PYMNTS.com JANUARY 2019

IoT

Intelligence of Things Tracker™

HOW IoT-CONNECTED CARS ARE

Modernizing Grocery Delivery

Pradeep Elankumaran, CEO of digital grocer Farmstead, talks connected cars and how they're modernizing grocery delivery

Page 7 (Feature Story)

AWS warns against adopting IoT simply for the sake of having it

Page 11 (News and Trends)

The top IoT ecosystem players this month, including eight additions to the provider directory

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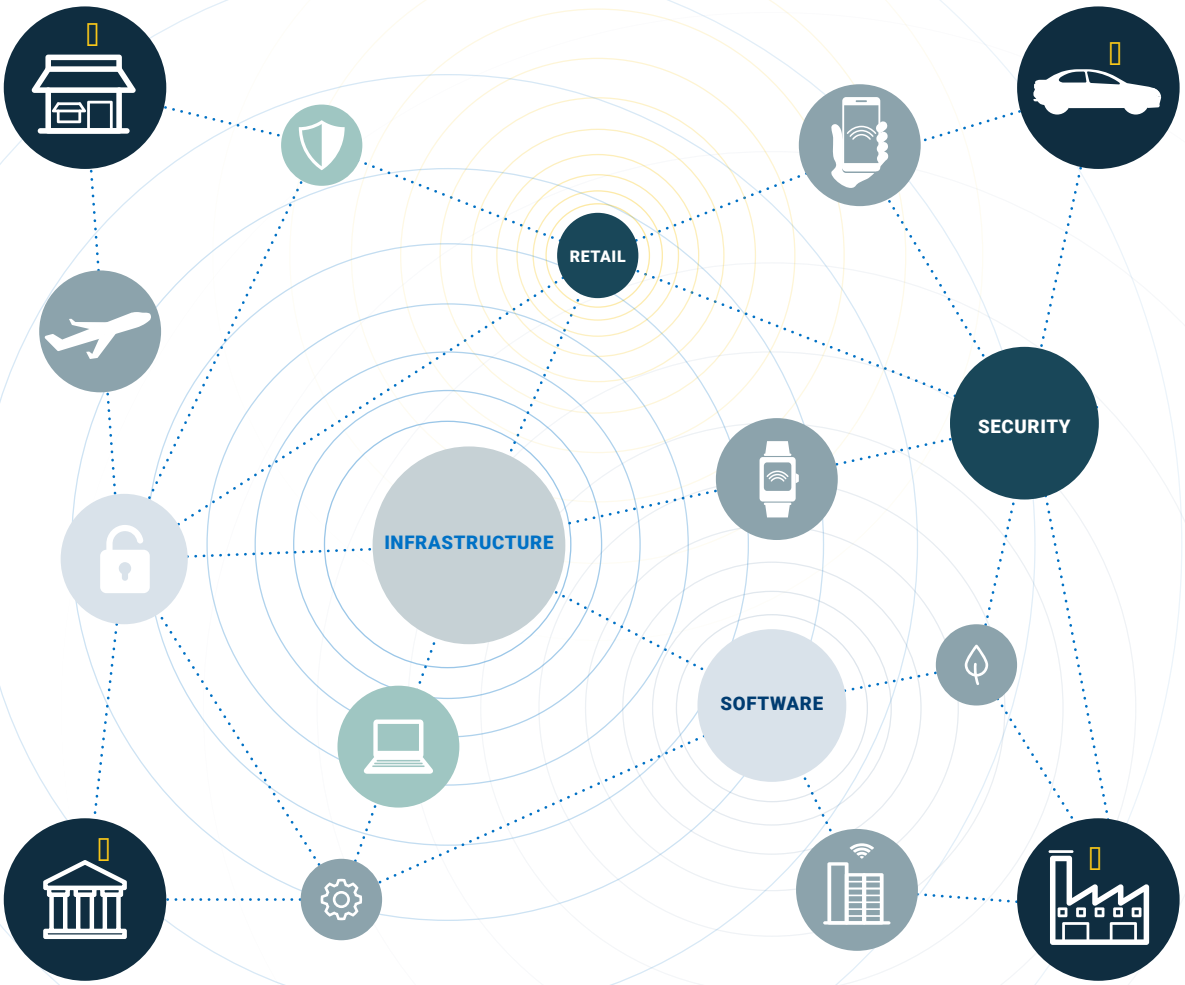
IoT ECOSYSTEM

HOME

Smartphone and internet usage is driving IoT market's growth in South America (p. 15).

AUTOMOTIVE

Digital grocer Farmstead debuts deliveries with connected cars (p. 7).



SECURITY

BlackBerry launches a suite of hardware and software tools for security (p. 12).

FIELD SERVICE

Japan's government plans to hack its citizens' IoT devices for better security (p. 14).

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WHAT'S INSIDE

The recent spate of smart devices suggests that businesses around the globe are responding to the potential for growth and improvement in the intelligence of things (IoT) industry.

Global IoT spending is expected to reach $745 billion in 2019. The U.S. is projected to lead spending this year at a total of $194 billion, with China a close second at $182 billion. With countries dropping such large amounts of cash on the technology, it's clear that IoT's appeal has yet to wear off.

IoT is also becoming more than just simple smart speakers or talking refrigerators. The technology is moving past simple use cases and is being extensively developed for kitchen devices, the auto industry and even agriculture — Case IH developed an autonomous tractor, a concept the company has been expanding on since late 2016. IoT is also proving useful for supply chain innovation and automation, alongside blockchain and artificial intelligence (AI).

Keeping data secure in the IoT ecosystem is becoming a great concern for the world economy as

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more consumers share personal information through connected devices. Experts project that there will be 22 billion connected devices worldwide by 2024. To keep their data — and their customers' data — safe and secure, businesses and other services must upgrade their IoT security.

Around the IoT world

BlackBerry is already turning its attention to IoT security. The company is creating a new suite of services that will supply hardware and software support as IoT devices are developed. BlackBerry hopes this will take away some of the security troubles faced by manufacturers. Digital security company Gemalto is also offering IoT support and protection by partnering with AT&T to bring more connectivity and safety to the latter's IoT module.

Some companies are using IoT as a way to better interact with data, and others are exploring the technology's potential when it comes to integrating with AI, blockchain and machine learning (ML). Combining these technologies — all of which are in various stages of innovation — could advance IoT and the digital economy.

When new technologies arrive on the market, it's important that businesses assess whether they would actually benefit from them before spending the money. That's the warning that Amazon Web Services (AWS) is delivering about IoT as it encourages companies not to invest in the technology just for the sake of having it.

Grocery, IoT and the connected car

Consumers are seemingly happy to use connected devices when it comes to ordering an item or two. But when it comes to making an entire grocery run online, they're not as enthusiastic. One way to change that might be through autonomous cars, according to Pradeep Elankumaran, co-founder and CEO of digital grocer Farmstead.

Autonomous grocery delivery could help to cut down on traffic issues and provide users with better delivery estimates to make sure they don't have to run to the supermarket every week, Elankumaran told PYMNTS recently. For more information on how Farmstead is experimenting with IoT-connected cars for its own grocery business, check out the Tracker's Feature Story (p. 7).

January Tracker updates

The January Intelligence of Things Tracker™ profiles over 300 IoT providers, including eight additions: DHL, Nexiot, Centrica, Libelium, Antmicro, DGLogik, Glassbeam and Novelti.

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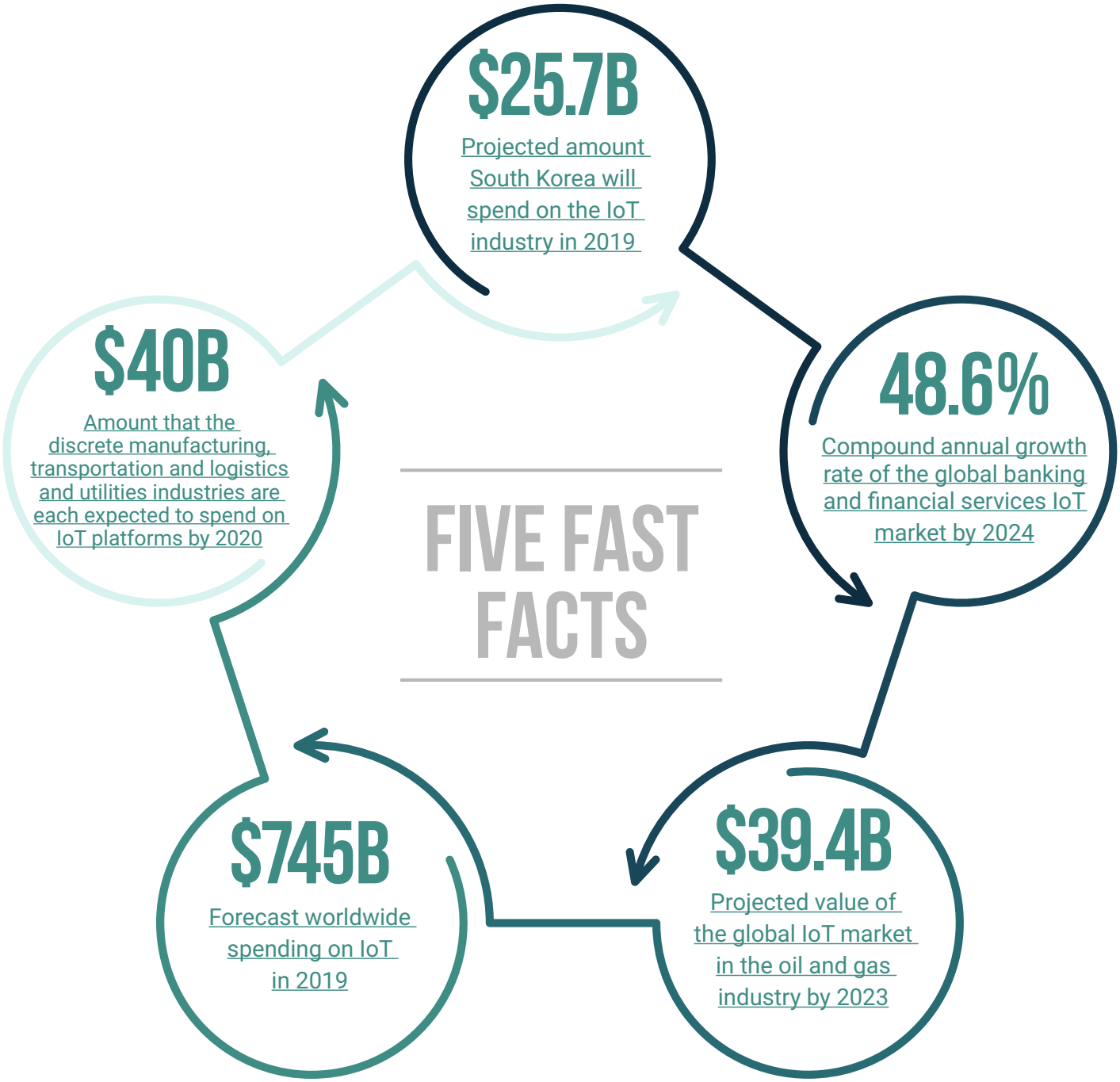

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FEATURE STORY

HOW IoT-CONNECTED CARS

ARE MODERNIZING GROCERY DELIVERY

FEATURE STORY

Consumers are quick to use their connected devices for online orders when it comes to buying clothes, shoes or accessories. But when it comes to groceries, most still prefer a trip to their neighborhood grocery store. The way they see it, there's no point in ordering milk, yogurt or other perishables for delivery if they're going to reach their doors much later than anticipated — consumers still find it necessary to make the weekly grocery run.

That being said, consumers aren't opposed to ordering groceries online and picking them up in store. According to the latest Digital Drive Report, 14.5 percent of U.S. consumers who connect to the internet during their commutes do so, hitting an annual spending total of nearly $44 billion. What comes next is turning them to delivery.

If consumers are going to utilize a grocery delivery service, it needs to be fast and keep consumers assured. Farmstead, a digital grocery startup based in the Bay Area, is aiming to do just that. The company launched in 2016 with the goal of bringing fresher products to customers at the same speed and price point as a typical grocery store, and last year it expanded its model to include delivery by autonomous vehicle.

"You don't have to go to the supermarket. You can just press a few buttons on your phone and get a perfect order every time without worrying about substitutions," Pradeep Elankumaran, co-founder and CEO of Farmstead, said in a recent interview with PYMNTS. "Customers are clamoring for this. Everyone wants this … and the U.S. is, frankly, behind every other country in online grocery."

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IoT and grocery

According to Elankumaran, there's a high chance that consumers will switch to delivery for their weekly grocery runs, especially as IoT-enabled devices make the experience more cost-effective and convenient.

