Case driven offender management and Internet of Things

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Microsoft

Public safety and Justice

Integrated justice

Police Case management
Court Case Management
Offender Management
Criminal Justice
E-Justice
Agency Management

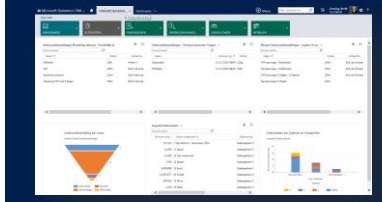
Police investigation

Prosecution services

Court Systems

Jails & Prisons

Parole & Probations



Police & Justice Case Management

Polaris Conceptual Architecture – phase 2

Incident → Investigate → Court & Delivery of Judgment

POLARIS

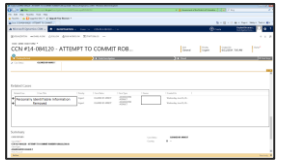
Receive/review case

Investigate case

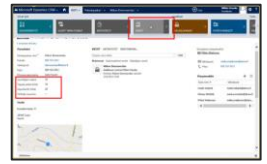
Legal case processing

Court hearing

Process appeal



Prison / Probation / Parole



Consumable Services Interfaces

Integration Hub

Data Hub

Identity Hub

Microsoft JPS Connect

Abstraction Layer based on Standardized Services

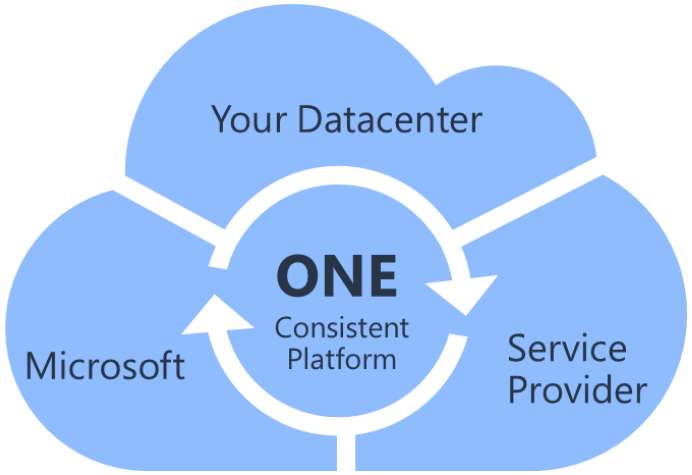
External Systems

Agency Systems

Other external systems

Central Crime Register (to-be)

