



# Microsoft Azure Internet of Things services

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# Topics

What is the Internet of Things?

Overview of Microsoft Azure IoT services

Taking advantage of IoT

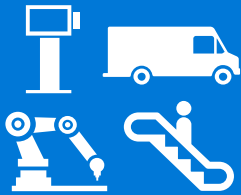
How to get started



What is the Internet of  
Things?

# What is the Internet of Things?

Things



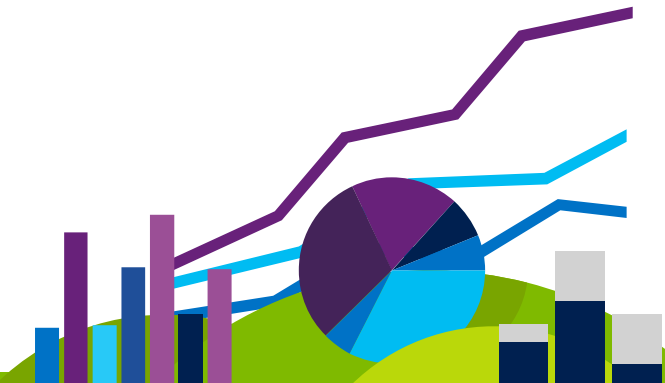
Connectivity



Data

10101  
01010  
00100

Analytics



# Microsoft's view




## The Internet of Things starts with **your** things

- ▶ Build on the infrastructure you already have
- ▶ Add more devices to the ones you already own
- ▶ Get more from the data that already exists

Stop just running your business. Start making it thrive. Start realizing the potential of the Internet of **Your Things**.





"We wanted to go beyond the industry standard of preventative maintenance, to offer predictive and even preemptive maintenance, so we can guarantee a higher uptime percentage on our elevators."

**ANDREAS SCHIERENBECK**  
CEO  
THYSSEN KRUPP ELEVATORS



[WATCH VIDEO](#)

