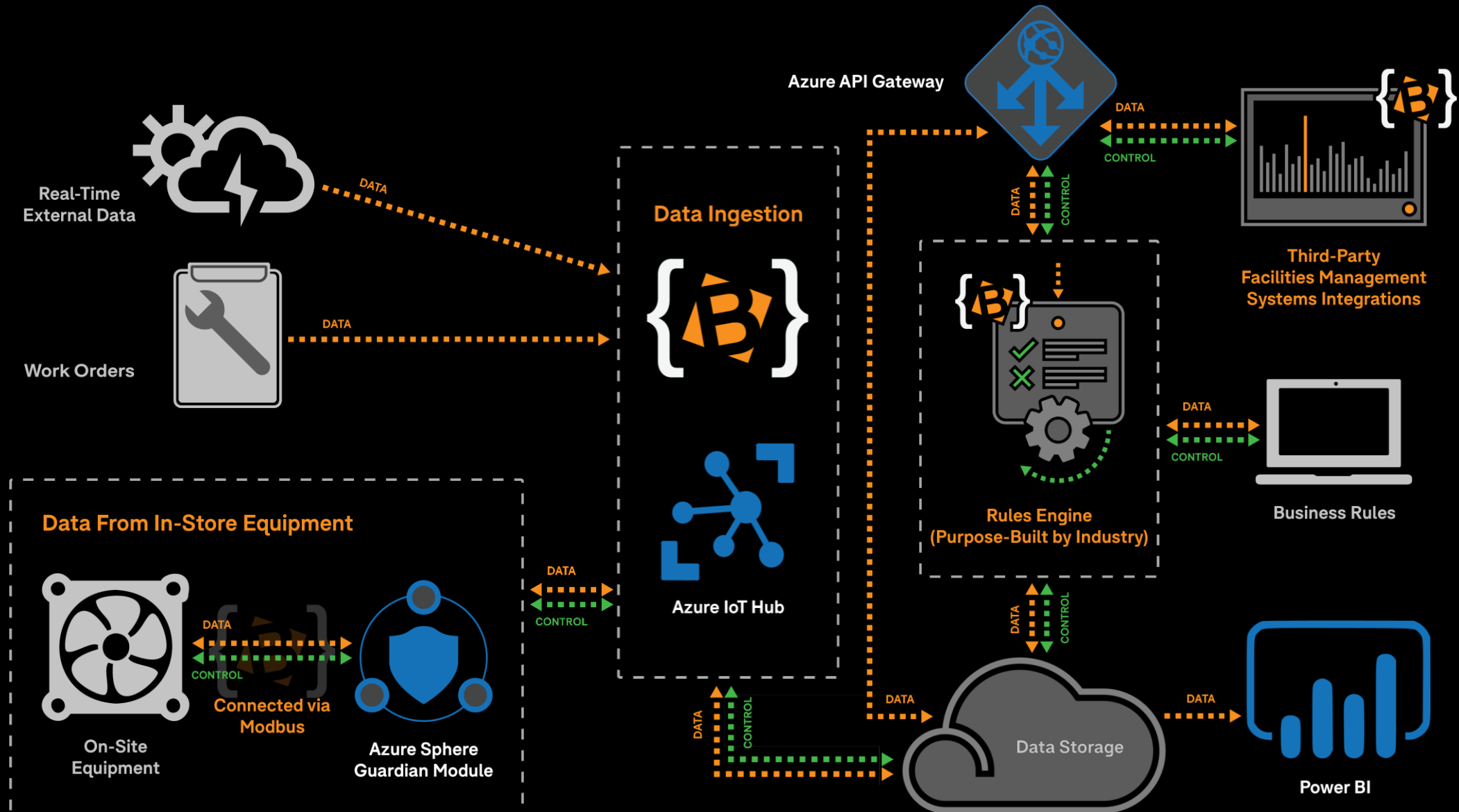
BSQUARE solution architecture



BSQUARE solution architecture



BSQUARE solution architecture



BSQUARE

PARCUS

Solution benefits

Immediate energy ROI

30% first year

Operational Efficiencies

Reduce truck-rolls

Infrastructure flexibility

Existing and new

Best in class security

Azure Sphere



Bsquare is helping people and business build the next generation of intelligent systems. In the world we imagine, intelligent devices and systems will be cloud-enabled, they will share data securely, and will facilitate distributed learning, control, and decision making. ■

We believe these systems will make better use of the resources of our planet and improve the human condition.

Bsquare develops software and services that power this next generation of systems, creating new revenue streams and business models while providing new opportunities for lowering costs and improving operations.