At our core… Microsoft is the productivity and platform company



Office 365

Microsoft Dynamics CRM

… set in the context of the Police & Criminal Justice Information Chain

Offender management process

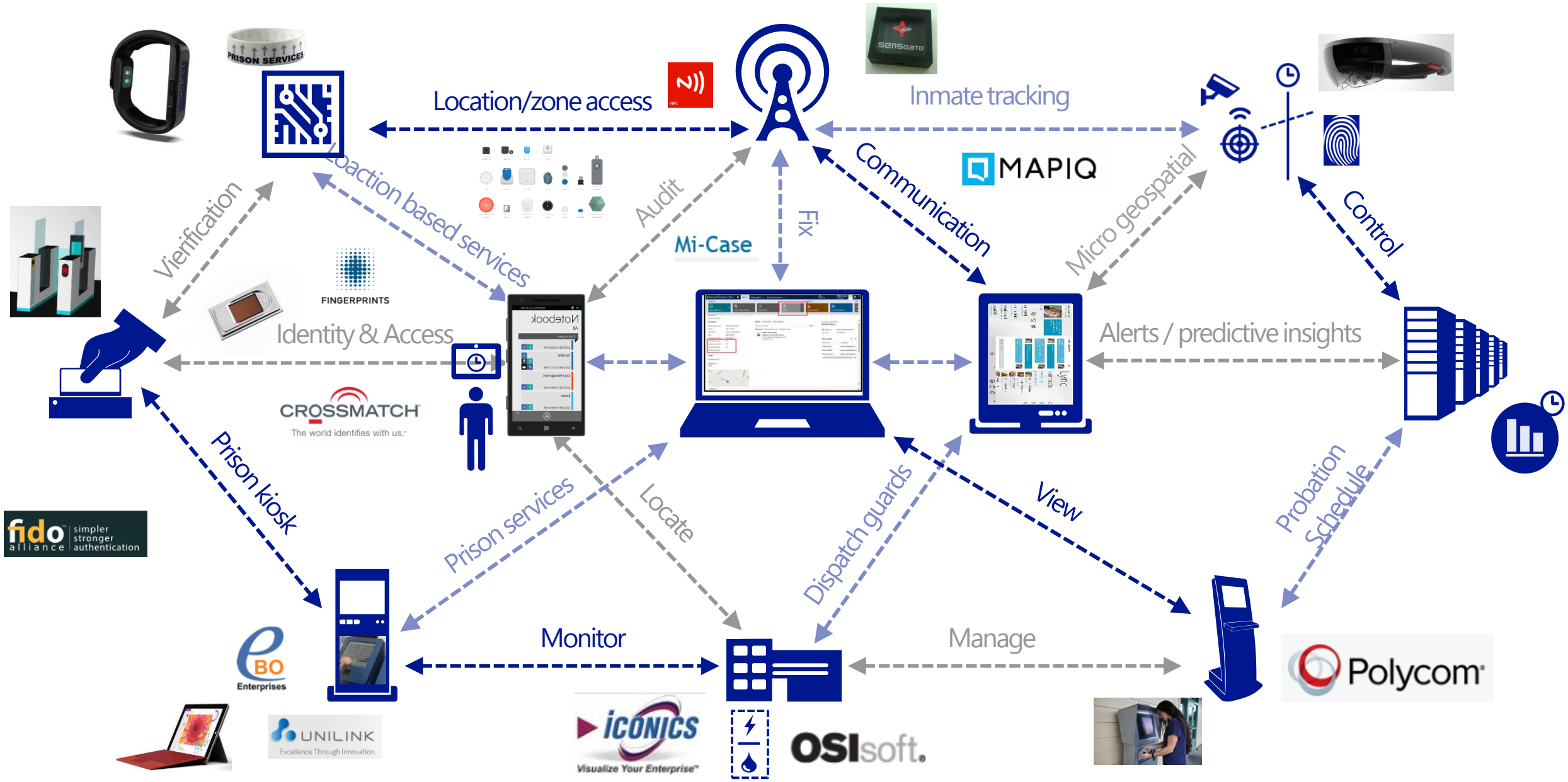
Permits	Study leave - Leave for civil work - Leave for supervised activities outside facility
Disciplinary penalties	Notification Hearing Proposal Decision Rectification
Department – cell planning	Level of control Safety precautions Activity types
Facility planning	Prison Free zone Probation
Sentence planning	Offender Life Cycle Management 360 view Rehabilitation planning
Customer master data	Community Sanction Imprisonment

Integration | Data | Identity

Services

Smart Sensor

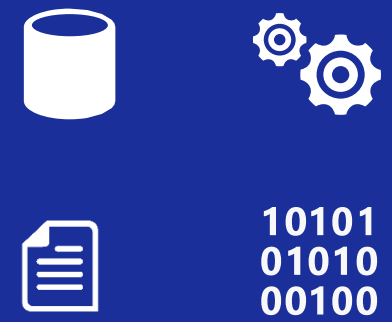
IoT towards a connected secured environment



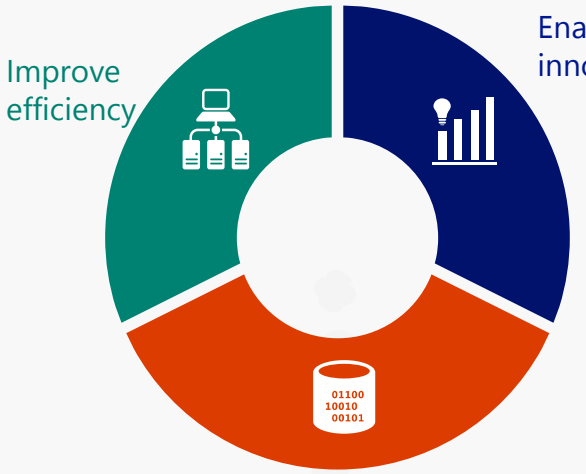
Your things. Our services.

You have things...

You have data...