As IoT becomes more prevalent, connected cars will lead to key changes in customer behavior and expectations. They can solve traffic inefficiencies, provide more accurate arrival times and allow companies like Farmstead to minimize food waste and costs.

"[Delivery is] very different [when you have] control of a car that you can program," Elankumaran said. "A programmable car tied specifically to your delivery system — that didn't exist before in any way."

Part of the draw of connected cars for grocery apps and other delivery services is the ease of use. Both experiences take friction out of the equation for the consumer, replacing it with a simple experience instead. Elankumaran added that grocery delivery via autonomous vehicle cuts down on costs, which will continue to occur as connected cars become more common.

"Cost per delivery will rapidly drop [due to autonomous vehicles] because the traffic estimations of when things will arrive [will get] better and better," he said. "It's very predictable. We know [when the delivery will arrive] within minutes of it showing up. … That's very difficult with delivery — even with a GPS connected car."

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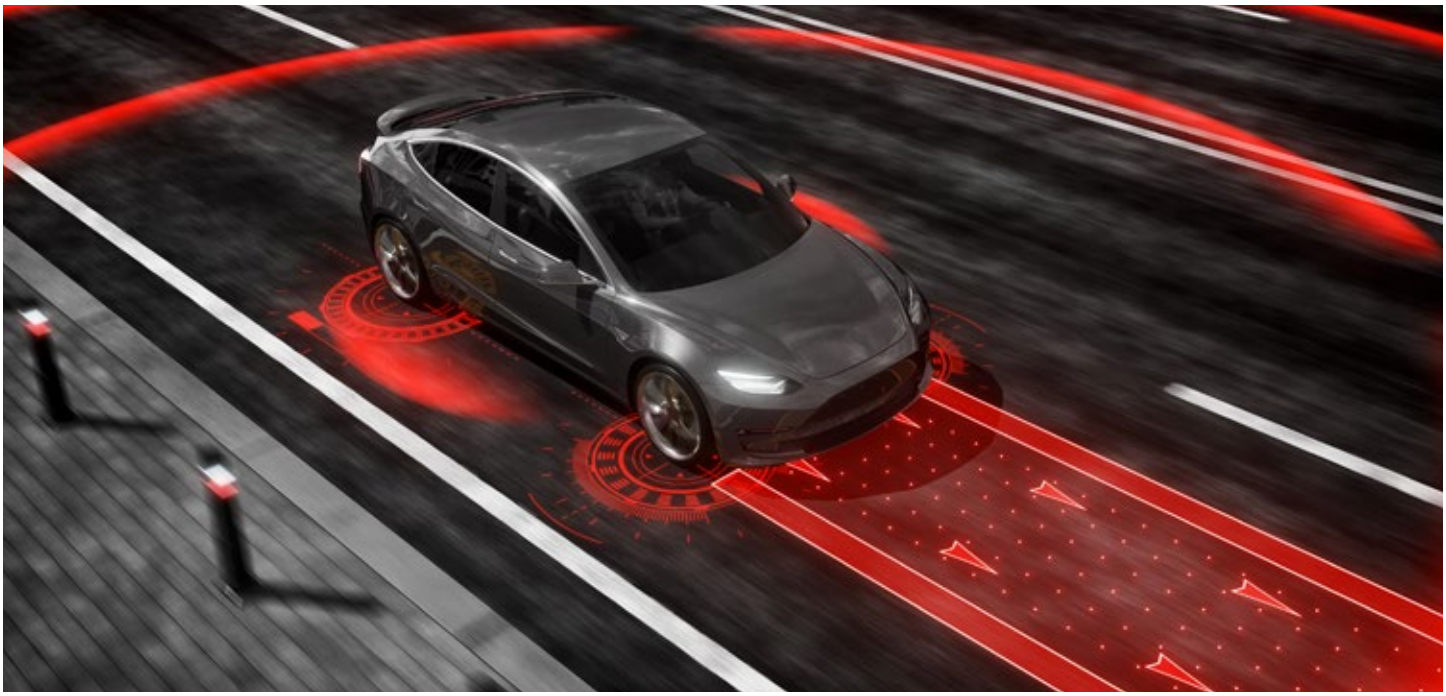

Connected cars and their speed bumps

While connected cars have the potential to change the way people are shopping for their weekly groceries, consumers have to get used to the idea of autonomous driving first. At the moment, Farmstead is pilot-testing its program with a single car in the Bay Area.

"The reason we plunged into this much earlier than others is because we want to understand how this is going to change our business and how this is going to change all businesses," Elankumaran said. "We're pioneering at the expense of some friction on our end … so, when these vehicles start hitting the road in droves, we will already know what the right customer experience is. We will already know what the economics we should expect are."

Farmstead is "probably a year or two away" from putting a fleet of self-driving cars on the road, but Elankumaran said the company remains invested in IoT-connected cars and their potential to change the grocery world.

With consumers increasingly turning to IoT-connected devices to order groceries, and grocers experimenting with innovative delivery methods — like Farmstead's autonomous car — the grocery delivery business might be reaching a tipping point.

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NEWS & TRENDS

Insights and Analysis

Data and security will be the top IoT concerns of 2019

As the number of IoT devices in the world continues to grow, the way consumers and businesses interact with IoT is going to change. IoT solutions providers will need to keep a careful eye on how they collect and secure data. These are areas on which IoT companies will want to focus this year, especially as consumers become more concerned about their data security.

IoT devices' insights will become more valuable this year as well, according to industry reports — as long as the data is handled carefully. With more sensors and devices of which to take advantage, the amount of data flowing from the typical IoT user needs to be well-managed. This could lead to the use of AI and ML alongside these devices — technologies that will likely become an important part of 2019's IoT ecosystem.

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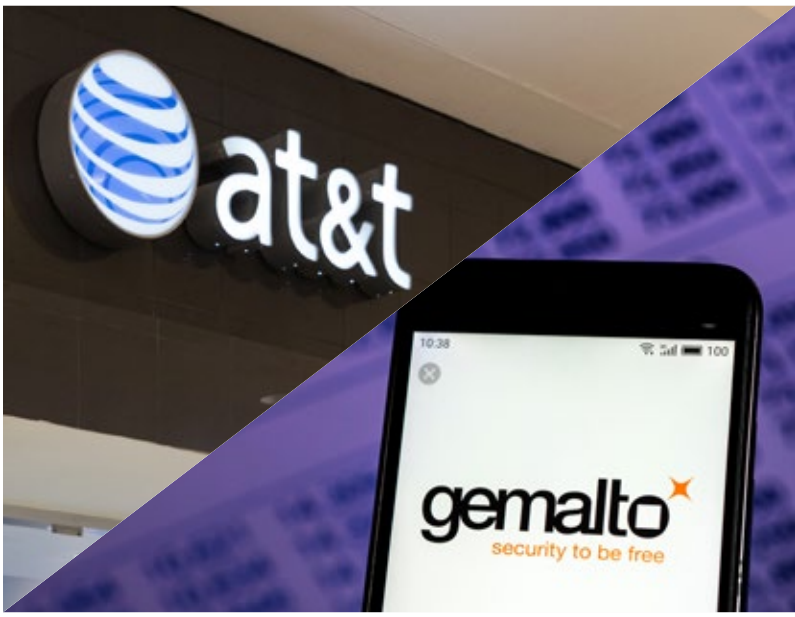
Gemalto partners with AT&T for IoT security
Telecommunications company AT&T is partnering with digital security provider Gemalto to provide more security for the former's IoT module. AT&T is integrating Gemalto's eSIM solution with its own SIM cards to engineer more IoT connectivity for customers. eSIM will be updated continuously by Gemalto, offering AT&T customers a higher level of security.

eSIM works with IoT trackers and wearables, which often do not integrate with traditional SIM cards because they require larger batteries. The companies' solution will give AT&T customers the ability to store more of their data when using their IoT devices, as well as a way to safely share that data with apps and people who have been granted access.

BlackBerry takes a closer look at IoT security
IoT security is becoming a crucial area of focus for companies such as BlackBerry, which recently released a suite of services to manage IoT security, minimizing the work that IoT devices and service providers need to do to protect data. The tools deal with both the hardware and software components involved in IoT security and include three separate offerings for IoT providers.

BlackBerry's offering promises to provide manufacturers with better data security using a tool that can connect to BlackBerry's network operations center. BlackBerry can then use this tool — the BlackBerry Secure Identity Service Key — to remotely monitor the device. The other tools in the suite deal with device hardware, which can often be overlooked when companies design their own security solutions. BlackBerry hopes its solution will enable businesses to focus on creating IoT devices that appeal to consumers without having to worry about their security.



Avoid implemeting IoT for IoT's sake, AWS says
AWS is warning companies to stay away from the IoT hype cycle, advising interested parties to make sure they're not creating an IoT solution just for the sake of having one. AWS says companies should instead treat IoT the same way they treat all other technologies: Create a solution only if it's going to solve a problem.

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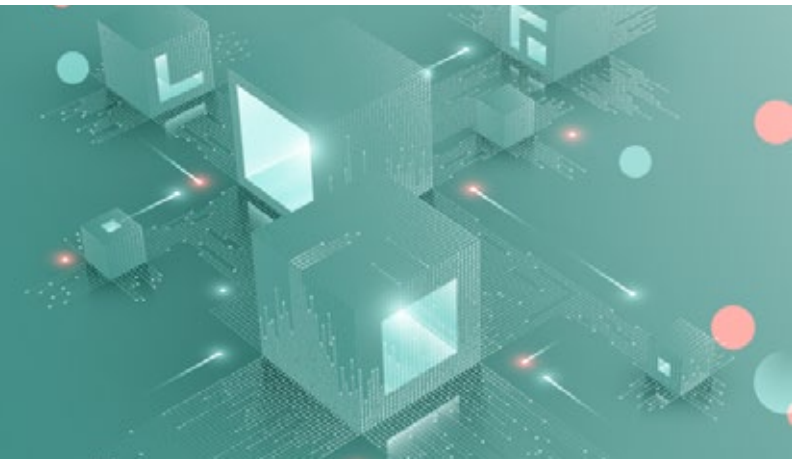
In an interview, AWS' vice president for IoT, Dirk Didascalou, said IoT solutions offer real-world applications that solve problems such as friction in bill payments, shopping and other consumer needs. He added that it's important for companies to know why they have IoT solutions in play in the first place. As one of the original creators of an IoT home device, Amazon certainly hasn't shied away from experimenting with the technology, and it's unlikely that its progress in that market is going to slow.

Blockchain and IoT could fix the supply chain

Whether a company is dealing with digital or physical goods, problems in the supply chain can be significant drains on money and resources, especially as consumers come to expect quicker deliveries and responses. Blockchain and IoT could solve some of the speed and efficiency problems in this area by reducing costs and providing companies with a more effective way to manage the supply chain.



Building a supply chain solution using IoT and blockchain could help companies provide more services or goods, maximizing businesses' monetary rewards. These technologies could also drastically cut down on delivery speed and better track inventory and cost.

IoT security devices with open source software

Consumers want devices that do everything as quickly as possible. When there is a security breach, though, it falls on the shoulders of the developers. Some in the industry are suggesting that developers create more secure devices by turning to open source software to combat fraudsters. Developers would be able to pick and choose the software components included in the device, essentially crafting a security response by picking the best components in the pool.

The idea relies on the shared ability of hundreds, even thousands, of software developers and security engineers, all of whom are developing what they believe to be are the best parts of a security solution. Open source software does come with some drawbacks. Developers could accidentally insert malicious code into their products, which would cause harm to the end user.

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Security Updates

Why trust is key in the IoT market

Keeping data safe is essential for any company in the IoT market — customers are unlikely to interact with devices they don't trust. If security concerns are properly managed, however, the industry has the potential to grow far and fast. Some estimates suggest that there will be 22 billion connected IoT devices around the world by 2024.

To reach that number, IoT providers need to consider device security, end-to-end security and protections for the flow of data as it moves from the end user to the company. AI and ML could prove to be integral to keeping personal information safe. IoT solution providers could use these technologies to sift through endless streams of data with ease, separating false customers from legitimate ones. This will become increasingly important as more users depend on IoT devices.

Japan is hacking its citizens' IoT devices

With more users depending on IoT devices, security is paramount — that's why Japan wants to hack them. The Japanese government just passed an amendment that will allow it to hack into citizens' IoT devices, stating that the security of such technologies needs to improve before the country hosts the 2020 Olympics.

Employees of Japan's National Institute of Information and Communications Technology (NICT) will undertake the actual hacking, attempting to log in to insecure devices with default passwords and easy-to-guess user credentials. The government will begin hacking the country's more than 200 million IoT devices at the start of February.