Matthew Inglis

VP of Engineering



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/matthew-inglis

BSQUARE

We are powering the next generation of intelligent devices and the systems in which they operate

ARCUS

arcusfm.com





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Ali Lavine
Connected Platform, Product Manager

Brian Berejik
Connected Platform, Engineering Manager

**Organizations require 10+ partners to
successfully execute a digital transformation project.**

Today, there is a new approach designed to eradicate complexity
and fragmentation across your digital transformation journey.

Enter: the Super Solution Integrator

(n.) a single team with expertise across all aspects of modern IT solutions to architect, manage and execute initiatives from end-to-end

We create meaningful experiences that help businesses run smarter.



Digital Innovation

Engage your customers
& empower your team
with digital experiences.



Cloud & Data Center Transformation

Provide guidance, technical
expertise and managed
services to solve IT challenges.



Connected Workforce

Connect and empower
your team with technology
to work smarter.



Supply Chain Optimization

Optimize & simplify technology
investments to drive business
transformation.

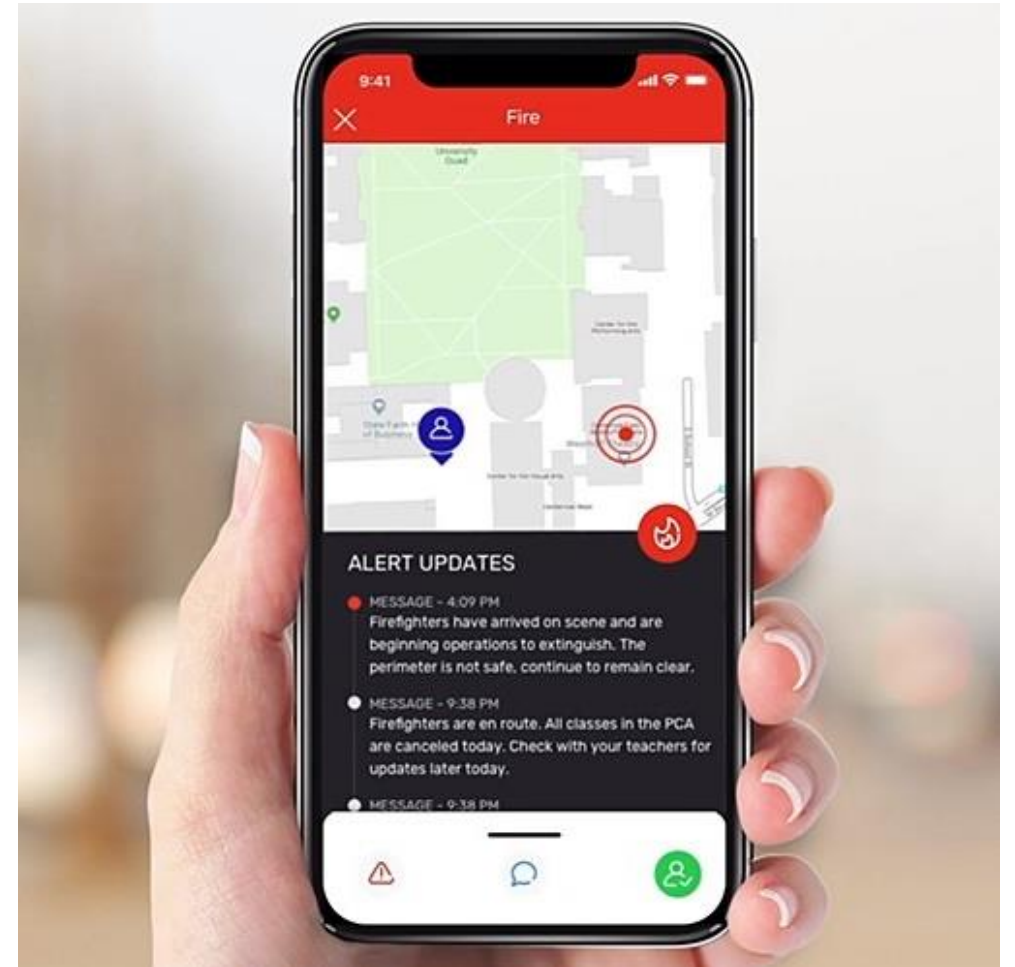
Insight Connected Safety

Emergency IoT notification system piloted in Houston's Aldine School District

Connects students, staff and first responders with a variety of devices, sensors, alerts and interactive floorplans

Lead with Digital Innovation's digital strategy capabilities to uncover pain points and develop solutions

Engaged with BeSafe Technologies and Microsoft, leveraging the strength of our deep partner relationships



How can these devices be used in other ways?

How can we scale this into a broad and
repeatable solution?