Microsoft has services that:



Asset Service Details

- Jeff Wettlaufer

Task Details

Job Type
Assigned

Details
Escalator Step Wheel

Location
Piccadilly Line - NW Escalator - Step 13

Occurred
14:20:40

Priority
Critical

Decription
Error (90210) Device sensors indicated 3.5mm alignment variance

State
Active

Temperature

26°C

Vibration Level

4.2

Procedure Details

4

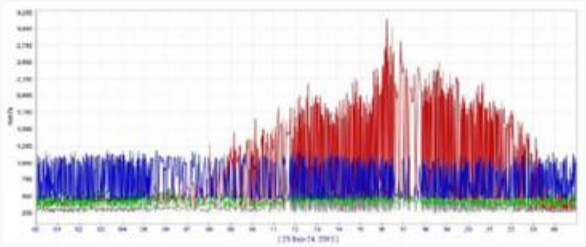
Device Detail

Device
Escalator Step Wheel

Device Profile
AISI-52100

Stock
2 available

Vibration Levels



Device Profile
ESK-DIGE-52100

Error Location
Step 13

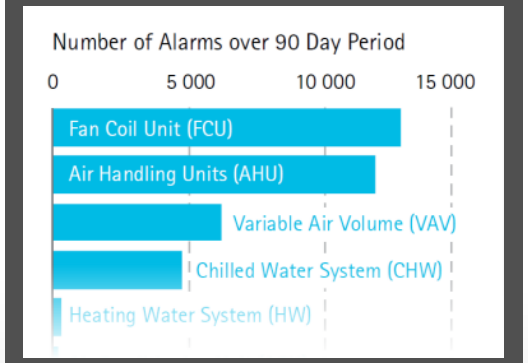
Device List

Device Name	Status	Device Profile
Gearbox	Active	SECAM-349834-223
Suspension	Active	HFR-34F34-223
Bolts	Active	Bol-wef-efbu
Step Wheel	Active	AISI-52100

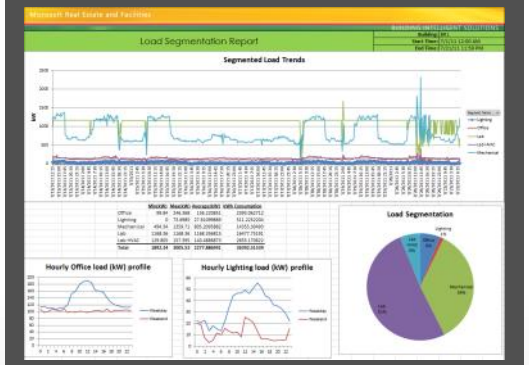
Focus of Our Smart Buildings Pilot

Building	Bldg. Cluster	Equipment	Fault and Diagnosis	Priority	Estimated Savings*
Bldg 58	Cluster E	AHU - 012	Leaking chilled water value	High	$11,291
Bldg 58	Cluster E	AHU - 003	Damper position fault	High	$4,782
Bldg 53	Cluster E	VAV - 022	Over cooling	High	$2,235
Bldg 58	Cluster E	CHI - 002	Changes to set points	Medium	$895