The long road to IoT security

More companies may be paying more attention to the security of their IoT devices but, overall, security still needs an upgrade. That's not to say there has been no progress — manufacturers are building devices with data security in mind, and developers are now designing software to keep personal data as secure as possible.

There are still security issues that need to be addressed, however, particularly when it comes to devices' sensors. These sensors are typically weak points that can inadvertently allow fraudsters to access devices and their attached data. There are also security concerns when it comes to integrating new technologies with IoT devices. AI, for example, needs to be carefully trained on which data to flag and which to ignore.

IoT and money

Cleveland IoT project receives $2.2M in funding for its second year

A Cleveland, Ohio, project created to research IoT has received $2.2 million in funding for its second year, allowing it to continue examining how connected devices are changing the world. The project, a collaboration between Cleveland State University and Case Western Reserve University, is looking at how

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IoT devices can solve modern problems. The project's pilot program in Lakewood, Ohio, involved installing sensors on town vehicles to monitor traffic incidents.

The pilot program will be funded with this $2.2 million, along with other community projects, including one in Northern Ohio, where researchers are using IoT technology to distribute information on the state's opioid crisis. Some of the funding will also be used to lower administrative costs and hire new faculty members at both participating universities.

Global IT spending will reach $3.8 trillion in 2019

According to a study by Gartner, new financing for IoT projects is expected to continue beyond Ohio's universities. The study, which tracks IoT spending around the world, predicts that the total global spend on the IoT, cloud and data center markets will reach $3.8 trillion in 2019.

This is likely due to the fact that spending is moving away from areas like mobile devices, which are well-funded for the foreseeable future, and into newer categories, such as IoT. The Gartner study states that spend is oversaturated for mobile and computer devices but not for IoT. The shift in spend is also due to businesses' changing perspectives. Companies no longer view IoT as a tool for business, but rather as the engine that moves it. Spending will continue to increase as IoT and the cloud become more popular tools.

South America's IoT market projected to reach $19.4B by 2023

One of the areas where IoT spending is set to increase most prominently is South America, a market where IoT is being used for everything from government and home automation to healthcare and agriculture. The IoT market for this region is expected to reach $19.4 billion by 2023, according to an industry release.

IoT spend in the area will be driven by a few factors, including rising internet usage and increasing demand for smartphones in South American countries. Furthermore, businesses and governments on the continent are also investing in IoT, experimenting with solutions for industries such as manufacturing, retail and telecommunications.

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METHODOLOGY

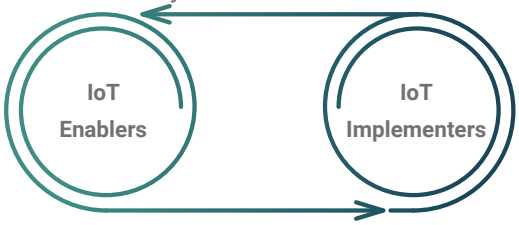
Every month, we identify active suppliers in the IoT ecosystem by combing through leading industry forums, analyzing research reports and assessing news coverage from around the globe.

To provide an objective assessment, we group these suppliers under four categories: Devices, Software, Services and Infrastructure.

The Tracker's Supplier Scorecard has been further divided into two groups:

Each of the enablers and implementers in the directory are ranked on the services they extend in the four IoT

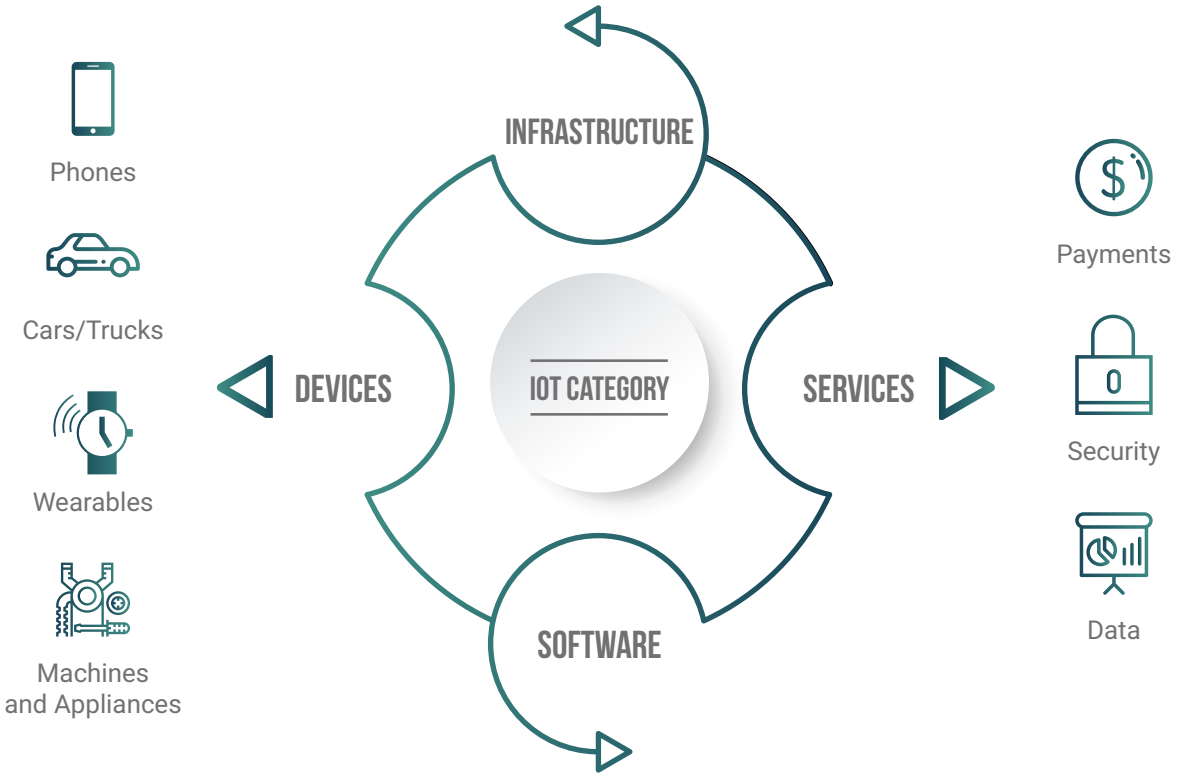
This group includes companies that are focused on developing and investing in IoT capabilities and new technologies.



Companies included in this group are dedicated to bringing IoT devices and services to market.

categories. For a conclusive measure, we quantified their recent activity and public innovation profile in the space through LinkedIn and Google, and marked them as market and company indicators.

The narrowed list of suppliers selected to be a part of the Tracker are those that appear most often in our research. Information on the selected companies included in our Supplier Scorecard is sourced from their respective websites.



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IoT Category	IoT Service	Description
Devices	Wearables	Wearable devices that extend tools such as health and fitness tracking
	Phones	Handsets that come with embedded chips for IoT capability
	Machines and Appliances	Manufactured products containing sensors that transmit data
	Cars/Trucks	Cars and trucks with integrated circuitry for IoT
Software		Software developments with IoT applications
Infrastructure		Architecture necessary for connecting devices, including sensors, chips, gateways and platforms
Services	Data	Data infrastructure, collection, storage, processing, modeling, analysis and visualization
	Payments	Gateways, infrastructure and software associated with payments in the IoT ecosystem
	Security	Security solutions for the IoT environment, including data and devices

PYMNTS will periodically update scores based on new developments. If you would like your company to be considered for inclusion in the Tracker's Supplier Scorecard, or if you wish to have an existing listing reconsidered for an update, please head over to our profile submission/update page.

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TOP 10

TOP 10 IoT IMPLEMENTERS

01 DELL — SCORE 100 TIE

01 HUAWEI — SCORE 100 TIE

01 LG — SCORE 100 TIE

01 SAMSUNG — SCORE 100 TIE

05 Hewlett Packard Enterprise — SCORE 99

06 FUJITSU — SCORE 81 TIE

06 Lenovo — SCORE 81 TIE

08 ARROW — SCORE 76

08 MARVELL — SCORE 76

10 enlighted — SCORE 73

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TOP 10 IoT ENABLERS

01 amazon SCORE 100 TIE

01 ARM SCORE 100 TIE

01 cisco SCORE 100 TIE

01 Google SCORE 100 TIE

01 intel SCORE 100 TIE

01 verizon SCORE 100 TIE

07 vodafone SCORE 99

08 aruba a Hewlett Packard Enterprise company SCORE 98

09 COMCAST SCORE 95

10 LANTRONIX SCORE 93

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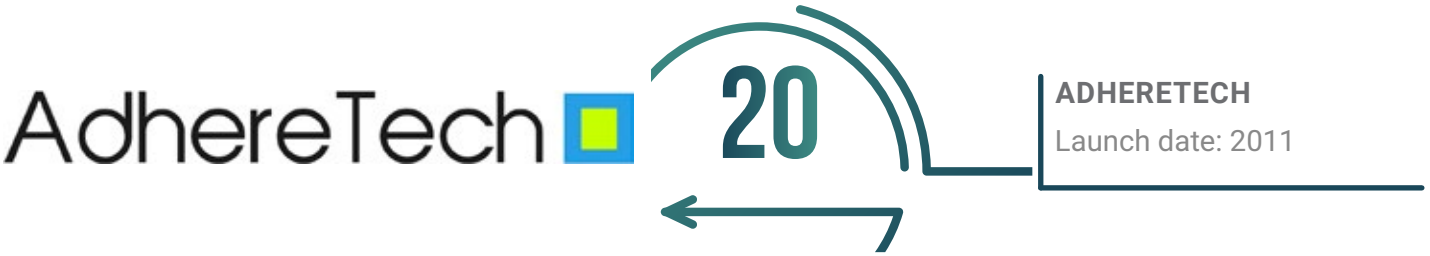
ABB manufactures and sells electrification, robotics and motion, industrial automation and power grid products.

Acer makes information and communication technology products including PCs, displays, projectors, servers, wearables, tablets and smartphones. The firm also offers a cloud-based ecosystem intended to enable customers and businesses to connect their devices and manage data.



AdhereTech is a healthcare firm which manufactures smart wireless pill bottles that are currently being used by patients in pharmaceutical and research engagements. This innovative device tracks and improves adherence, collecting and sending all data in real-time. If doses are missed, patients can easily receive customizable alerts such as automated phone calls, text messages, lights and more.

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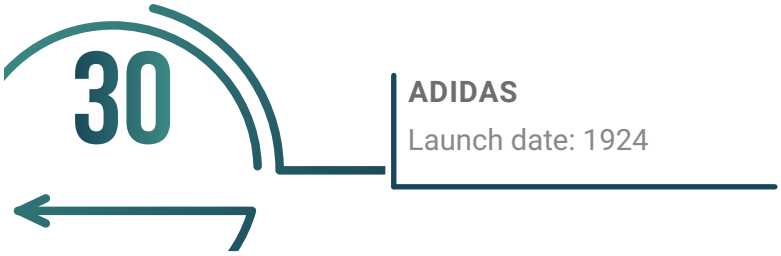
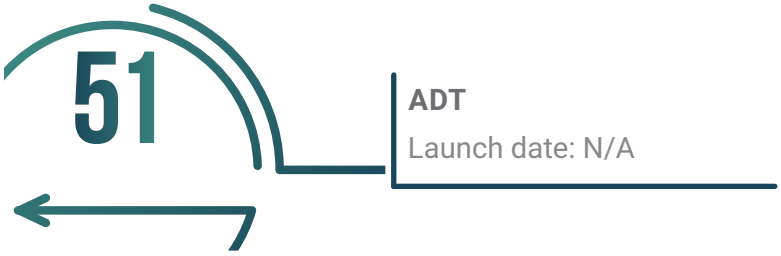


Adidas, the German manufacturer and designer of sportswear, is also playing in the IoT world. The company's miCoach is a service that covers hardware and software developments for fitness tracking. Adidas commercializes wearables like smartwatches, shoe sensors and smart soccer balls and provides users with activity tracking apps that allow for real-time coaching and training scheduling.



ADT provides security and automation solutions for homes and businesses in the U.S. and Canada. Its solutions can control access, react to movement, sense environmental conditions such as flooding or carbon monoxide and respond to personal emergencies like injuries or incapacitation. Users can also remotely access their security videos and control lights or other elements of their homes or businesses.

Alarm.com is an IoT company that works in the development of security and smart home services. Their software and devices offer services like interactive security, video monitoring, access and energy management. The company also provides home automation services that integrate different home devices and let users operate them via their smartphones.

