



Get started with the
Internet of Things in
your organization
Introducing Microsoft Azure
Internet of Things services

Executive Summary

You've likely heard and read about the technology trend called the Internet of Things (IoT). When you see definitions and hype about IoT, it's easy to feel overwhelmed. When analysts and other companies mention connecting billions of devices or creating trillions of dollars in economic value, it can be difficult to equate that to what it can do for your business—today. But there's no reason IoT has to be futuristic, complicated, or overwhelming.

At Microsoft, we believe IoT starts with your things, where "your things" are what matter most to your business. To help you get started or expand how you're using IoT in your business today, we have a new set of cloud-based services built on the flexible and scalable Microsoft Cloud Platform. With Microsoft Azure Internet of Things services, you can monitor assets to improve efficiencies, drive operational performance to enable innovation, and employ advance data analytics to transform your company with new business models and revenue streams.

Small changes can have a big impact on your bottom line. When you take advantage of the Microsoft Cloud Platform, you can use Azure services to help you move faster, do more, save money, and capture the benefits of IoT for your business. Azure IoT services meet your business where it is today—whether you're focused on where to start or ready to scale your IoT scenarios. It's time to stop just running your business and start transforming it to make it thrive.



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What is the Internet of Things, and how can it help your business?

The bigger things are, the harder they are to define succinctly. So it's hardly surprising that definitions for the Internet of Things (IoT) are confusing—especially when the “things” in question ultimately number in the hundreds of billions. While analyst firms like Gartner, IDC, and Forrester are tracking IoT and the trend is receiving lots of attention in the media, there's confusion about what IoT means to businesses and how they can capitalize on the opportunities it brings. After all, where do you start when breathless analysts claim IoT has the potential to create up to \$3.02 trillion in economic value annually by 2020?

Adding to the complexity is the shift in technology decision-making from traditional and centralized IT departments to decision-making within business units by line-of-business leaders. This shift is driven by the change in focus from back-office IT (servers and routers) to front-office IT (business applications and devices). Gartner estimates that by 2019 more than three quarters of all new IT projects will be funded by individual business units directly responsible for generating growth.

So, setting aside the hype, what is the Internet of Things?

First, it's a world where the connected smart assets and sensors that matter most to you—whether that's trains or elevators or vending machines or payment terminals—can collect and share data and, in so doing, enable new insights that can transform your business. Second, it's here right now. IoT is already generating return on investment for organizations that know how to harness it. With a few practical steps, you too can start transforming your business today.

Third, it is a transformative business opportunity requiring bold leadership by line-of-business executives. The costs of connected systems are falling by orders of magnitude, thanks to the combined effects of cheaper microprocessors, the flexibility and scalability of cloud storage and analytics, and cheaper wireless connectivity. When you take advantage of the new capabilities of the cloud, such as machine learning where your business can apply historical data and models to a new problem and predict future behavior, you can move faster, do more, save money, and capture the benefits of the Internet of Things for your business. New economics create new opportunity.

Here are a few tangible examples to help illuminate what the **Internet of Things** could mean to your business:



ThyssenKrupp Elevator is sending data from elevators into dynamic predictive models, which continually update data sets via seamless integration with Azure. When the elevator reports that it has a problem, it sends out an error code and the three or four most probable causes of that error code. In effect, field technicians are being coached by this “expert citizen.”

Rockwell Automation

Rockwell Automation is using Microsoft Azure IoT services to develop cloud-based solutions that predict equipment failures along the oil and gas supply chain, track performance in real time, and help prevent failures in the future.



To meet demand for premiere architectural stone products, the owner of **Lido Stone Works** needed to automate his factory. He realized the potential of IoT, creating an intelligent system that connects the factory's machines with the experts in Italy who built them. By harnessing the resulting flow of data via a secure, cloud-based connection, Lido has drastically cut maintenance costs. The Internet of Lido's Things has transformed the business, increasing productivity by 30 percent and revenue by 70 percent.

The next section will explain how, together with Microsoft, you can use the **Internet of Your Things** to transform your business.

How the Internet of Things can transform your business

When you see definitions and hype about the Internet of Things, it's easy to feel overwhelmed. When analysts and other companies mention connecting billions of devices or creating trillions of dollars in economic value, it can be difficult to equate that to what it can do for your business—today. But there's no reason IoT has to be futuristic, complicated, or overwhelming.

At Microsoft, we understand the business value and opportunity that IoT enables, but we think you can start small to realize big impact. This means examining processes, line-of-business assets, and existing systems to find areas where you can make updates and better utilize data.

The Internet of Things starts with your things. You can connect the line-of-business assets that you already have and use existing data in new ways. When you harness your existing investments and connect your people and infrastructure, you can change the trajectory of your business in real time. Harnessing the power and opportunity IoT presents can enable you to:

- Improve efficiency by monitoring and tracking the health of your assets.
- Enable innovation by analyzing data from multiple sources in real time.
- Use advanced analytics to transform your organization by creating new business models and revenue streams.

Microsoft has a comprehensive set of **Microsoft Azure IoT services** that can enable you to transform your business today. With Azure IoT services, you can start creating the Internet of Your Things today.



The Internet of Things is here.

IoT is here today. And it starts with your things.

IoT is not just a futuristic technology trend. It can make a real difference right now. Rather than think about IoT as billions of devices and sensors connecting to systems and the cloud, think about it as the Internet of Your Things.

Your business needs the Internet of Things.

It's time to stop just running your business and start making it thrive, by focusing on the Internet of Your Things to make a big impact. Your things are what matter most to your business.

There is real opportunity to be found by optimizing a few key areas of your business. When you harness your data, and connect your people and infrastructure together, you can change the trajectory of your business in real time to become more efficient and to enhance operational decision-making.