Fault detection and diagnosis



Alarm management



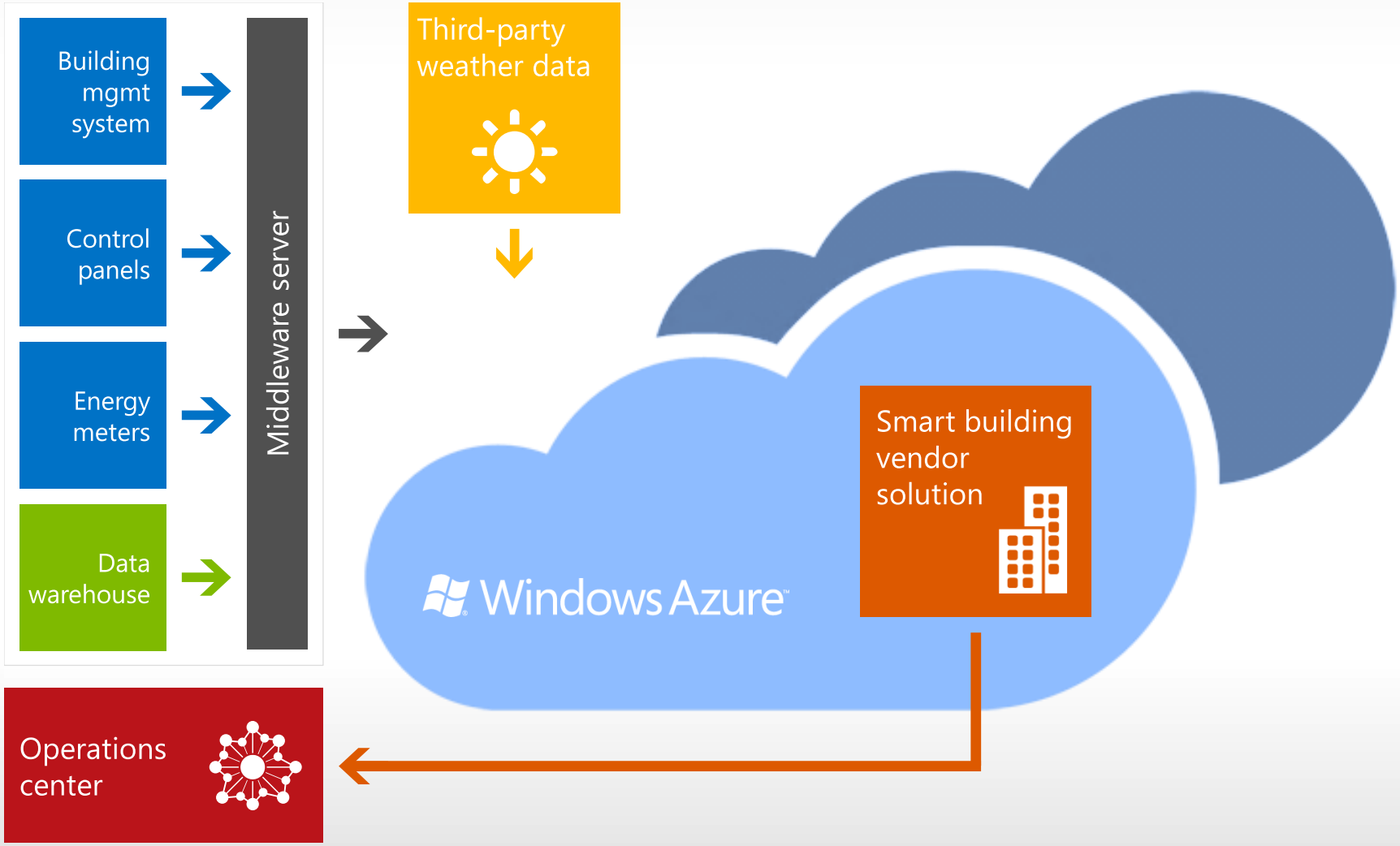
Energy management

Campus-wide building energy management

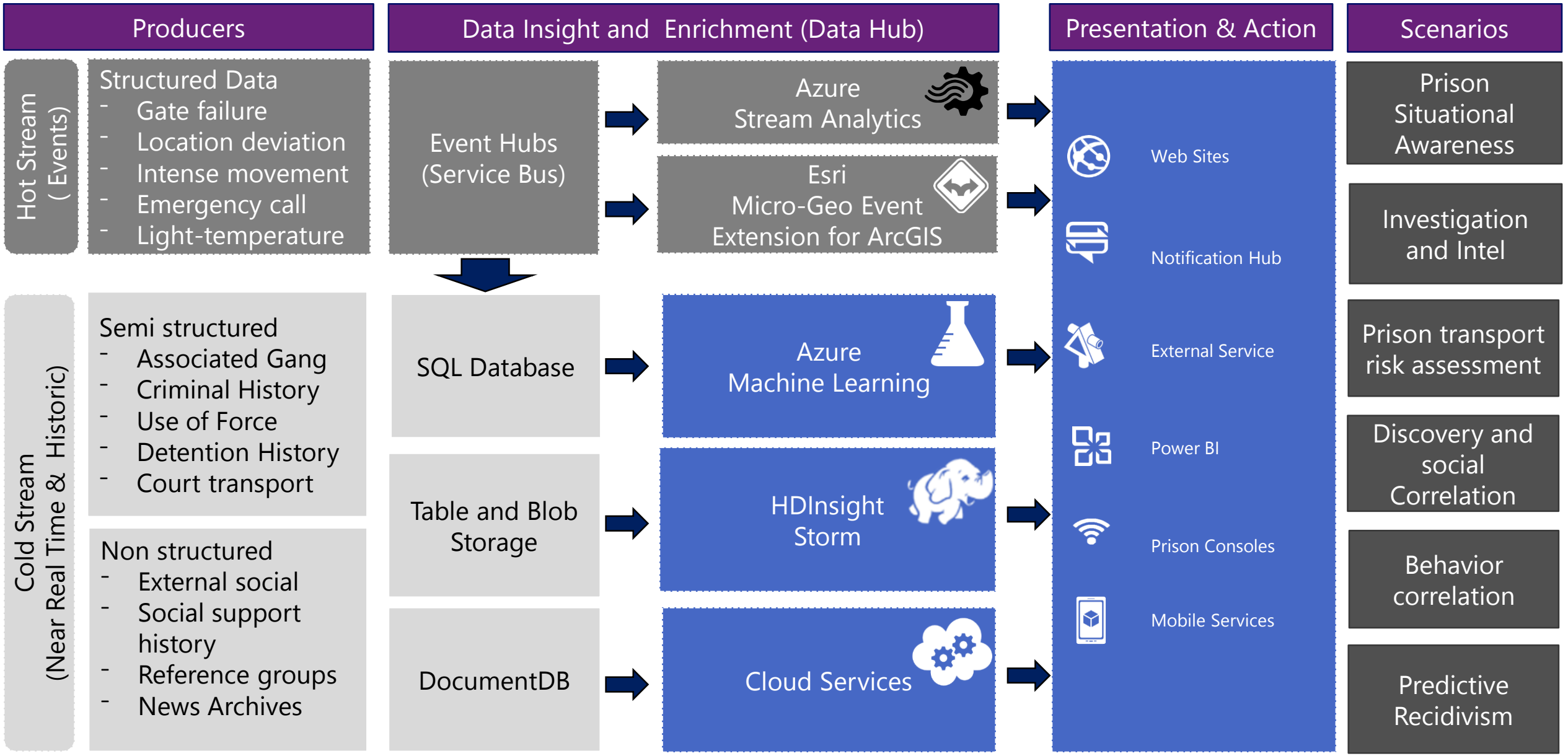
- Software-based solution
- No physical retrofit of building equipment
- No disruption of building occupants