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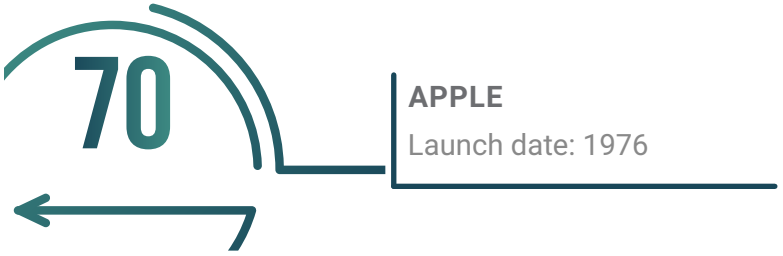
Ambarella develops low-power, HD and ultra-HD video compression and image processing solutions. Its products are used in a variety of professional and consumer applications including security IP cameras, sports cameras, wearable cameras, flying cameras and automotive video processing solutions. Ambarella compression chips are also used in broadcasting TV programs worldwide.



Apple works on the design and development of products ranging from electronics and software to Internet services. Their consumer electronics include smartphones, wearables, computers and smart TVs. Their software developing includes web browsers and operating systems.

Arrow Electronics is a leading global provider of Internet of Things (IoT) connectivity products and services. The company distributes electronic components and computer products to industrial and commercial customers. The Company offers a variety of products including computer systems, peripherals, software, and mass storage products to original equipment manufacturers and commercial customers worldwide.

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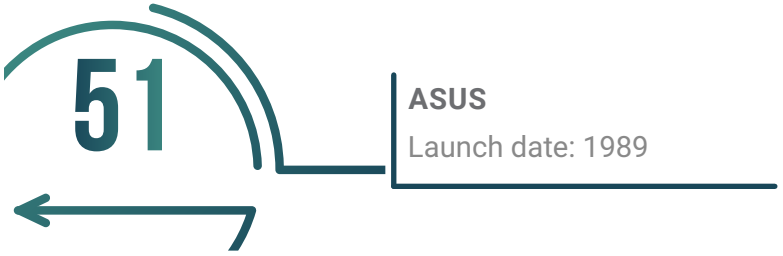
Arxan Technologies offers security services for the IoT, mobile and desktop devices. Its products aim to offer customers protection against financial loss, brand damage, fraud, IP theft, stolen credentials, fraudulent transactions, unauthorized access and non-compliance with regulatory and industry standards.



ASUS engages in manufacturing and wholesaling computing, communications, and consumer electronics solutions. The company is pioneering new mobile trends with the ASUS ZenFone™ series, and it is rapidly developing virtual and augmented reality products as well as IOT devices and robotics technologies. Most recently, ASUS introduced Zenbo, a smart home robot designed to provide assistance, entertainment, and companionship to families.

Athos provides Internet of Things (IoT)-enabled fitness clothing paired with an app offering muscle activity tracking and insights into more effective athletic training.

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ATLAS WEARABLES

Launch date: 2015

Atlas Wristband is a connected device that tracks fitness data, like the amount of repetitions or burned calories and presents the data in a mobile app. The system is updated over time and includes new exercises or metrics and allows for two different modes: Coach and Freestyle. The Coach mode gives the user a tracked routine to follow, while Freestyle mode just records the data from the user's personalized exercise routine.

50

AUGURY

Launch date: 2012

Augury is an Industrial IoT company bringing predictive maintenance to new markets with cutting-edge machine learning and AI technology.

47

AUGUST

Launch date: N/A

August Home develops smart home access products that use encrypted locking technology. It enables users to use smartphones or computers to create virtual keys for their homes to grant access to house cleaners, dog walkers, delivery services and guests — and control how long that access lasts.

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Automile develops an online platform that connects vehicle drivers and fleet managers with vehicle data. Its web app provides mileage and compliance logging, driver identification, messaging, real-time tracking and other features, and the company also offers asset tracking solutions.

Ayyeka develops end-to-end remote monitoring solutions that streamline and secure the process of bringing field data to decisionmakers and SCADA systems, enabling smart infrastructure and environmental networks.

Babolat is a sporting goods manufacturer with a connected solution called Babolat PLAY. By using a connected racquet and a smartphone app, users can check their stats, power and technique and compare their performance with friends. The company also offers Babolat POP, a connected wristband which can be paired with smartphones and tennis racquets to collect performance data.

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Bayshore Networks provides cybersecurity solutions for the industrial IoT. Its products aim help companies deliver safe and secure integration of IT and OT networks, systems, data, and infrastructure. Its IT/OT gateway offers security solutions for operational assets from internal and external cyberthreats while enabling operational data to be shared with business systems for monitoring, controlling and analysis. The company also offers security and protection for smart cities.

Bird is a dockless electric scooter rental company that operates in parts of the U.S., Austria, France, Israel, Mexico and Belgium.

Blossom offers a smart watering device which builds watering schedules according to local weather forecasts, historical data and vegetable types. Users can also input and customize their own schedules.

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The Bosch Group provides an IoT development platform that allows for the design, development and deployment of big data/Internet of Things applications that leverage telemetry, elastic cloud computing, analytics and machine learning for the usage of predictive analytics. The company also offers IoT applications like supply chain.

Bragi develops virtual audio assistants to enable productivity, enhance awareness and entertain users. The Bragi Dash Pro is a pair of wireless intelligent earphones featuring Bluetooth connection to other devices. The earphones also enable users to listen to music, or can be used as real-time translators or fitness trackers.

British Gas is an energy and home services provider offering its customers Smart Meters for gas and electricity that are intended help them to be in control of how much energy they are using. The company also offers a smart thermostat that enables users control their heating and hot water from their smartphone, tablet or laptop.

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BSQUARE CORPORATION
Launch date: 1994

Bsquare offers DataV, a software solution designed to enable businesses and industries to use data from their connected devices to improve their outcomes. DataV provides users with several tools, including device-side logic, cloud analytics, predictive reasoning, predictive analytics and business process optimization.

C3 IOT
Launch date: 2009

C3 IoT provides an IoT development platform that allows for the design, development and deployment of big data/Internet of Things applications that leverage telemetry, elastic cloud computing, analytics and machine learning for the usage of predictive analytics. The company also offers IoT applications like supply chain optimization, predictive maintenance and customer engagement.

CAEDEN
Launch date: 2014

Caeden develops design-focused earphones and wearable devices that can sense and manage stress via tracking of variables such as pulse and physical activity.

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California Eastern Laboratories (CEL) sells and markets compound semiconductor devices from Renesas Electronics Corporation. The company's products include RF components, solid state relays and photo detectors. It also develops Cortet, a connectivity management suite that includes radio services like modules and gateways, software libraries compatible with multiple ecosystems, and the Cortet App, which allows for devices control and cloud solutions.

New!

Centrica is a British multinational utility company headquartered in Windsor, Berkshire. Its principal activity is the supply of electricity and gas to businesses and consumers in the United Kingdom and North America.

Clear Channel Outdoor entered the Internet of Things market with Clear Channel Outdoor RADAR, which uses aggregated mobile data to gain information about who is exposed to their advertising displays and how they interact with brands afterward.

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Control4 manufactures wireless home automation products and enables users to virtually control any device in a home or business. The company has developed hardware and software solutions to remotely monitor and automate home theater and television, video, multiroom music, lighting, energy, temperature and security.

Cubical Laboratories offers solutions to monitor the electrical appliances remotely at households, hotels and office environments. The company produces smart homes controllers and switches, wireless cameras as well as the software and applications necessary to control electronic devices, lightening, fan and curtains from a smartphone or laptop. Users can also get real-time insights, graphs and analytics regarding energy usage data and consumption.

Dell's participation in the Internet of Things industry covers areas from infrastructure solutions to analytics capabilities, as well as security services.

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Density has developed a small sensor that measures how busy a location is in real-time. The firm uses depth sensing technology, computer vision, and an onboard quad-core processor to anonymously measure and manage entrances and exits through a door. Density system is designed to protect privacy and can be deployed into places a video camera cannot go such as stadium bathrooms, churches, secure corporate offices, elementary schools, and dressing rooms.

DigiCert provides identity, authentication and encryption solutions for the web and IoT. Its SSL tools and PKI certificates ensure correct authentication of devices as it connects, and protects communication between devices.

Latvia-based Displio produces a self-standing WiFi-connected digital display. The product shows sections from a range of information options, including email alerts, weather and shipment tracking information.

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New!

DHL is a leading global logistics company with a presence in more than 220 countries and territories across the globe.

Founded by James Dyson, this company produces vacuums, air treatment devices, lighting solutions and hand dryers. Dyson Pure Cool Link is an air purifier embedded with connectivity technology that can be controlled from the user's phone, send information to the user's mobile about the quality of the air and report on its own functioning. It also gives insight on data like times the device has been working and levels of pollution throughout the day.

Eaton Corporation is a power management company that develops products and systems to manage electrical, hydraulic and mechanical power. These include vehicle automation, aerospace actuators, connectivity and more.

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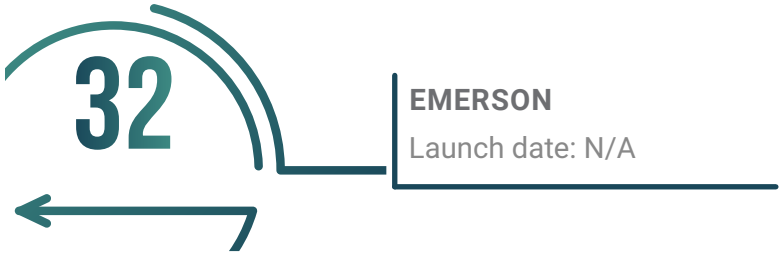

Emerson Automation Solutions develops components and software for automation equipment manufacturers.

Ecobee is a smart thermostat enabling users to control their homes' temperature using smartphones, computers, tablets or via voice recognition. The Ecobee device also comes with sensors that recognize the rooms' hot and cold spots and can detect occupancy.

Eggplant Technologies is the developer behind "Move It," a smart, mobile-connected personal gym. The solution is composed of a smart handle that is interchangeable with four types of training equipment and is capable of detecting 16 different types of exercise. The company provides a mobile app that synchronizes with the equipment and allows users to interact with other people to find workout buddies or challenge friends.

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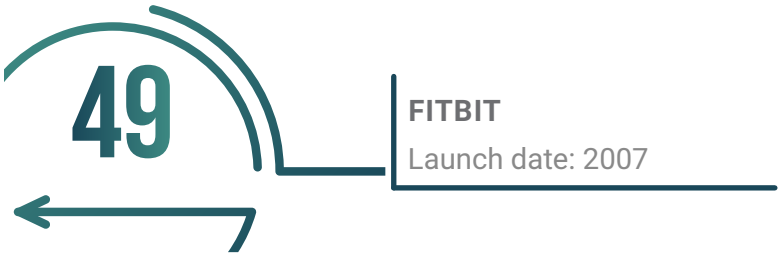
Enlighted manufactures light control platforms for smart buildings. The firm provides sensor technology and data analytics system for energy savings, space utilization, security and more. Its smart sensor can monitor real time occupancy, light levels, temperatures and energy usage, among other things. The solution has been designed for commercial office, education and health care spaces.

Epson is a manufacturer of printers, projectors, scanners, professional imaging, system devices and factory automation products. Besides, the company offers wearable devices such as smart glasses or fitness trackers, point-of-sale products, cameras, home entertainment devices, among others.



Fitbit develops a range of different wearable bracelets that can track activity. The Fitbit app can track daily activity and quality of sleep, record exercise routine stats, and help users organize workouts. The app also adds different features of social engagement and helps with nutrition care by allowing for food logging or weight tracking with a Fitbit-connected scale, Aria. The information is displayed on the user's phone, as well as the bracelets themselves, which can also receive and display phone data such as calendar entries or calls.

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FitPay is a proprietary technology platform. It provides contactless payment capabilities for wearables and Internet of Things (IoT) devices.

Five Elements Robotics is a technology company focused on the development of personal and consumer robots. The company is the developer behind DASH, a retail robotic shopping cart. DASH allows users to import their shopping lists from their phones and gathers data from user usage to offer targeted marketing.

Fleet Space Technologies designs, builds and launches a network of nanosatellites to provide global satellite connectivity to the Internet of Things (IoT). It serves the mining, oil and gas resources, precision agriculture, transport and logistics sectors.

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Foobot is an air quality monitoring system enabling users to control indoor air pollution. The company's app offers indoor air metrics, outdoor pollution levels at the user´s location and home automation features.

ForeScout Technologies, Inc., is an IoT security technology developer. Their solutions can see which devices are connected to the network without requiring endpoint agents, allowing it also to detect nontraditional IoT devices. The company's solutions integrate with more than 70 network, mobility, IT and security products, allowing for information sharing and operation synchronization.