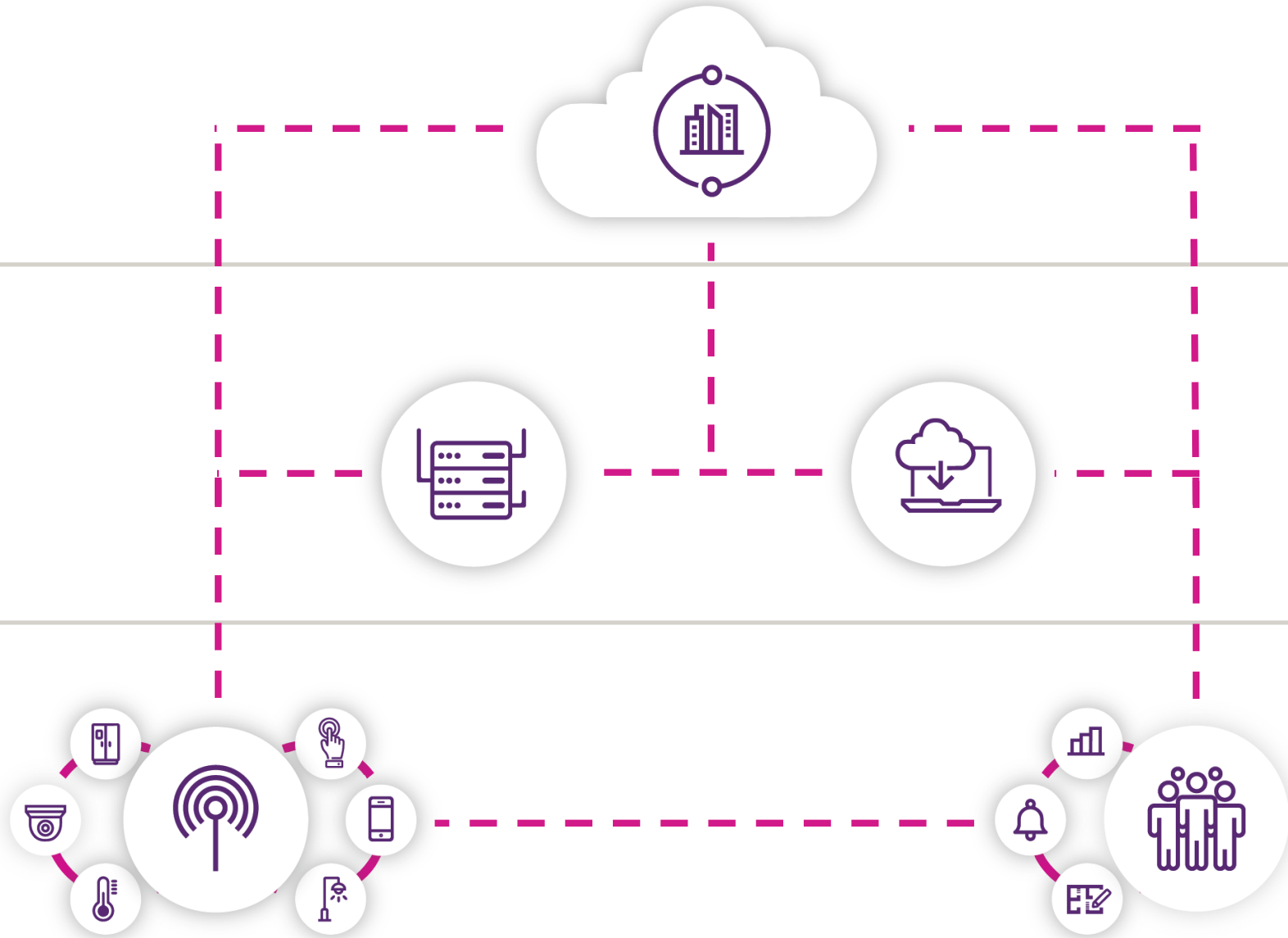
Insight Connected Platform

The journey to a repeatable, scalable solution

Cloud

Edge

Devices
& People



Secure, scalable & flexible

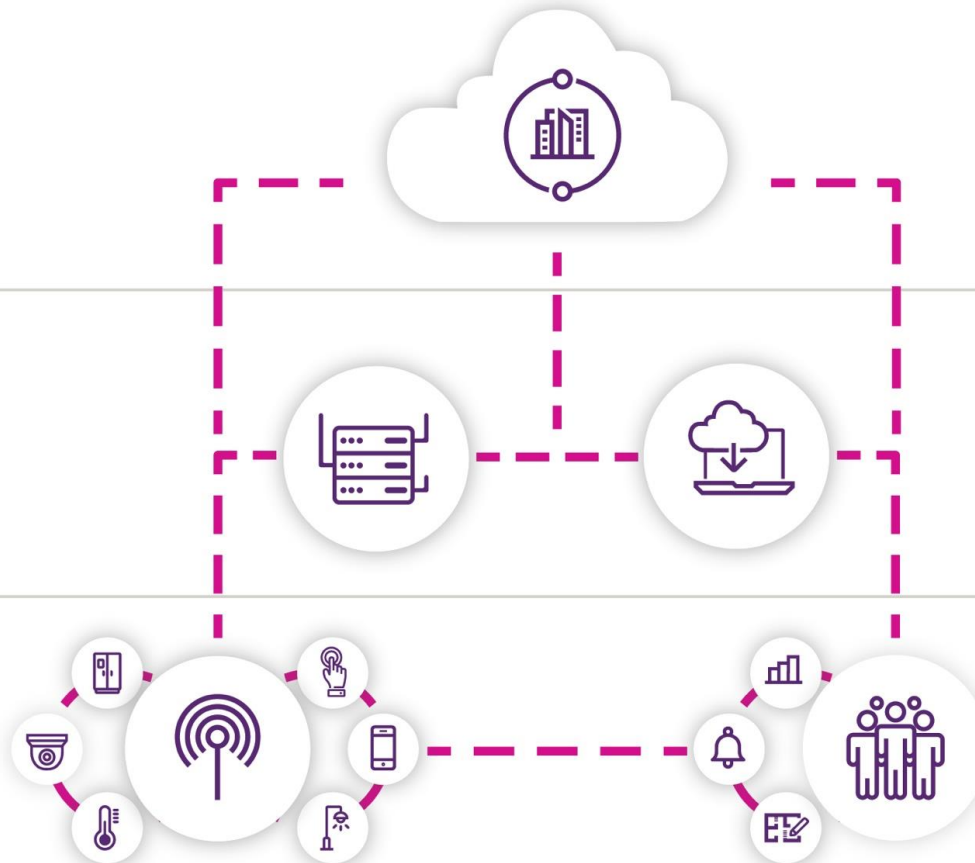
Insight Connected Platform

Platform High Level Architecture

Cloud

Edge

Devices & People



Platform Functionality



Mobile friendly



Identity management



Roles & Permissions



Branding / White label