> By using software to harness the data from our diverse building systems, we kept upfront capital expenditure to less than 10 percent of our annual energy costs, and are projecting $1 million in energy savings and payback in 18 months.
>
> Darrell Smith, Senior Operations Manager
> Real Estate & Facilities, Microsoft

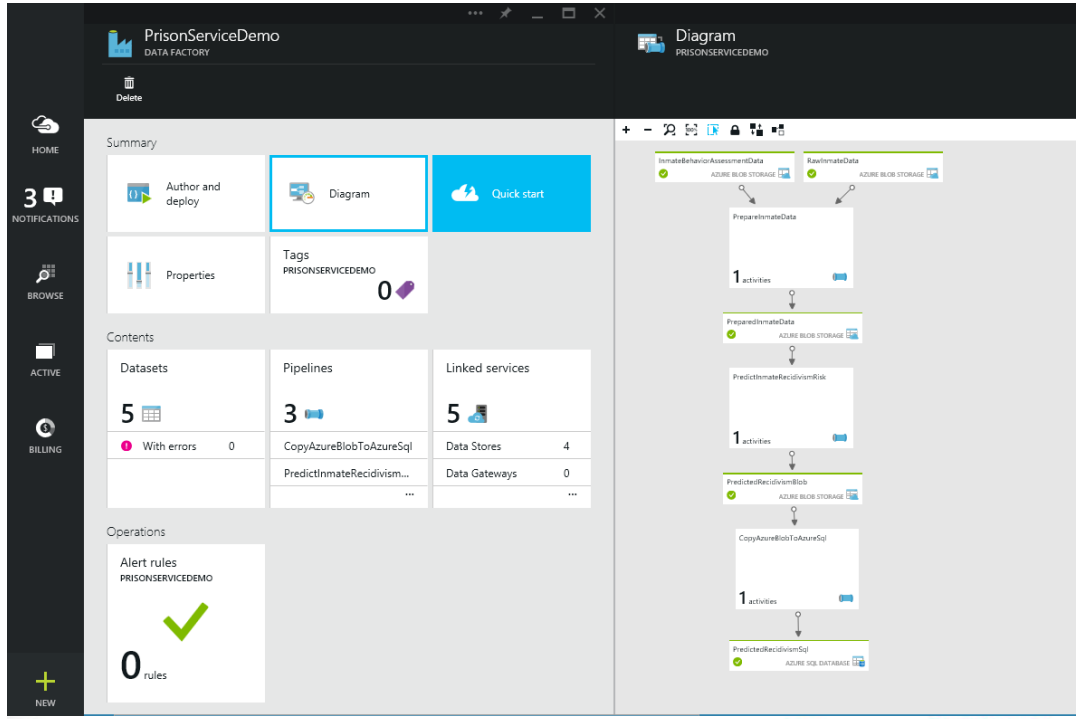
Microsoft Energy-Smart Building Architecture



IoT in prison information context



Prison service demo



SOUTH EAST ASIA / ASIA PACIFIC / TECHNOLOGY / NEWS / INNOVATION / PUBLIC SAFETY

Self-service kiosk for Singapore prison inmates

With the successful implementation of the pilot, Singapore Prison Service plans to extend the deployment of the Inmate Self-Service Kiosk (iKiosk), across its 14 prisons.