Create the Internet  
of Your Things



**ThyssenKrupp**

# Overview of Microsoft Azure IoT services

# Microsoft Azure IoT services

Comprehensive  
technology



Enterprise-  
proven platform



Global scale





# Microsoft Azure IoT services

Comprehensive  
technology



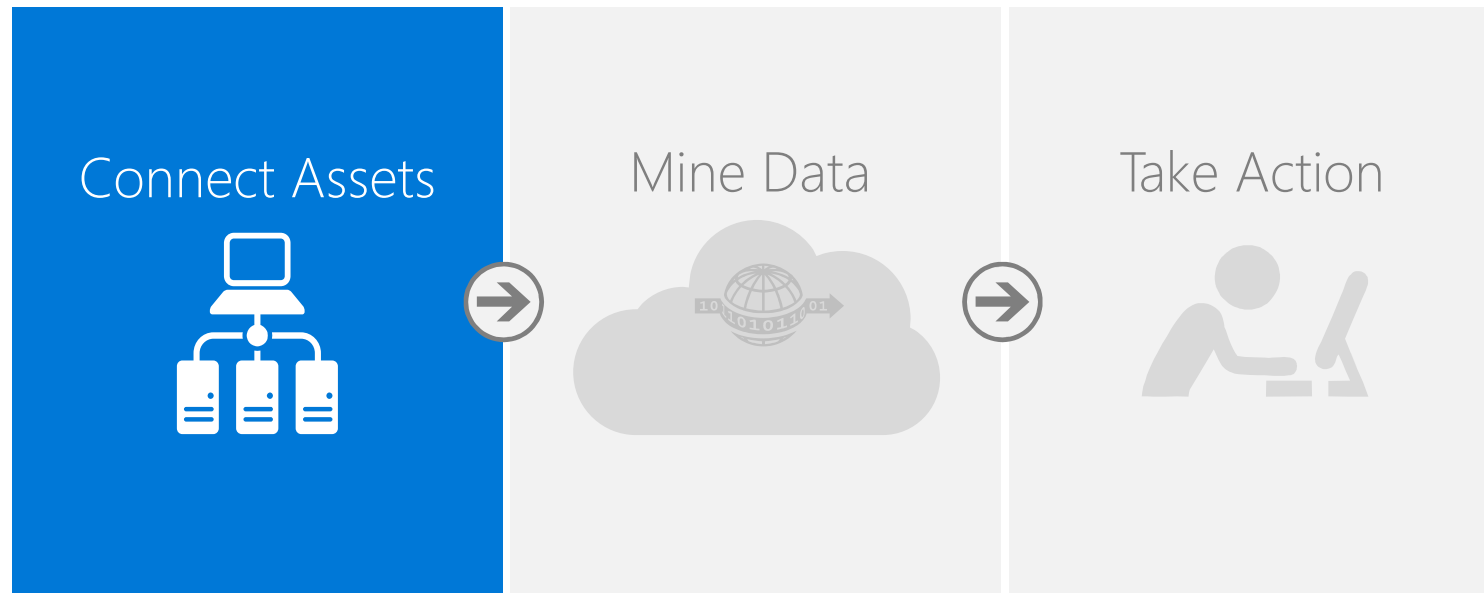
Enterprise-  
proven platform



Global scale



# Comprehensive technology

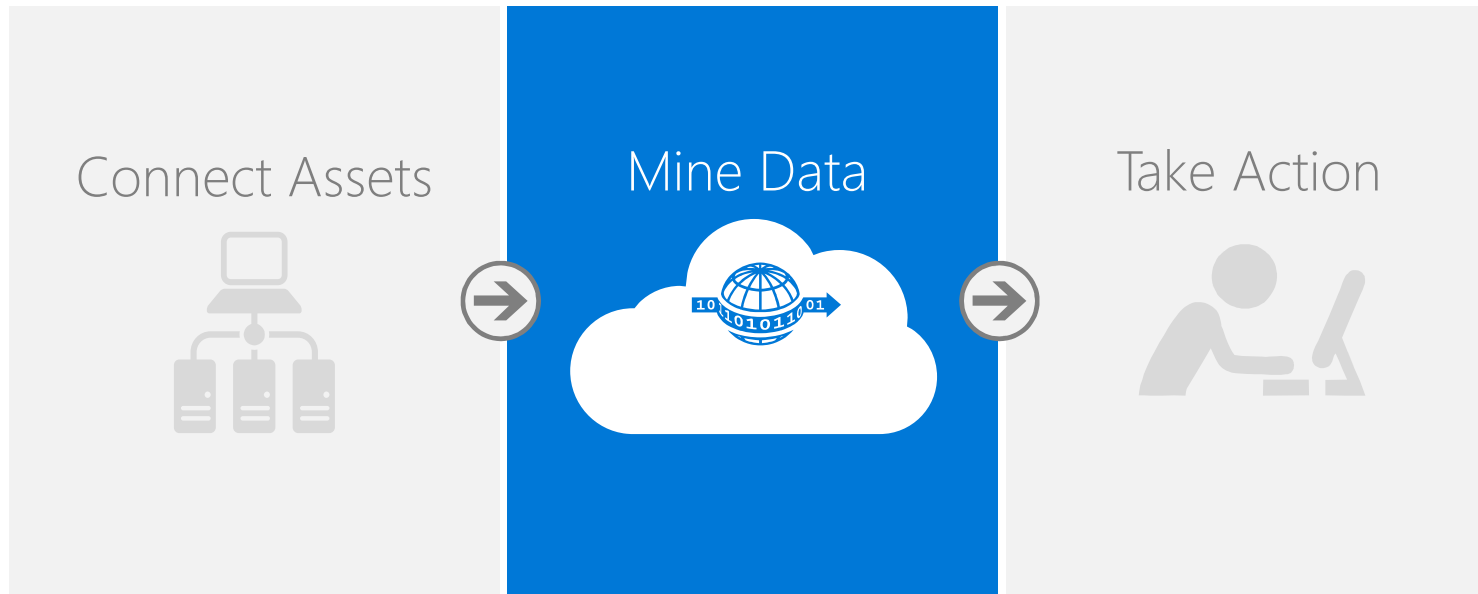


Connect assets and process data

- Connect to heterogeneous devices
- Log millions of events per second in near real time
- Process data from devices with variable load profiles