HW Device Integrations



SW App Integrations



Device & Data Management



Alerts & Notifications



Mapping engine



Rules engine



Automated workflows



Communications service



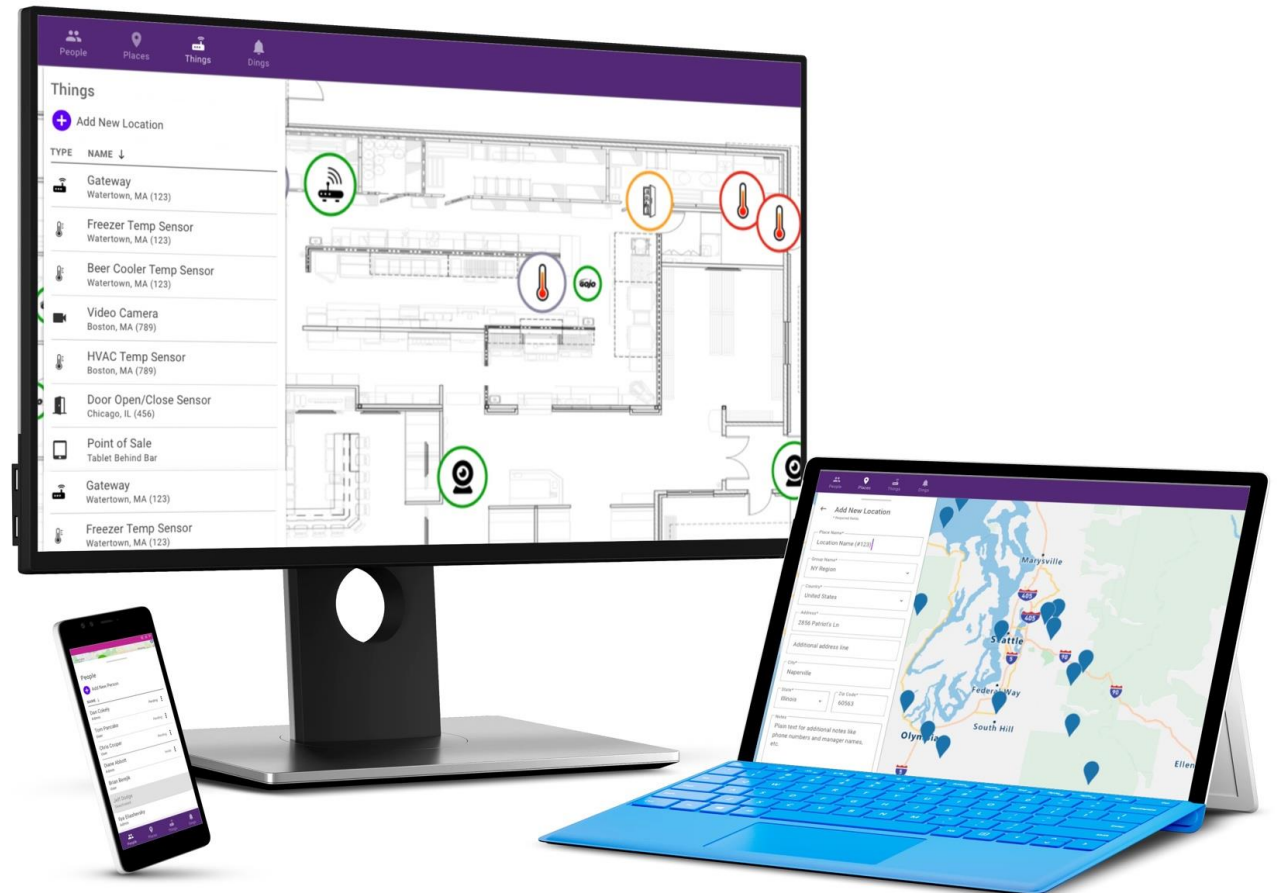
Data analytics

Insight Connected Platform

Visualizes and triggers workflows from any IoT data source

Empowers real time, persona based, operational control through a single pane of glass