19/09/2013 *By Kelly Ng*

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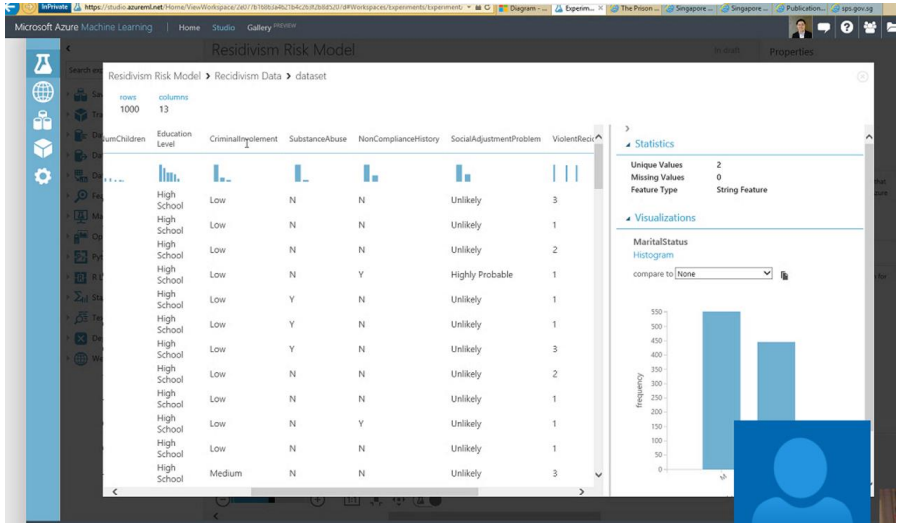
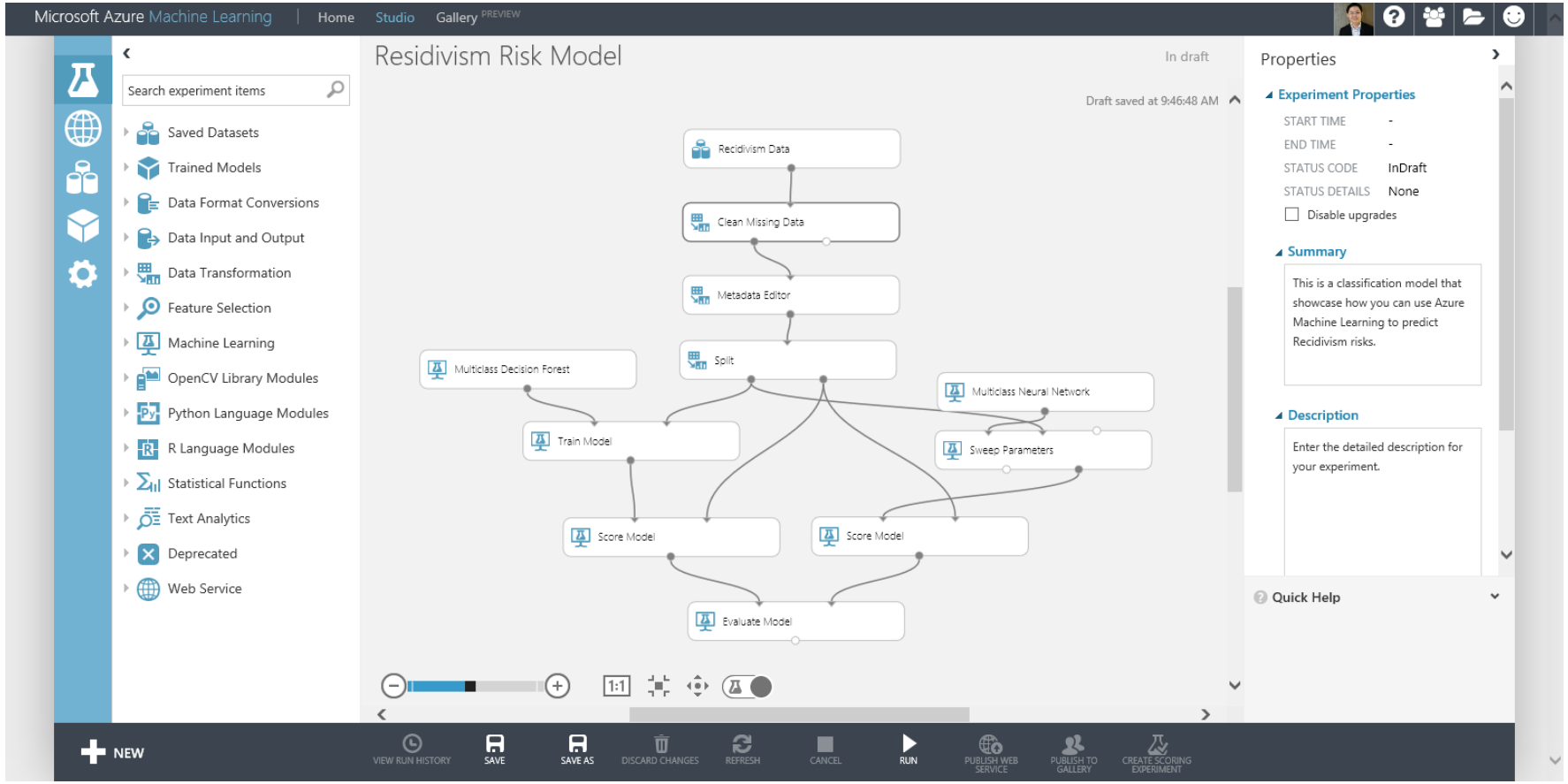