Friendly Technologies is a platform provider offering solutions for smart home, IoT, TR-069, LWM2M, MQTT and OMA-DM device management. The company's software is designed for service providers and those participating in IoT utilities, transportation and smart cities markets.

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Frontpoint Security Solutions installs, monitors and maintains security technology offerings, including home security systems that can be controlled remotely with an app.

Fujitsu is an information and communication technology company offering IoT platforms ranging from enterprise wearable devices and middleware applications to standardized business solutions for customer verticals. Its IoT platforms provide data aggregation and management as well as application development services and device management capabilities. The firm also builds electronic devices and hardware products such as laptops, smartphones and tablets.

Garmin manufactures and designs products for the automotive, aviation, marine, outdoor and fitness markets that are capable of running a GPS. Other products sold by the company include smartwatches, cameras and sensors. The company has developed applications that enable users to manage and control their devices.

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Gemalto designs and manufactures digital security solutions. The company's IoT solutions are mostly aimed to provide reliable connectivity, reliable security and agile monetization frameworks. Gemalto´s M2M portfolio is enabling solutions in industries ranging from health care, retail services, smart energy, transportation, logistics and automotive. Besides, their consumer electronics portfolio includes solutions for smartphones, tablets, PC and wearables.

IoT WoRKS TM by HCL works to enable organizations to develop IoT ecosystems in order to enhance their connections of things, data and processes. The company's solutions are designed to help businesses to enhance communications between devices and cloud. The company also offers a data analytics platform which allows secure data ingestion, management, and syndication.

Helium Smart Sensors are deployable in minutes and built for companies that need to monitor and analyze conditions of interest and importance. The company offers two main wireless smart sensors: the Helium Blue, that measures internal refrigerator temperature and door state and the Helium Green, which measures multiple environmental parameters. In addition, Helium also offers a cloud, which is the control and storage center for the entire distributed smart sensing system.

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HEWLETT PACKARD ENTERPRISE

Launch date: 1939

Hewlett Packard Enterprise offers a group of different solutions that go from cloud, security and big data to mobility infrastructure and the Internet of Things. The company's Universal IoT Platform offers an architecture for businesses to manage and connect heterogeneous IoT devices as well as collect, analyze and monetize data. The solution comes with attributes like application design, API monetization and policy enforcement.

HIKU

Launch date: 2012

Hiku is a kitchen device to scan barcodes and recognize voices to add products to shopping lists. Consumers can use it for shopping in-store and online, add planned updates to receive price comparisons and share shopping lists with others.

HITACHI

Launch date: 1910

Hitachi Insight Group is the arm of the Japanese technology firm that focuses on the Internet of Things. The company provides its own IoT platform called "Lumada," and also develops IoT solutions for smart cities and energy efficiency, as well as industries like health care, automotive and construction.

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Honda is primarily known as a manufacturer of automobiles, motorcycles and power equipment. The company is also focused on connecting its cars with solutions like HondaLink, a display audio system that's powered by a user's phone, to access online content.

Honeywell manufactures wireless and scanning technologies used in building, home and industrial applications. The company's solutions are designed to deliver energy efficiency, security and safety. The company also offers software and applications to stay connected and control its devices.

HotSchedules develops employee scheduling and labor management solutions for the restaurant industry. In 2015, the company introduced its IoT platform, which allows users to capture data, transform it into insights and deploy their own apps. With the platform, a restaurant can connect things like kitchen appliances, payment devices and drive-thru displays into the same platform, gathering data in a single place and allowing for more complete information.

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Huawei Technologies is a telecom solutions provider that offers infrastructure application software, telecommunications networks and devices with wireline, wireless and IP technologies. The company has developed a wide range of IoT devices including phones, PC, tablets, wearables, audio devices and Wi-Fi routers for smart homes.

Huami is a Chinese wearable device manufacturer that produces fitness trackers and smartwatches. Its products include the Amazfit and Xiaomi wearables.

Humavox has developed ETERNA, a wireless charging technology that enables users to recharge their electronic devices from nearly any containing object where they instinctively drop their devices. The company offers solutions for charging headphones, fitness trackers, smart rings, watches and clothing.

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The Korean automobile manufacturer Hyundai has its own player in the automobile IoT market: BlueLink. The service allows drivers to access a group of different features, from safety tools like automatic collision notification and monthly vehicle health reports to external control features like remote start and stolen car location. BlueLink also provides a destination search solution powered by Google and can connect with Apple Watch and Android Wear.

IHT Spirit System developed an assessment platform focused on physical education. The company's IoT software solutions allow teachers to access the data of every student and test their performance.

infiswift is an IoT-enabled platform designed to connect and manage devices and cloud services. The platform offers multi-layer security for enterprises, real-time device monitoring and data processing and analysis.

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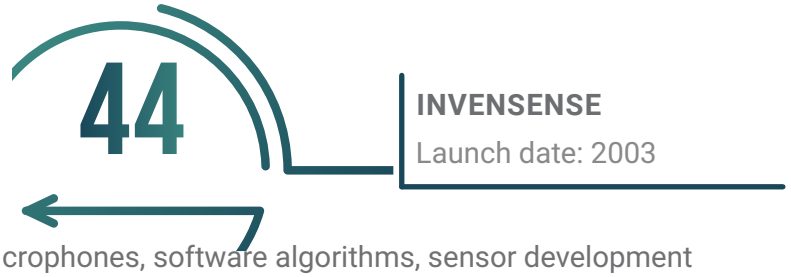

InvenSense provides MEMS inertial sensors, microphones, software algorithms, sensor development tools and platforms needed for the product creation and sensor integration of IoT-connected devices. InvenSense technology is designed for multiple products including smartphones and tablets, automotive, wearables, drones, and smart remotes for smart TVs.

Johnson Controls International develops smart buildings, energy solutions, infrastructure and transportation systems. The firm offers products including energy efficiency, building management and automation solutions. In addition, Johnson Controls Smart Equipment offer embedded controls and secure connectivity to help companies improve serviceability.

Karamba develops security solutions for connected cars. The company offers endpoint security for the externally connected electronic control units of connected cars that allows only explicitly permitted code to run through them. Karamba also offers early detection of droppers and malware protection services.

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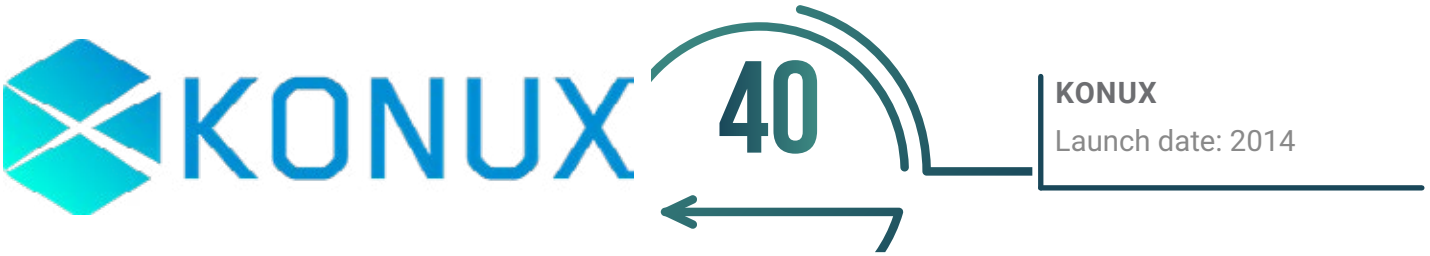
Keen Home develops home automation hardware and software products. The company's Smart Vent System enables users to control heating and cooling airflows room-by-room. Smart Vents also connects to the internet and to its other components, giving users the ability to manage all functionalities from the Keen Home app.

Kepware is PTC's software development business. It works to provide a portfolio of software solutions designed to help businesses connect automation devices and software applications and enable industrial IoT.



Konux provides the industrial IoT market with smart sensor systems designed to measure all kinds of mechanical and geometric parameters such as torque, pressure, force and angle. Konux sensing technologies are combined with a cloud solution that provides customers with real-time data visualization and intelligent data analysis, enabling them to understand their machine problems and make maintenance predictable.

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Lenovo develops, manufactures, and markets technology products and services. It offers commercial and consumer personal computers, as well as servers and workstations; mobile Internet devices, including tablets and smart phones; storage and networking products; memory and processors; rack and power infrastructure; and laptops, desktops, and accessories, as well as operating systems, security, and systems management software.

LG Corporation delivers connected products that go from smartphones, tablets and smartwatches to TVs and home audio devices. The company also works with affiliated companies in telecommunication services such as: LG N-sys, LG CNS and LG U.

New!

Libelium designs and manufactures wireless sensors for smart cities and the internet of things.

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LIFX is a WiFi-enabled LED light providing users the ability to control their home or office lights with any enabled device, such as a smartphone, wearable or a smart home device. The multi-colored smart light comes with an app offering features like a music visualizer, themes, scenes and schedules.

LimeBike is a dock-less bicycle sharing company. Its app enables users to locate bikes and scan to unlock them.

Local Motors is a technology company that works on the development of vehicles. The company's products include a 3D printed car and Olli, an autonomous electric shuttle. Olli uses sensors and data to understand its environment and can help in corporate or municipal transportation needs. The shuttle can also work like a taxi with the user determining a pickup location through the app for later traveling and paying within said app.

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Lofelt develops "The Basslet," a wearable watch-size subwoofer. The device delivers beats and basslines directly into the user's body. The Basslet works next to a sender that can be connected into devices like smartphones, gaming consoles or VR headsets.

Digital products provider Logitech has developed a range of IoT solutions mainly focused on smart homes. The company's portfolio includes several products that allow users to remotely control their connected devices and manage their home's lighting, music, locks, thermostats and more. The company's products include smart remotes, connected security cameras and smart buttons.

LogMeIn provides software as a service and cloud-based remote connectivity services for collaboration, IT management and customer engagement.

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Lumo develops body tracking technology, including clips that attach to running shorts or capris to measure cadence and speed, giving the runner instant feedback through earphones. Lumo also offers clip-on devices that monitor posture.

Lutron offers a family of IoT devices including lights, shades and temperature controls for a room or a whole house. The tools can also adjust automatically to prevent excessive energy consumption.

Marvell is a fabless semiconductor company with experience in microprocessor architecture and digital signal processing. The company develops platforms for storage solutions as well as wireless and networking products between others.

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Mastercard is a technology company developing solutions for the payments industry, with payment processing as its core business. The company develops different payment products, including the use of NFC technology, eCommerce applications and security products. Mastercard is also engaged in the development of Internet of Things technology usage into payment applications.

Matternet is an autonomous drone logistics platform developer with its own drone, cloud and usage stations. The company provides aerial delivery transport for healthcare, eCommerce and logistics organizations, along with serving individual customers. The platform is designed to be used in densely populated urban areas which often present delivery challenges.

Microsoft develops a broad range of software products, from Windows to Skype and from Bing to Office. The company also develops devices like Lumia and Xbox, as well as the Azure IoT Suite, a platform that allows the user to connect and scale projects, as well as analyze the data generated by it.

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MISFIT
Launch date: 2011

Misfit manufactures wearable and smart home devices. The company offers smartwatches, fitness trackers and smart accessories. Misfit also offers IoT-based applications such as the Misfit Link App, Home App and Cycling app, which help users better manage wearables from their smartphones.

MOCANA
Launch date: 2002

Mocana's IoT security platform helps companies secure and monitor their devices and gateways in a complex, multi-vendor environment. The device-to-cloud platform functions as a real-time operating system (RTOS) for wired and wireless networking settings.

MOEN
Launch date: N/A

Moen has developed a customizable shower with personal device integration enabling users to control time and temperature. Once the U by Moen shower is connected to WiFi and the cloud, users can control their showers using their smartphones, Alexa or the shower controller.

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Moov is a water and dust-proof connected wristband designed for sports, including cycling, swimming and boxing. The wearable device can also be used in coach mode, allowing for a voice-guided workout and different metrics, such as amount of repetitions or landing impact. The device can also track 3-D movements, allowing it to teach the user more effective exercise techniques, and permits for social engagement and competition with connected friends.

Coffee machines and capsules provider Nespresso has developed a connected coffee machine. The Nespresso Prodigio is a Bluetooth connected coffee machine which enables users to manage capsules stock, program coffee times and receive alerts for machine maintenance and care, everything done from their smartphones through the Nespresso app.

Nest is a technology company focused on smart home tools. Nest products include a thermostat that learns from user preferences, a smart smoke-CO2 alarm and a camera that tracks the user's phone location to know when to turn on. The company's devices can communicate with the user's device through the Nest app in order to either provide information or be externally controlled.