Event Hubs | Heterogeneous client agents

# Comprehensive technology

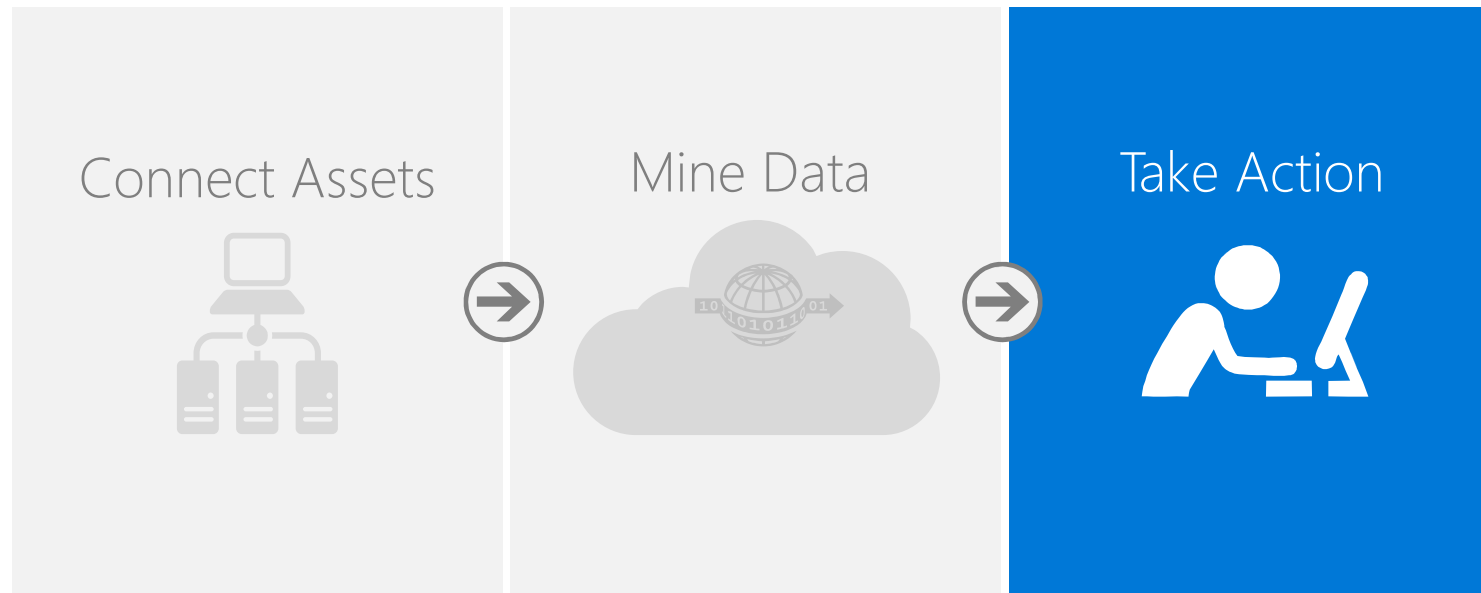


## Mine data to produce insights

- Uncover real-time insights from streaming data and events
- Process unstructured and semi-structured data to uncover new business possibilities
- Predict future outcomes by combining live data with historical data

Stream Analytics | Machine Learning | HDInsight | Storage options

# Comprehensive technology






















Act on the data and insights to realize results

- Deploy at scale IoT dashboards
- Notify users on any platform
- Leverage decision support tools to spot risks and opportunities at a glance

Azure Websites & Mobile Services | Notification Hubs | Power BI

# Microsoft Azure IoT services portfolio

Producers	Connect Devices	Mine Data		Take Action
	 Event Hubs (Service Bus)	 SQL Database	 Machine Learning	 Azure Websites
	 Heterogeneous client agents	 Table/Blob Storage	 HD Insight	 Mobile Services
	 External Data Sources	 DocumentDB	 Stream Analytics	 Notification Hubs
		 External Data Sources	 Cloud Services	 Power BI
				 External Services

# Microsoft Azure IoT services

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technology



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# Enterprise-proven platform



Benefit from Microsoft's scale and expertise running millions of businesses worldwide