Utilizes cloud AI models deployed to the edge for true business insights

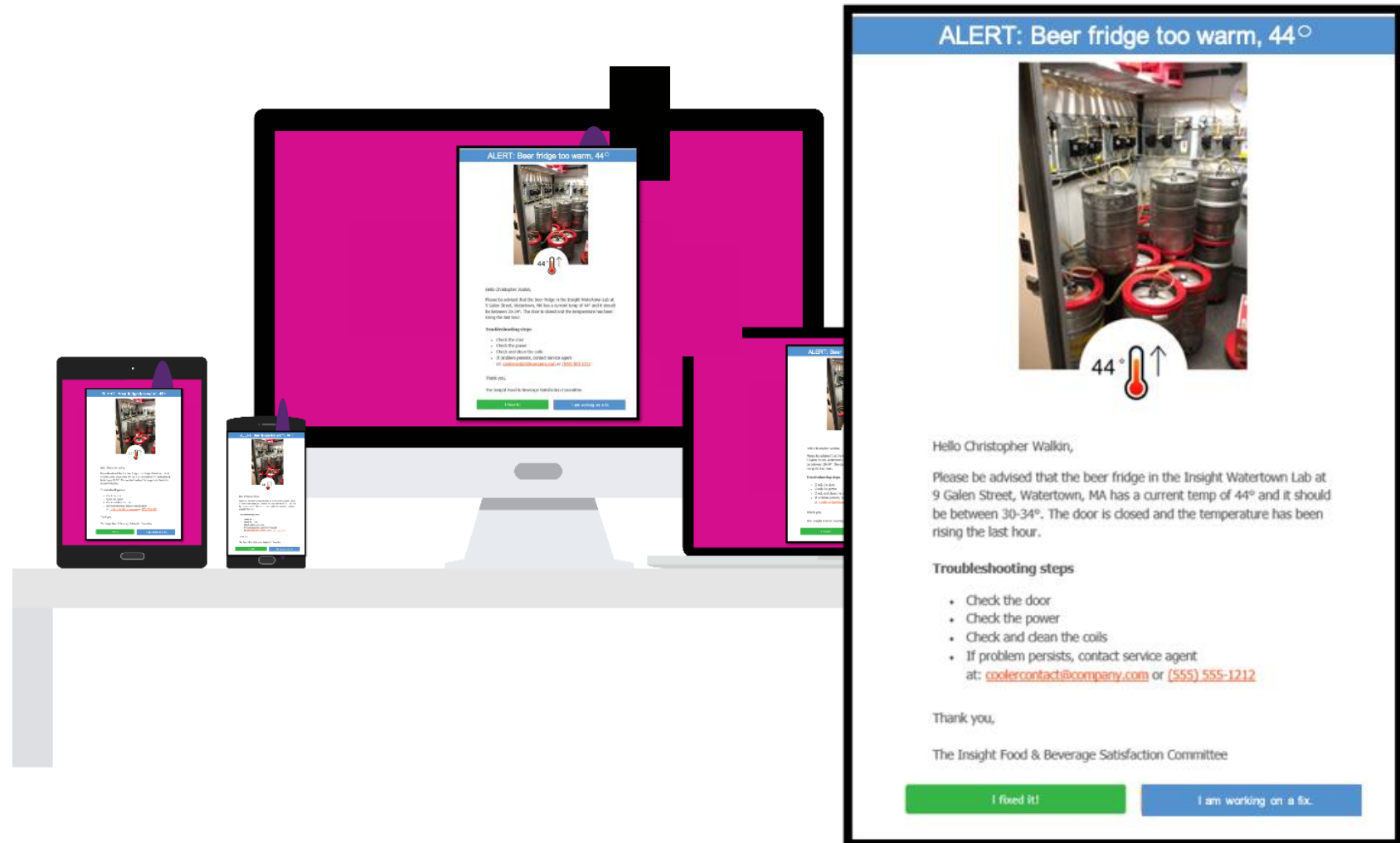





Key business outcomes for retail & restaurants


Inventory insight	Optimizing operations	Predictive maintenance	Employee safety
<p>Optimize inventory.</p> <p>Improve food safety conditions.</p> <p>Minimize out of stock, shrinkage & losses.</p>	<p>Increase quality & restaurant conditions.</p> <p>Increase throughput.