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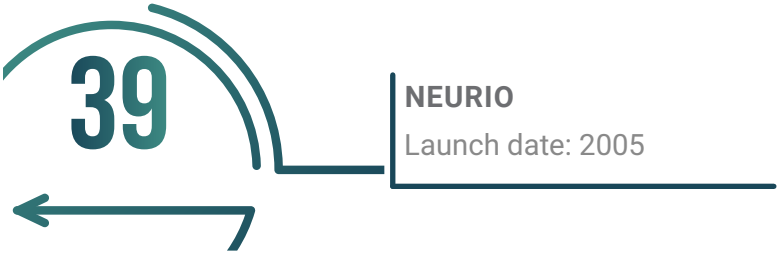
Netatmo is a smart home company, developing connected consumer electronics. Netatmo designs the mechanics, electronics and embedded software of all its products and also creates the mobile and web applications.



Neurio is a home intelligence technology company that gives homeowners the ability to monitor their homes. The company's Home Energy Monitor allows homeowners to track their power use in real time, see bill forecasts, set up budgets, get energy saving tips and more.

Since spinning off from ETH Zürich, one of the world's top technical universities, Nexiot quickly became one of Europe's leading providers of integrated digital supply chain solutions.

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NFC RING
Launch date: 2015

NFC Ring provides a wearable ring that can be used to make payments, lock or unlock doors and devices or share and transfer information.

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NISSAN
Launch date: 1933

Nissan, the Japanese automobile manufacturer, offers embedded IoT technologies in their cars through a service called NissanConnect. The solution allows drivers to access a group of different features that includes access to different apps such as Google and Facebook as well as security tools like stolen vehicle locating and roadside assistance. The solution can also control external features of the car, such as locking doors, triggering horns and controlling the air conditioning.

47

NOTION
Launch date: 2013

Notion develops sensors that allow homeowners to monitor their homes remotely. Notion's device can track a group of variables, such as when a door is open, the temperature goes too low or too high, and there is a water leak. Users can also monitor their homes from their phones and receive notifications.

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Nucleus is a smart home wireless intercom system designed to allow users to make calls from room-to-room or home-to-home. Each Nucleus account has a unique Home and Remote code enabling them to establish secure connections between devices. The Nucleus device connects to the internet via Wi-Fi or Ethernet and is Amazon Alexa-enabled.

Numerex provides a portfolio of managed end-to-end Internet of Things solutions including smart devices, network connectivity and service applications enabled to address the needs of a wide spectrum of vertical markets including Waste Management, Manufacturing & Distribution, Public and Personal Safety, Oil & Gas, Transportation, Emergency Management and Commercial & Residential Security.

Nuzzle has developed a GPS collar that enables owners track their dogs. The GPS collar features 24/7 connectivity via dual-band 3G cell, embedded SIM card and Bluetooth. In addition, the GPS collar offers impact detection, temperature monitoring and activity monitor. Owners can also use a mobile app to track their pets.

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Omnitracs, LLC, is a trucking solutions provider. It offers transportation technology and insights, with solutions designed to assist with compliance, safety and security, productivity, telematics and tracking, transportation management, planning and delivery, data and analytics and professional services.

OnePlus is a manufacturer of waste container fullness and control systems. The company also produces technology that can regulate who can access the system and provide users with a cloud-based software from where they can access information.

Optimal+ is a data analytics company offering end-to-end solutions designed to improve quality, yield, and productivity for semiconductor and electronics manufacturing.

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OSRAM
Launch date: 1919

Osram implements high-tech devices and smart solutions for lighting technology in the automotive, entertainment and health sector as well as private consumers. The company also offers smart home products and is developing smart city solutions.

OSSIA
Launch date: 2008

Ossia is the developer of Cota, a wireless power charger that can power equipped devices. The solution takes energy from a single source and transmits it through a net of antennas to a power receiver within a 30- foot radius. The solution also allows for energy saving, as the system turns off once the devices are off the range or hibernating.

PETNET
Launch date: 2012

Petnet offers the SmartFeeder, an automatic feeder for cats and dogs that enables users to manage feeding times, portion sizes and food supply. The SmartFeeder uses sensors to measure portions based on a pet's age, weight and level of activity. Users can control their pets' feeding from their smartphones.

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PetPace offers remote pet monitoring services through a wireless smart collar, which collects a pet´s vital signs and behavior patterns. PetPace comes with an integrated Health Monitoring Service to continually analyze the collected health data and send notifications to the pet owner´s smartphone in case of emergencies.

Philips´ IoT-enabled lighting product, Hue Personal Wireless Lighting, is a connected lighting solution designed to enable users to manage their lighting system from their smart devices. Hue uses a system called The Bridge that connects the smartphone to the Philips Hue lights via Wi-Fi. The Bridge offers different types of smart lights and gives users the ability to create timers, control brightness, play with colors and synchronize lights to music, TV and games.

Polar is a manufacturer of sports training technologies. Among other products, Polar has deployed GPS-enabled bike computers, fitness and running watches, as well as heart rate monitors and performance trackers. Their devices are designed for any activity ranging from swimming, cross-training and yoga to tracking user's daily activity and calorie consumption.

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Rachio develops a smart sprinkler device that uses weather prediction to ensure more efficient usage of water. Rachio devices can adjust their functioning to the characteristics of the yard where it's working or the changing seasons. It is connected to a mobile app that not only allows for external control of the sprinklers, but also delivers information about precipitation, watering and the yard's health.

Ray has developed a smart touch-screen remote that enables users to control all their devices. The remote supports a wide range of entertainment devices including TVs, cable and satellite providers, streaming devices, sound bars, and DVD players.

Red Hat has a portfolio of secure products and services such as cloud storage and operating system platforms along with middleware, applications and management solutions. It also provides customer support, training, implementation and consulting services.

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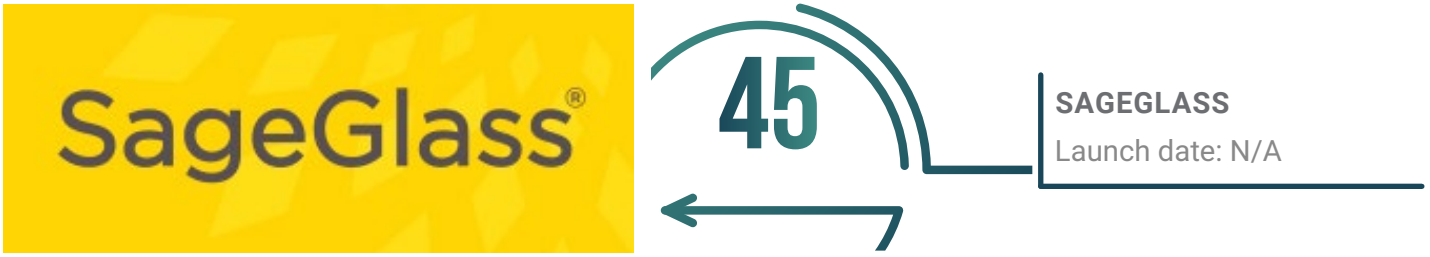
Rockwell Automation develops industrial automation and information technology products. Its Connected Enterprise capability enables industries to connect, monitor and optimize devices and processes. The company's Industrial IoT solution integrates networks and creates an integrated production platform that can enable smart manufacturing.



SageGlass offers electronically tintable glass — known as dynamic or eletrochromic glass — for windows, skylights and curtain walls. The glass tints automatically or on demand to control sunlight levels, without need for shades or blinds.

Samsara offers internet connected sensor systems designed for diverse environments from energy monitoring to asset utilization to vehicle tracking. Its traditional sensor model is combined with an integrated, software-centric solution enabled to capture hundreds of metrics, bringing visibility and insight into any operation.

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Samsung's business expands through many industries, from heavy industry to chemical to its more well-known face: Samsung Electronics. The company develops wearable devices, smart TVs and some of the most classic connected devices: smartphones. Samsung has also begun developing smart home applications, from sensors and hubs to connected appliances.

SATO Global Solutions (SGS) develops IoT solutions, including data-based advice for business operations and customer experience improvements. The company co-founded the Acuitas Digital Alliance which develops cloud-based IoT solutions to help retailers use Big Data and IoT.

SEAT (or Sociedad Española de Automóviles de Turísmo) is an automobile manufacturer headquartered in Martorell, Spain. The company was founded in 1950 and is currently an owned subsidiary of the Volkswagen Group. SEAT has been researching connected car developments with companies such as SAP and Samsung for solutions like parking reservations and payments as well as digital key sharing.

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SectorQube has developed Maid, a smart oven that sets the time and temperature according to number of servings and a user's personal preferences. Maid comes with an intelligent personalization engine that learns user preferences and is connected to an online recipe store. The oven can be controlled and managed by using its touchscreen or through voice and gestures.

Seebo offers an integrated platform intended to help manufacturers create, develop, analyze, integrate and build IoT products.

Sensoria develops wearables that track and communicate data like body weight, eversion and in-footwear pressure. The data is analyzed and displayed in the user's mobile device.

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Sentri is an all-in-one home controlling solution helping users make their homes safer and smarter. The device comes with a 120-degree wide-angle camera and sensors that track environmental health including temperature, humidity, air quality and weather. Users can connect and control other smart devices and get mobile notifications whether any unusual activity or change in the home environment is detected.

Skyhook is a global location network that, by georeferencing mobile users, allows companies to deliver more personalized content. The company's location engine is based on Wi-Fi data that is combined with information from GPS, cell towers, IP addresses and device sensors, and its services are suitable for different industries, including app development, advertising, device manufacturing and wearable design.

SmartDrive offers solutions for corporate fleets. Its offerings include security programs, an open analytics platform, and transportation intelligence intended to improve safety and identify opportunities for greater operational efficiency.

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Software AG is a software developer whose solutions apply to a range of different industries, including IoT, banking, energy, government and retail. The company's IoT solutions include Terracota, a data management platform, location-based marketing capabilities, location analytics and manufacturing products such as equipment predictive maintenance energy theft detection.

Somfy offers outdoor home products like smart gates, doors, window shutters and alarm systems that can be managed from a mobile app.

Sony Corporation products range from categories such as television and audio/video solutions to semiconductors, medical equipment and digital imaging developments. The Japanese company has introduced IoT technology in different equipment they develop, starting with their mobile and tablet devices and now including smart TVs and wearable products like watches or wristbands.

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SOPHOS
Launch date: 1985

Sophos provides IoT security services that work to protect devices, data and key processes from malicious malware code and dangerous cyber activity. Among other services, the company offers endpoint, encryption, email, web, mobile, network security and UTM products, as well as a range of tools for home users.

SPIN
Launch date: N/A

Spin is a dockless electric scooter rental company that is currently operating in 11 cities and on six campuses.

STATSPORTS
Launch date: 2007

STATSports provides sports science and performance analytics. Its performance tracking systems can calculate more than 50 metrics in real time and store all data into a cloud infrastructure. The STATSports Apex tracking device connects via Bluetooth LE to multiple devices, including heart rate sensors, EMG shorts, smart watches and tablet devices.

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STRIIM
Launch date: 2012

Striim is a real-time data integration and streaming analytics software platform. The company integrates IoT data to provide data analytics and protect users against cybersecurity threats. Striim for IoT combines real-time sensor data with other enterprise data from databases, log files, message queues and cloud environments.

SWATCH
Launch date: 1983

Swatch produces smart watches and other wearables. The company's Touch Zero One smartwatch was specially designed for beach volleyball players and gives users the ability to calculate steps, track calories burned, set goals and check progress. Users can also connect Swatch devices to their smartphones and use an application to check performance insights.

SYMANTEC CORPORATION
Launch date: 1982

Symantec Corporation provides cybersecurity services through its anti-virus software Norton. It also offers integrated solutions to defend against attacks across endpoints, cloud and infrastructure. Symantec Corporation has also developed a router to which IoT-enabled devices can securely connect in a single action.

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Tag Heuer´s smartwatch collection has been manufactured in collaboration with Google and Intel. The TAG Heuer Connected Modular 45 collection offers customized designs, GPS, time management tools and water resistance. The device is also connected to a mobile app.

Teletrac Navman offers GPS-based fleet management and optimization products and services. Its products include real-time vehicle tracking, electronic logging, communications and analytics designed to enable companies to monitor, measure and improve operational costs and efficiencies.

Teradata develops a range of solutions that apply to the Internet of Things industry, with options like Teradata Unified Data Architecture, which allows businesses to organize and leverage data, or Teradata Aster Analytics, which allows for data visualization and analytics.