Get a trusted foundation for your cloud investments



Take advantage of a strong partner ecosystem



\$15B invested in cloud infrastructure



57% of Fortune 500 companies use Microsoft Azure



# Microsoft Azure IoT services

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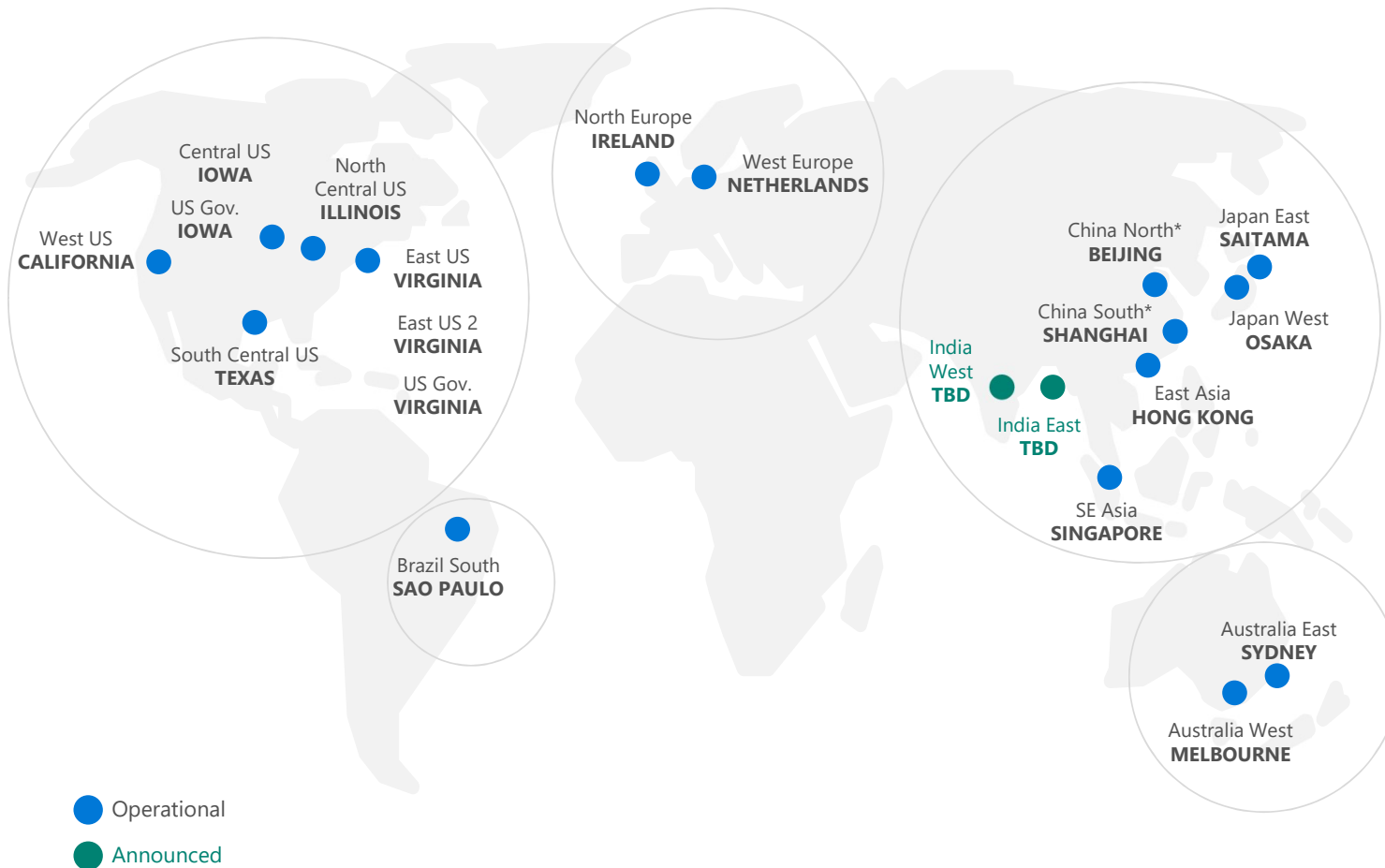
Global scale





# Global scale

Huge infrastructure scale is the enabler



- 19 regions ONLINE... huge datacenter capacity around the world...and we're growing
- 100+ datacenters
- One of the top 3 networks in the world (coverage, speed, connections)
- 2x AWS and 6x Google number of offered regions