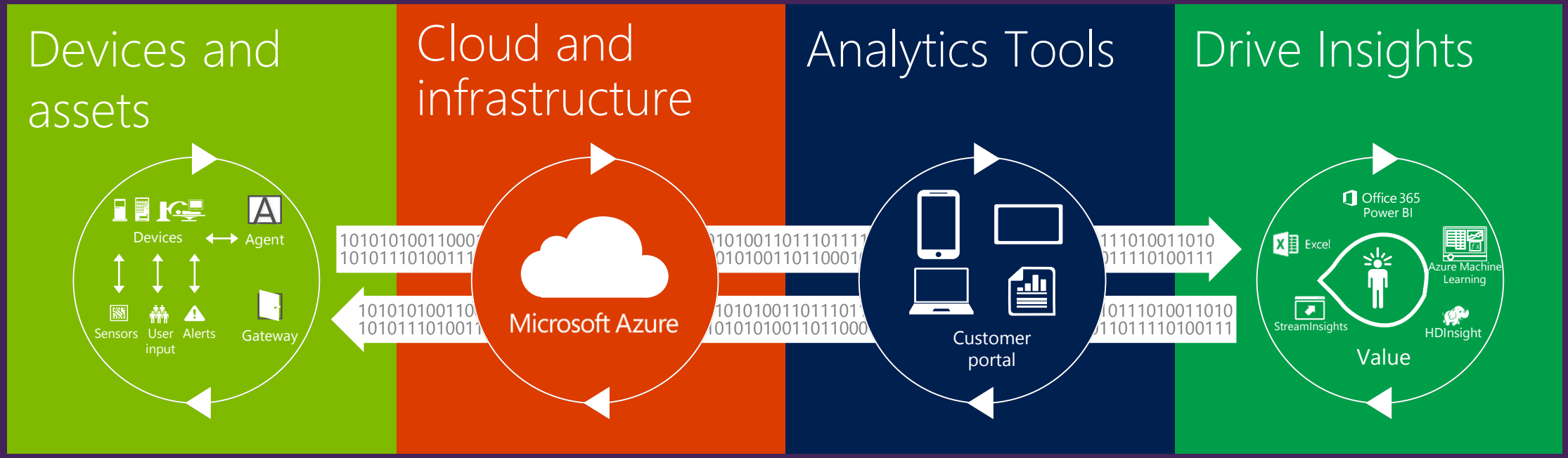
Machine learning

Drag & Drop + Best in Class Algorithms



- Relationship in behaviour offenders
- Optimised routes for prison logistics
- Environmental context to future offender capacity requirement
- Crime to behaviour correlation
- Define fraude indicators
- Sensors coordination to behaviour on light and temperature
- Social cohesion and offender resistance