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TILE

Launch date: N/A

Tile provides devices, a network and mobile app that use Bluetooth technology to assist users in locating keys, wallets, phones and other items.

TOKEN

Launch date: 2015

Token offers a biometric-based wearable ring designed to make payments and provide authentication in place of ID credentials, internet passwords or at physical locations. Its product also can be used with specialized company-made locks to unlock home or compatible car doors.

TOMTOM

Launch date: 1991

TomTom designs and develops navigation and mapping products for cars, motorcycles, scooters and trucks and provides fleet management solutions. The company also offers GPS smartwatches and accessories for running, fitness, golf and other activities.

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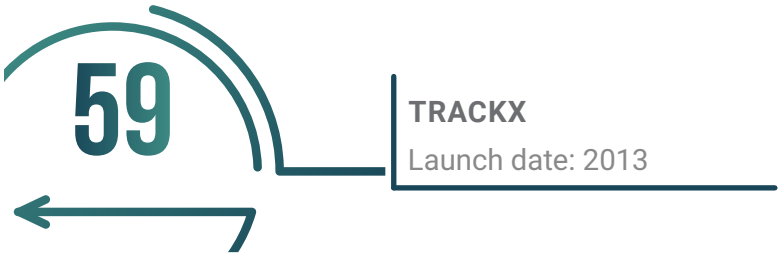
Tovala has designed a Smart Oven that can steam, bake, broil and heat prepackaged meals that the device, after scanning the code they come with, will know how to cook. The oven can also connect to the user's phone using its own app, which allows for tracking of the cooking time.

Toyota, the Japanese car manufacturer, has integrated IoT technology into their automobiles. Entune, the service the company developed for connecting mobile devices with cars, allows drivers to access their playlists or use voice recognition commands. Toyota also delivers security-connected solutions that can assist in cases of collisions, needing emergency assistance or locating stolen vehicles.



TrackX is a software solutions provider. Its products focus on asset tracking, inventory management and supply chain solutions, all using a cloud-based asset tracking platform, GPS, RFID and sensors.

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TritonWear develops wearables that allow coaches and their athletes to track performance through their mobile devices in real time.

Trustonic is a device security company that provides security for connected devices, associated services and applications.

Ubigreen is a technology company that develops turnkey solutions. Its offerings include web apps to monitor and control energy use or other operations in a building or other site.

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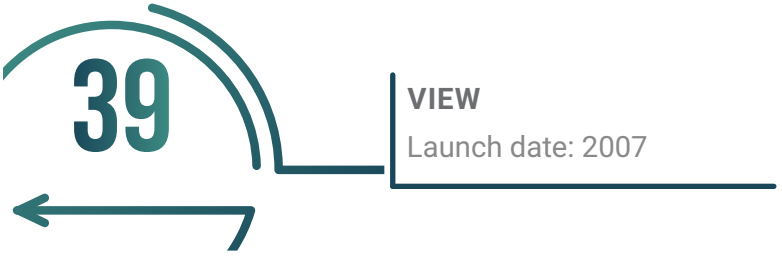
Under Armour products include apparel developed for controlling body heat and intelligent items concentrated on tracking the user's performance. The company's interest in IoT applications pushed the acquisitions of fitness apps such as MapMyFitness and MyFitnessPal.



View Dynamic Glass' window tint tech helps to control the temperature inside a room, saving energy and improving comfort. The device can adjust automatically to the time of the day, the angle of the sun and weather conditions, taking into account the geolocation of the building and its architectural design. The solution also provides data for the user to track energy efficiency.

VIMOC Technologies is a platform provider for Landscape-Computing, enabling the deployment of solutions for the Internet of Things and smart city implementations. The platform is provided through a scalable API that facilitates sensory data access with built-in statistical analysis and a workloads distribution framework.

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Vinli is a small device that can be connected to a car to provide services including connectivity and apps. Using a 4G LTE network, Vinli can also be used as a Wi-Fi hotspot to allow passengers to stream movies or download games. The company also offers apps covering security, social engagement and other utilities, such as sending notifications if a collision occurs.

Visa is an American multinational financial services company focused on the transfer of electronic funds. The company's portfolio includes Visa-branded credit, debit, commercial, prepaid, mobile and money transfer. VisaNet is the technology behind the company's payment processing solution, which provides its services at a worldwide level.

Vivint is a smart home services provider focused on connected home automation and home security cameras and devices, all controllable by an app.

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Webroot works on endpoint security and threat intelligence services, providing solutions for businesses and individuals. Webroot developed its own IoT cybersecurity tool, and also produces its BrightCloud Threat Intelligence for IoT Gateways.

Western Digital is a data storage company using both the cloud and data center storage. It provides clients with software as well as hardware like hard drives and storage devices.

Whistle Labs is an intelligent device manufacturer offering pet owners a smart GPS tracker to monitor pets' locations, activity and rest cycles. The Whistle app helps prevent lost pets by sending users notifications when a pet leaves a designated "safe space."

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WISeKey is an information security and identity management company that works on data protection and identification, and authentication of people and objects over physical infrastructures, networks and the internet. The company focuses on the IoT industry and developed a security platform covering identity management, transaction assurance and process integration.

Xiaomi manufactures and develops hardware, software, and internet services. Xiaomi offers a range of internet connected devices that includes smartphones, TVs, notebooks, wearables, drones, earphones and more. In addition, the firm develops mobile applications such as MiTalk and an operating system called MIUI.

X Lab is the company behind Spendwallet, an electronic wallet that can store the user's credit, debit and gift cards. The device can also be synchronized with users' phones.

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Xped Limited is an IoT technology business. Among others services, the company has developed the Auto Discovery Remote Control (ADRC) platform, which is designed to enable users to connect, control, monitor and manage their devices and appliances from a single app.

Yokogawa's portfolio of solutions includes cloud-based data sharing services for data collaboration for supply-chain collaborations and optimization. It also offers cybersecurity solutions.

Zebra Technologies develops tracking technology and solutions that allow companies to know where and in what conditions things are. Zebra products cover a wide range of devices and software, from mobile computers and printers to location solutions and RFID bands. Zebra's technology can also be used in different industries like health care, manufacturing and retail.

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Aclara Technologies LLC provides smart infrastructure solutions (SIS) for water, gas and electric utilities worldwide, including meters and various communications networks.

Actility's ThingPark is an IoT-enabler platform for the deployment and management of LPWA networks. The software solution is aimed at allowing communication service providers, device manufacturers and application suppliers to develop IoT applications in vertical markets such as smart cities, energy and utilities or industries.

Advantech provides embedded M2M/IoT module integration services and wireless solutions for M2M communication including Bluetooth, WiFi, 3G/LTE and GPS modules.

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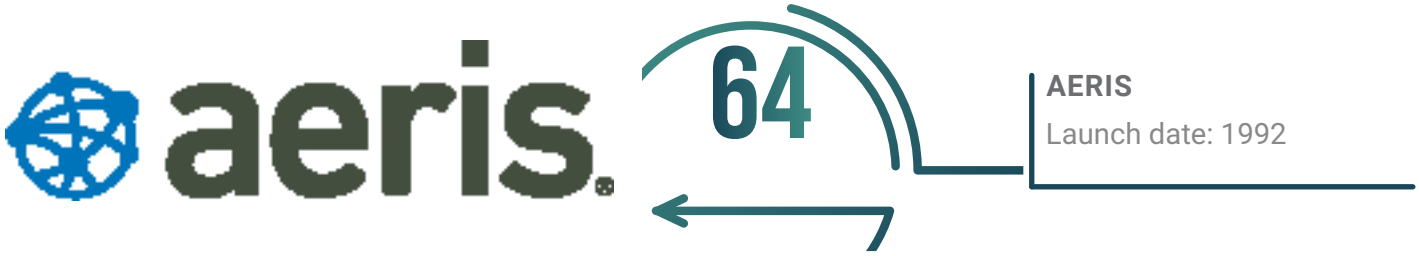

Aeris Communications is a technology provider and a cellular network operator delivering comprehensive IoT / M2M services to the automotive, energy, transportation, retail, and healthcare industries. Aeris offers a complete stack of technology from an online management portal to an application enablement platform and cellular connectivity networks.

Aerohive Networks, together with its subsidiaries, designs and develops cloud networking and enterprise Wi-Fi solutions. These include hardware, software-as-a-service (SaaS) subscriptions and tiered maintenance and support services.

Afero offers an IoT Platform as a Service solution that allows for the development and deployment of connected devices. The system is powered by Afero Cloud, which provides services for the development and operation of connected things. The company also helps developers with processes like monitoring, management and prototyping.

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AGILITYI0
Launch date: 2011

AgilityIO offers software solutions to translate ideas and products into digital and Internet of Things (IoT) products. The company handles software development, UX/UI design and product management through the process of idea conception to retail.

ALERT MEDIA
Launch date: N/A

AlertMedia provides enterprise customers with monitoring services and a communications platform for regular and emergency messaging.

ALTOROS
Launch date: 2001

Altoros is a software and open-source development company providing hardware, software and guidance to clients. It uses Java/.NET/Ruby architecture to create cloud-native IoT applications for companies, and offers Smart Baggage Tracking software for private customers.

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AMAZON
Launch date: 1994

Amazon Web Services has developed a cloud computing platform providing services such as application hosting, databases and content delivery. The company's IoT consists of a cloud platform that allows businesses to connect devices to Amazon services as well as to other devices, secure and process data, and enable applications to interact with those devices.

AMDOCS
Launch date: 1982

Amdocs provides software and services to communications and media companies. Its solutions are designed to enable digital and network transformation. The company offers a suit of IoT solutions, including Amdocs Connected Home, a cloud-based solution delivering monitored smart home security services. In addition, Amdocs IoT Services Enablement Platform enables IoT ecosystem players to offer integrated and easy-to-activate global consumer and industrial IoT services.

New!

ANTMICRO
Launch date: 2009

Antmicro is an embedded software company working with emerging technologies, prototyping and feasibility studies.

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ARM
Launch date: 1990

ARM designs energy-efficient processors and related technologies for digital electronic products ranging from sensors to servers. The company has developed the ARM mbed IoT Device Platform, a solution that provides open standards based on a common platform and an ecosystem for IoT development and connectivity to make IoT work at scale, from device to cloud.

ARMIS
Launch date: N/A

Armis Security is an agentless IoT security solution that allows enterprises to see and control any device or network.

ARRAYENT
Launch date: 2002

Arrayent offers an IoT platform that enables manufacturers to transform traditional products into connected devices. It also offers an end-to-end solution that offers secure access to customer and product data.

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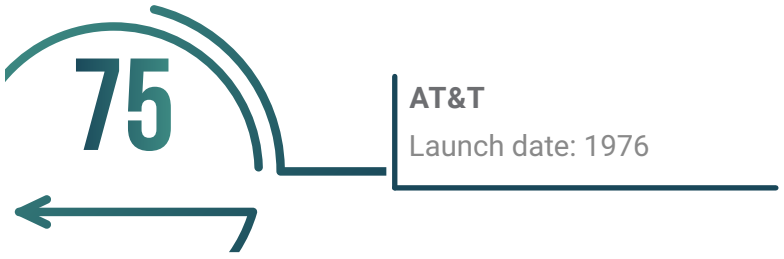
Aruba Networks develops operating systems for both wired and wireless network infrastructure, provides remote access services and offers data security solutions.

Arviem is an independent global cargo tracking and monitoring service provider. Its IoT monitoring device mounts on cargo containers and communicates over phone or satellite networks.



AT&T provides a wide range of IoT solutions, including connectivity of devices and development platforms that can be applied to industries from vehicles and smart cities to health care and machinery.

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Software developer Autodesk offers Fusion Connect, an IoT Cloud Service, to connect, analyze and manage remote products. The software provides its customers analytics and insight automatically extracted from their IoT devices, enabling them to identify products performance and failures.

Avnet provides organizations with component and services solutions for IoT. It helps companies in deploying IoT and adding new functionalities, such as security and connectivity. Avnet offers components for industries such as automotive, home automation, energy, industrial and wearables, among others.

Ayla Networks is an IoT platform provider. Its platform is comprised of three elements: Ayla Embedded Agents, Ayla Cloud Services and Ayla Applications Libraries, which together allow devices to connect to the cloud and applications while providing tools to manage, provision and analyze IoT deployments.

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Bastille offers an enterprise security solution designed to include full-spectrum scanning of corporate airspace. Its solution works to detect wireless risks and use machine learning and behavioral analytics to offer companies a more informed view of wireless environments, complementing Wi-Fi and traditional security architectures.

Belden manufactures and sells a comprehensive portfolio of cable, connectivity and networking products for the transmission of signals for data, sound and video applications. Its products are designed for a variety of markets including industrial, enterprise, broadcast, transportation, energy and consumer electronics.