</p> <p>Minimize costs.</p>	<p>Minimize equipment downtime.</p> <p>Optimize spare parts inventory.</p> <p>Prevent losses due to faulty equipment.</p>	<p>Improve situational awareness.</p> <p>Reduce response times.</p> <p>Enhance communications and coordination.</p>

Connected Platform demo



ALERT: Beer fridge too warm, 44°



44° 

Hello Christopher Walkin,

Please be advised that the beer fridge in the Insight Watertown Lab at 9 Galen Street, Watertown, MA has a current temp of 44° and it should be between 30-34°. The door is closed and the temperature has been rising the last hour.

Troubleshooting steps

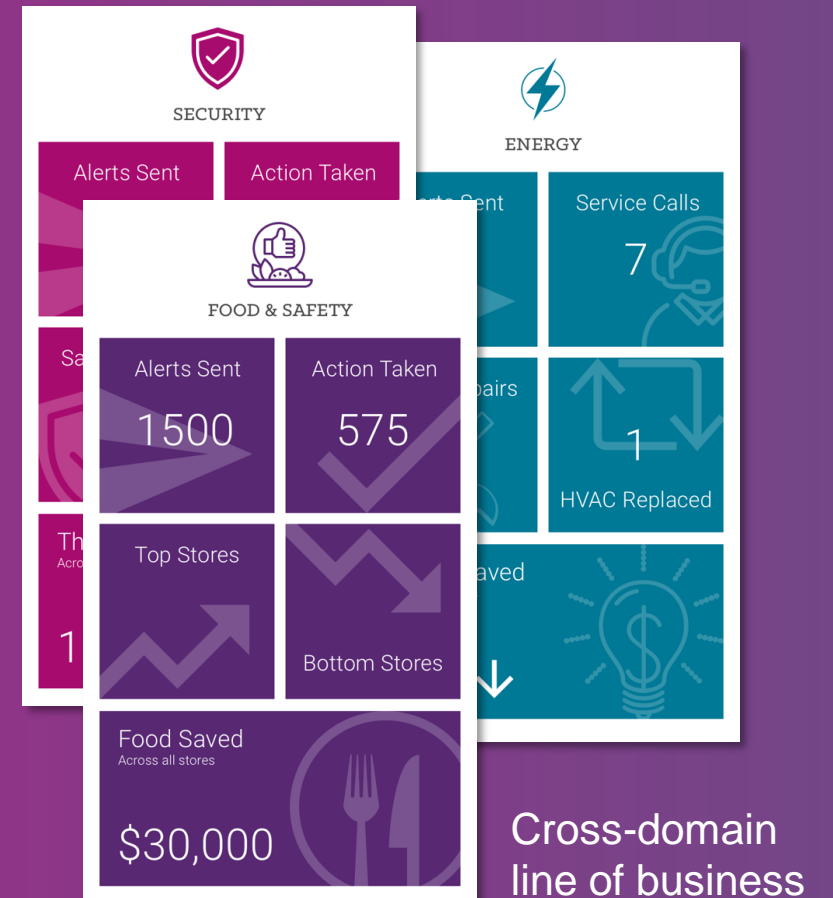
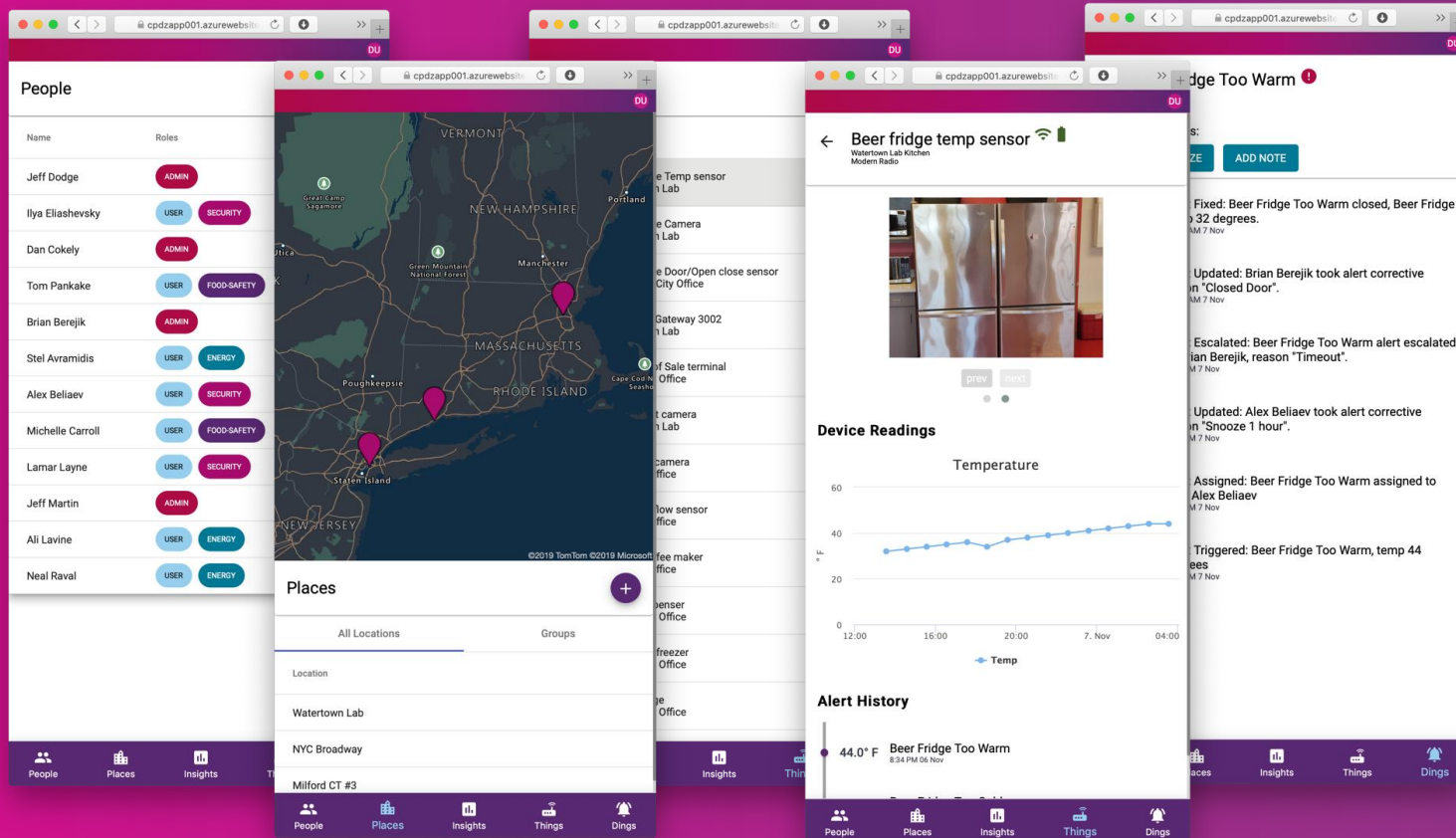
- Check the door
- Check the power
- Check and clean the coils
- If problem persists, contact service agent at: coolercontact@company.com or (555) 555-1212