Microsoft delivers on the Internet of Things

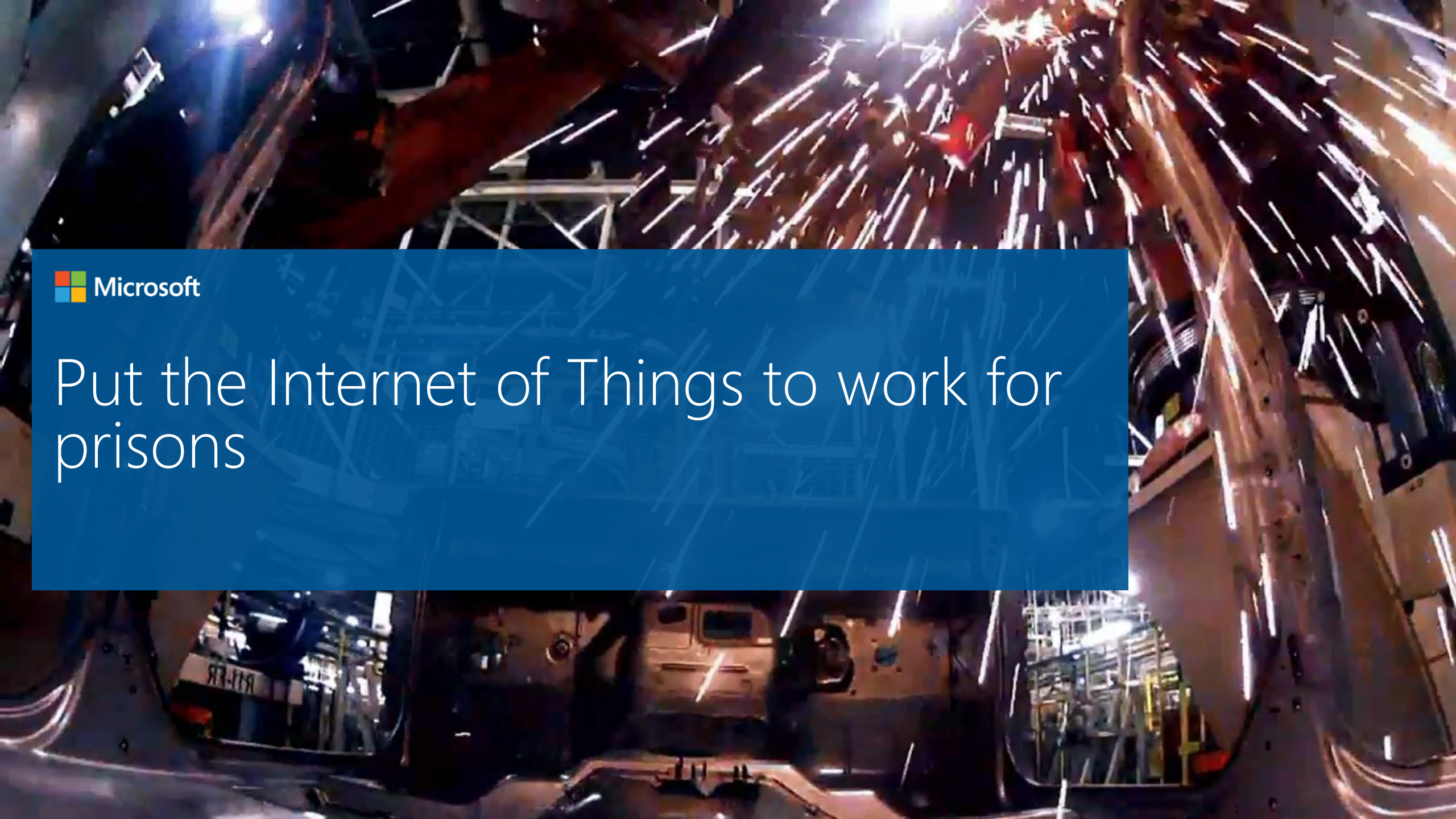


Connect new and existing devices using open-source agents or gateway technologies

Store machine-generated data with data from other sources in the cloud

View data, administer devices, and configure rules, alerts, and other actions using out-of-box or custom portals

Mine insights from your data to find gaps and opportunities to make better decisions and realize new business value



Microsoft

Put the Internet of Things to work for prisons