Microsoft has technology to help you.

Microsoft is a leader in the technology industry and has a clear vision for what IoT means to business.

The comprehensive set of **Microsoft Azure IoT services** helps organizations transform their business and enable new growth opportunities. Microsoft can help you turn the data from your line-of-business assets into insights.

What are Microsoft Azure Internet of Things services?

Remember, IoT starts with your things. With a set of cloud services from Microsoft, you'll be able to harness value from IoT quickly and with flexibility for future needs.

With [Microsoft Azure IoT services](#), you can monitor assets to improve efficiencies, drive operational performance to enable innovation, and use advanced data analytics to transform your business with new business models and revenue streams. Small changes can have a big impact on your bottom line. When you take advantage of the Microsoft Cloud Platform, you can use Azure IoT services to help you move faster, do more, save money, and capture the benefits of the Internet of Things for your business.

Most important, you don't have to be at a particular juncture in adopting IoT scenarios in your business to get benefits. You might be just starting to look at how you might improve a particular business process or you might already have years invested in creating an IoT solution. Whatever the case may be, Azure IoT services meet your business where you are today—whether you're focused on where to start or ready to scale your IoT scenarios.

Here are some of the ways Microsoft Azure IoT services can help your business:

Improve efficiency

Understanding the health of diverse line-of-business assets and devices can be a challenge. When you can easily connect and monitor these assets and devices, you can track their condition and performance over time. Rules and alerts notify the right team or department in your business when action is needed, so you can improve business processes and efficiencies.

Enable innovation

Businesses that learn and adapt will continue to thrive. When you can see trends as they emerge, your business will be better able to respond to opportunities and threats. By monitoring and analyzing data from multiple sources in real time, you can enable your business to innovate and make the most out of the situation.

Transform your business

Data is only ones and zeros until you turn it into insights and business impact. When you employ the data from your asset monitoring and use advanced data analytics to enhance decision-making and innovation, you can see the potential to transform your business by creating new business models and revenue streams through data insights.

What are Microsoft Azure IoT services?

- **Azure Event Hubs:**
A scalable service for ingesting and storing data from line-of-business assets and sensors.
- **Azure DocumentDB:**
A NoSQL document database-as-a-service that helps enable fast deployment of IoT applications that are flexible and scalable, handle a diversity of data, and run in a trusted cloud environment.
- **Azure Stream Analytics:**
A real-time distributed stream computation service that provides low-latency, scalable processing of streaming data in the cloud with an enterprise-grade service-level agreement.
- **Azure Notification Hubs:**
A scalable, mobile-push notification engine for quickly sending millions of messages to iOS, Android, or Windows devices.
- **Azure Machine Learning:**
Harness machine-generated data with powerful, cloud-based predictive analytics.
- **Azure HDInsight:**
A Hadoop distribution powered by the cloud to process unstructured or semi-structured data from web clickstreams, social media, server logs, devices and sensors, and more.
- **Microsoft Power BI:**
A self-service analytics tool for all your data.



Why Microsoft?

When looking at ways to improve your business with Internet of Things scenarios, one of the most important decisions you will make is what vendor and partners you work with. It's important to balance innovation with flexibility and ability to scale. It's important to cut through the hype and find a technology company that can get you started today and be around to help you into the future.

We believe there are three reasons why Microsoft should be your vendor of choice when you work on ways to capture business value from IoT:



Microsoft makes it real today.

Microsoft is a proven leader in the enterprise space. We understand the needs of businesses like yours. Microsoft has a long-standing commitment to help companies build on their existing technology assets, devices, and data. Your business probably already uses a variety of Microsoft technologies and services today. When you choose Microsoft to help with your IoT needs, you get technology, support, and expertise from a company you trust. Microsoft also has a vast partner ecosystem in place to help your business easily customize a solution to your unique needs.



Microsoft has the technology you need.

Microsoft helps you leverage the technology and infrastructure you already have in place. And with new, innovative offerings like Microsoft Azure IoT services, we enable enterprises to more securely connect, capture, and store machine-generated data from their line-of-business assets that can then be harnessed in a multitude of ways to improve operational and business agility.

Microsoft data and business intelligence (BI) solutions enable enterprises to gain business insights from structured and unstructured data of virtually any size and activate new types of data irrespective of its location. With our data and BI capabilities, Microsoft is focused on helping enterprises create actionable business insights from data you may already have. Then you can pull data into your existing business solutions, such as Microsoft Dynamics ERP and CRM, to drive operational performance management and make improvements in your core business processes to stay ahead of your competition.



Microsoft supports a diverse ecosystem of partners and solutions.

You already have Microsoft technology today, and when you create new IoT scenarios around your key business processes, you make better use of it. Because of our commitment to supporting the needs of businesses over the long term, Microsoft technologies work well with others and can support your existing investments—even if they aren't Microsoft investments. Microsoft partners with industry-leading systems integrators to create expert advisors to help your business get started with IoT today.

Get started with the Internet of Things today

What's the best time to put the Internet of Things (IoT) to work in your business? Right now. To help accelerate the creation of the Internet of Your Things, Microsoft, with select partners, is offering "IoT Quick Start" consultations for qualifying companies.

At this hands-on consultation, you'll hone in on the opportunity to improve efficiency, enable innovation, and transform your business. Begin scoping and preparing a proof of concept, and identify the next steps to bring it to life. It's IoT on the fast track—get started today!

- [Find out more about the consultation.](#)

It's time to get started creating the Internet of Your Things.

Learn More

Learn how you can put the Internet of Things to work for your business today:

- [Learn more about Microsoft Azure IoT services.](#)
- [Learn more about how to create the Internet of Your Things in your organization.](#)

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www.InternetofYourThings.com