Taking advantage of IoT

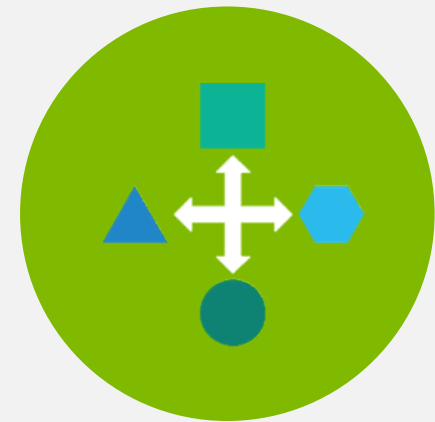
# Business leadership imperatives



Reduce  
costs and  
inefficiencies



Increase  
revenue with  
existing assets



Create  
new business  
models

# Leverage Azure IoT services to

Improve efficiency



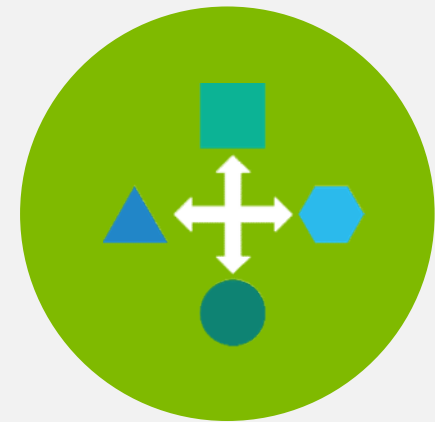
Reduce costs and inefficiencies

Enable innovation



Increase revenue with existing assets

Transform your business



Create new business models

# Make IoT real in your business

## Improve efficiency

Decrease costs through  
asset monitoring



## Enable innovation

Increase revenue through product  
improvement  
Ex. Feature Optimization



## Transform your business

Create additional revenue streams by  
offering new services  
Ex. Predictive Maintenance



# Asset monitoring

Gain real-time visibility into asset health, regardless of location



Address problems faster through automatically triggered service requests



Operate more efficiently by remotely managing geographically dispersed assets



Reduces CO2 emissions by an estimated **75 metric tons** by 2023 through optimized car-sharing services

Cuts drivers' transportation costs by **90 percent**



Create the Internet  
of Your Things

- Reduce CO2 emissions by estimated 75 metric tons by 2023
- Cuts drivers' transportation costs by 90%
- Enhances user experience with personalized settings
- Simplifies implementation with better connectivity

**MARCELINO PERA**  
PROJECT MANAGER  
AUTOLIB'







"I took that same data and ran it through the Azure ML service, and the algorithm identified the anomaly — it actually tagged it, so in that scenario, the system would have seen the tattletale, and we would have taken action to investigate the potential issue or planned appropriate maintenance."

Marcus Keenan

Manager of instrumentation and controls  
SLAC Facilities and Operations directorate





# Service improvement

Market more effectively by better understanding customer behavior through connected products and smart facilities



Meet evolving customer needs and improve loyalty by optimizing services to align with their behavior patterns



Design new services by applying insights gained from customer behavior and other data sources



Improves competitive advantage by delivering dynamic, relevant content

Boosts sales up to **120%** when dynamic content is combined with a discount offer



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of Your Things

"People ... are amazed at how fast the P97 solution is. Compared to using a card swipe at the pump, it's 30 to 40 percent faster to fuel your car ... And the in-store experience is so much faster; the technology is quicker and the workflows are better"

**LEW BEZANSON**

CHIEF TECHNOLOGY OFFICER  
P97 Networks





Create the Internet  
of Your Things

"We wanted an interactive interface from the consumer's perspective. It's not just about delivering digital content, it's about doing it in a more targeted and relevant way."

**STUART PORT**

MANAGER OF FROZEN BEVERAGES STRATEGY  
COCA-COLA AMATIL



# New monetization opportunities

Reach new customers and access untapped markets by expanding service offerings



Enable better post-sale services and unlock new customer service scenarios



Develop new business models based to disrupt existing markets



Kaiser  
Permanente

Expects to **reduce outpatient visits** for routine checks and reporting of vital signs

Provides **better insight** into patient data, improving the **efficiency** and **workflow** for nurses, dietitians, and other staff





Prototyping a new remote patient-monitoring service with the potential to improve patient comfort and care, reduce hospital admissions and re-admissions, and drive great efficiencies.

Create the Internet  
of Your Things

**KAISER PERMANENTE®**

How to get started

# Finding the right IoT project

## Go for a quick win

- Cost effective, both short-term and long-term
- Fast payback time



## Put yourself in the shoes of...

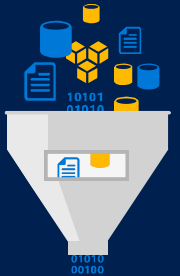
- Customers
- Operations
- Service department



## Select the most valuable scenario

Leverage machine generated data for...

- Remote monitoring and management
- Customer service and loyalty improvement
- Reaching new customers and markets
- Public infrastructure monitoring and maintenance



Iterate



# IoT Quick Start consultation



Identify  
business  
priorities

Apply  
Microsoft IoT  
capability  
model

Learn from  
other  
customers

Define  
financial  
benefits

Scope a  
proof-of-  
concept





# Get started today!

- Sign up for an IoT Quick Start consultation
- Learn more about how to create the Internet of Your Things
- Explore Microsoft Azure IoT services today at [www.InternetofYourThings.com](http://www.InternetofYourThings.com)



[www.InternetofYourThings.com](http://www.InternetofYourThings.com)

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