Thank you,

The Insight Food & Beverage Satisfaction Committee

[I fixed it!](#) [I am working on a fix.](#)

Modern mobile first



Cross-domain
line of business

IoT integrations

Building blocks for any scalable solution

Reduce complexity, optimize operations
Enhance safety & security, increase insight



Temperature
sensors



Door
sensors



RFID tags
& readers



Security /
cameras



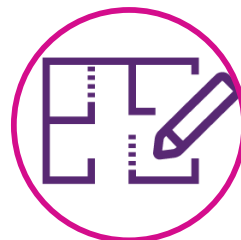
Other data
sources



Point of Sale
(PoS)



Visual
displays



Interactive
floorplans



Vibration
sensors



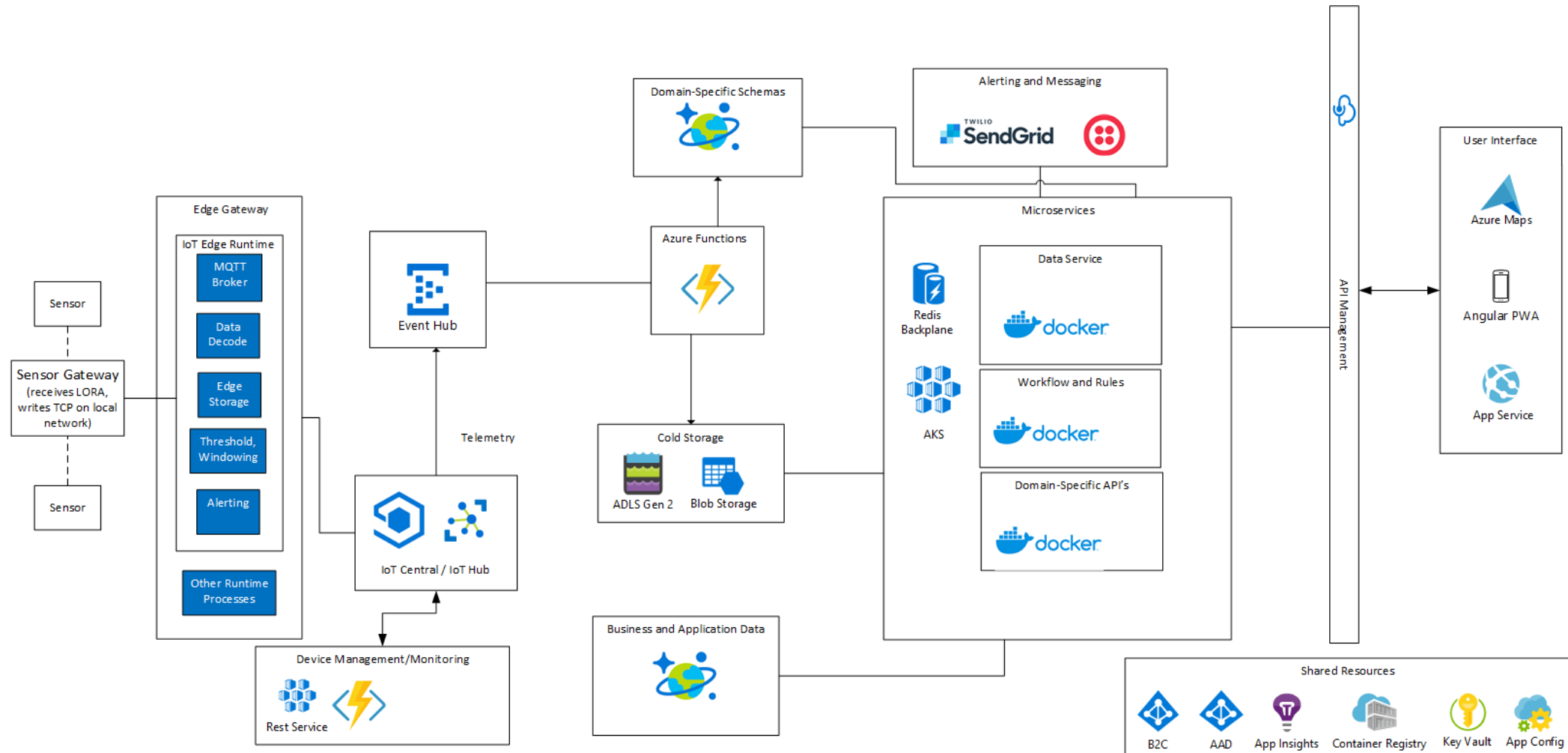
Smart
buttons

Architectural overview

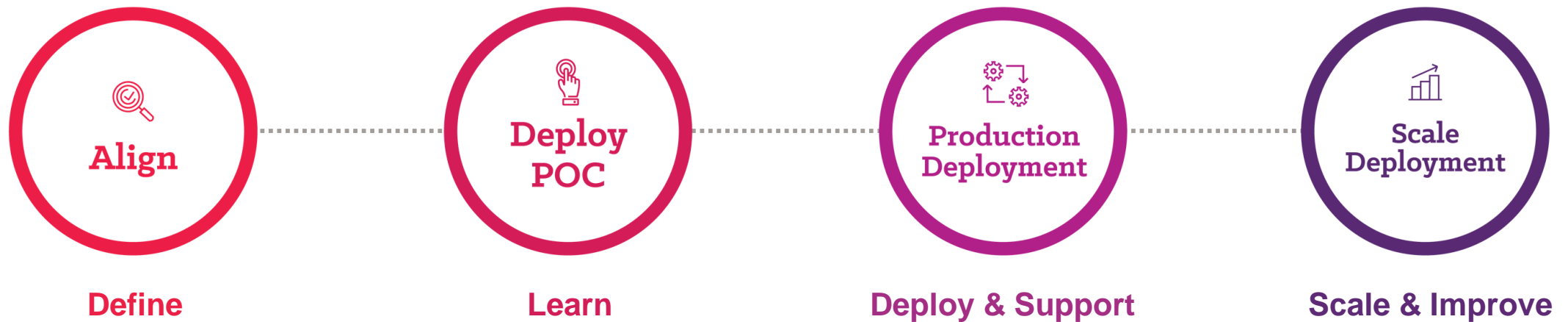
The features and benefits of the Insight Connected Platform have tremendous potential across a variety of use cases...

But how did we actually build it? How do we make it work in a scalable, repeatable, cost-effective, secure way?

Insight Connected Platform architecture



Repeatable, enterprise-wide deployment model



Thank you.

Contact connectedsolutions@insight.com
to learn more.



 **Insight** | Digital
Innovation