Belkin offers internet networking products including Ethernet and wireless adapters and wireless routers. Besides developing connectivity solutions, the company has created WeMo, a Wi-Fi-based home automation network that includes smart lighting systems, Wi-Fi-connected cameras, smart plugs and light switches.

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BITREACTIVE

Launch date: 2011

Bitreactive offers a visual programming tool enabling Java developers to program embedded software for IoT devices. The firm serves clients in logistics, telematics, automotive, oil and gas, home automation, smart energy, smart cities and building control industries.

BOSCH

Launch date: N/A

Bosch is a global supplier of technology and services.

BROADCOM

Launch date: 1991

Broadcom is a provider of semiconductor technology. The company is primarily focused on wired infrastructure, wireless communications, enterprise storage and industrial markets.

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CA Technologies supports companies' transitions to use smart technology, and monitors, manages and secures clients' information technology (IT) infrastructure and applications.

CalAmp provides communications devices, cloud platforms and software applications. Its IoT cloud enables companies to collect, monitor and report data and intelligence from remote assets.

Cambium Networks is a provider of wireless broadband point-to-point and point-to-multipoint platforms. It offers sustainable communication networks for companies, enterprises, governmental and military agencies, and the firm's services also include network monitoring, measurements and analytics.

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CENTRI focuses on IoT security. Its technology is designed to integrate into organizations' exiting applications and services in the cloud, data centers, connected devices and products to secure the organizations' data. Its solution offers tools including encryption and the establishment of trusted devices.

Chronicled is a technology company using blockchain and the Internet of Things (IoT) for supply chain solutions. It offers a decentralized protocol and network, and serves the pharmaceutical, commodities and precious metal and mineral verticals.

Cisco develops internet protocol–based networking technologies. Their products include routing and switching devices, home networking technology, IP telephony, optical networking, security, storage area networking, and wireless technology. Cisco also provides technologies covering connectivity, security, software and data management.

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Clearblade is a platform for the industrial Internet of Things that enables developers to engineer and run real-time, scalable IoT applications. Deployable in any vendor cloud, on-premise or in hybrid environments, ClearBlade allows companies to build Enterprise IoT solutions that make streaming data actionable by combining business rules and machine learning with visualizations and integrations to existing business systems.

ClearScale delivers cloud systems integration, application development and managed services. The company provides IoT platform design and automation services, builds infrastructure for connected devices and more.

Cloudera provides end-to-end data management services including a data storage and analysis platform. It provides and supports Apache Hadoop-based software to businesses.

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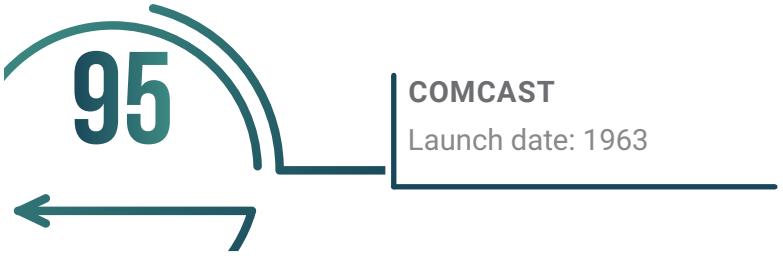

Comcast is a media and technology company. The company provides customers with video, high-speed Internet and phone services under the name of XFINITY. The company also offers XFINITY Home, a platform that integrates the user´s smart home devices into one personalized platform.

Building Robotics is the developer of Comfy, a service that allows office workers to change the ambiance of their workplace. Workers can personalize temperature, lighting, window tint and more. Changes can also be applied in specific areas, allowing each worker to adjust conditions of their workplace without bothering others.

Commscope designs, builds and manages wired and wireless networks. Their services include incrementing bandwidth and existing capacity, improving network performance, increasing energy efficiency and the simplification of technology migration.

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Convisint is a cloud platform for the development of identity and IoT applications that enables customers to identify, authenticate and connect networks of people, processes, systems and things.

CrowdOptic provides middleware for wearables that allows enterprises to manage wearable computing devices in the field from a single platform.

Cypress manufactures semiconductors and electronic products for the automotive, industrial and consumer markets. Among other products, the company develops PSoC-programmable, system-on-chip solutions, capacitive touch-sensing controllers, Bluetooth Low Energy (BLE) and USB connectivity solutions.

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DataStax, Inc. provides database software and data management. Its solutions include a distributed cloud database built on Apache Cassandra architecture and designed for hybrid cloud. DataStax's offerings aim to support management and analysis of large amounts of time- and sensor-based information.

Davra provides organizations with an AEP platform for the development of IoT applications. The platform has been designed to control all elements of the IoT Edge Gateway.

DeviceHive is an IoT data platform. The company's platform enables device integration and offers services to connect smart devices to public and private clouds. The platform collects and analyzes data from devices such as sensor networks, smart meters, security systems, telemetry, industrial or smart home devices.

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DEVICE INSIGHT
Launch date: 2003

Device Insight has developed a IoT platform solution called CENTERSIGHT® that offers tools to monitor IoT and M2M devices. The platform provides operating data insights and analytics, error reports, machine configuration features, alarming and more. The CENTERSIGHT® platform can be used in the following markets: industry & automation, connected products, telematics & fleet management and energy & smart city.

DEVICE SOLUTIONS
Launch date: 2003

Device Solutions provides solutions for three main areas: engineering consultancy, testing and certifications of products for network providers and its own service, Cellio. Cellio is an end-to-end solution that connects, computes and communicates information from the IoT. It is made from sensors, a cellular communication gateway and cloud-based software.

New!

DGLOGIK
Launch date: 2007

DGLogik provides innovative software solutions that enable and visualize IoT.

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DIGI INTERNATIONAL
Launch date: 1985

Digi International develops M2M and IoT connectivity products such as embedded modules, gateways, routers and USB and serial connectivity devices. The firm offers remote device managing solutions and wireless design services. Digi International's products are designed for energy, smart cities, medical, industrial, retail and transportation markets, among other industries.

D-LINK
Launch date: 1986

D-Link offers networking solutions as well as Smart Home ecosystems. Their products include surveillance cameras and recording devices, networking tools including routers and extenders as well as automation solutions.

ELECTRIC IMP
Launch date: 2011

Electric Imp offers an Internet of Things platform that securely connects devices with cloud computing services. The platform helps manufacturers to manage and quickly scale their connected products and services to millions of users. In addition, the solution enables uses to monitor and update products in the field at any time and have access to real-time manufacturing insights.

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EMnify offers a connectivity, control and management platform for IoT and M2M devices.

Ericsson's Internet of Things solutions cover a wide range of capabilities and functions including service enablement, data analytics and billing, data connectivity, and standardized APIs. Ericsson's products include its Smart Metering as a Service, an end-to-end automatic meter and data management solution.

Eseye is a global provider of machine to machine (M2M) cellular connectivity for the Internet of Things (IoT). It aims to simplify enterprises' global device deployments.

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Etisalat is a telecommunications company offering coverage of 3G and 4G mobile technologies, and is currently working with 5G services. The firm offers machine-to-machine (M2M) solutions and controlling and monitoring services for both government and enterprises.

Eurotech researches and develops connected hardware. It supplies products such as computer boards, modules, computer devices and systems, and offers software to create machine-to-machine (M2M) and IoT applications.

FILAMENT

Filament provides blockchain hardware and software solutions for enterprise and industrial Internet of Things (IoT). The solutions enable secure connections, allowing devices and machines to safely interact and transact value.

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Flexera Software develops software licensing, compliance, cybersecurity and installation solutions designed to help application producers and enterprises manage application usage and increase security. The company's FlexNet Producer Suite for intelligent device manufacturers is a part of a strategic solution for application usage management.

Flex designs, manufactures and distributes IoT products and offers a range of aftermarket services. Flex services include prototyping, design, manufacture and logistic distribution, as well as its retirement of the market. The company also offers its expertise in a range of products from sensors and connectivity to security and software.

FogHorn Systems is a multi-tier Internet of Things (IoT) application deployment platform that bridges information technology.

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General Electric is rolling out IoT tools for a range of industries that includes automotive, aviation, chemical, food and beverage, healthcare, oil and gas. Predix, one of the company's main IoT solutions, is an operating system and platform for building applications that connect to industrial assets, collect and analyze data, and deliver real-time insights.

New!

Glassbeam provides a SaaS-based solution for product analytics based on machine log data.

Globetouch provides connectivity, management and deployment services for M2M and IoT solutions. The company offers GConnect, a platform enabling IoT connectivity through CloudSIM technology. The company's GControl platform provides IoT connectivity management tools to launch and manage IoT services.

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Designed for residential, commercial, retail, hospitality and industrial applications, Gooee has developed an enterprise scale IoT lighting ecosystem which provides sensing, control and communication components enabled to integrate with an enterprise scale cloud platform for lighting manufacturers to 'connect' to the IoT.

Google Inc. develops a family of technology products that go from the known search system, desktop tools and operating systems to communication hardware, payment solutions and wearable devices.

Hologram is a platform for building IoT products with a focus on cellular. The cloud-friendly Hologram Cellular Platform enables users to connect devices to the internet. The company also offers software that allows users to talk to their devices, route incoming and outgoing messages, and open up secure PPP sessions via secure API.

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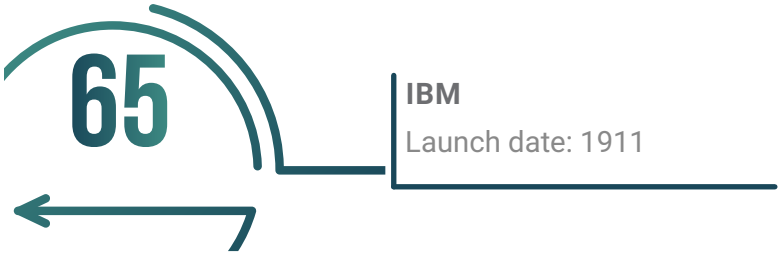
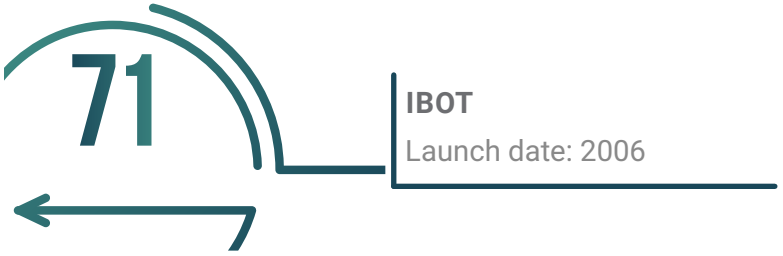
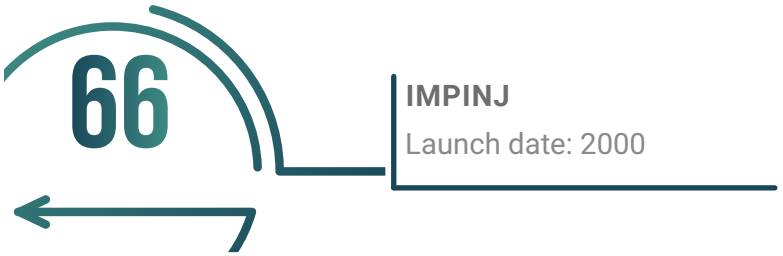


IBM develops an array of solutions among industries such as analytics, commerce, security, cloud and mobile. IBM's Watson IoT platform extends the power of cognitive computing to the Internet of Things. The platform enables the connection of devices and the application of cloud- based services like device management, predictive and real-time data analytics or information management.



iBot Control Systems is a research and development company. It provides a platform and other software intended to help manufacturers and other businesses use the IoT.



Impinj has developed a platform comprised of hardware and software using AIN RFID to wirelessly connect IoT. The platform provides businesses with real-time insights about their connected devices, and the company also offers gateways and reader chips.

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INFERNA
Launch date: N/A

Infinera Corporation provides optical transport networking solutions, equipment and software and services worldwide.

INGENU
Launch date: 2008

Ingenu enables long-range, low-power connectivity for IoT and machine-to-machine communication. Its wireless network serves a wide range of industries including smart cities, fleet management, smart agriculture, usage-based insurance and connected cars.

INTEL
Launch date: 1968

Intel allows companies to improve real-time decision-making, boost revenues, and lower costs by using its end-to-end platform of IoT solutions. The company's platform provides reference models and a portfolio of products based on foundational technologies that let companies connect, secure, and manage valuable data from existing business assets that were previously unconnected from new smart and connected things.

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InterDigital provides wireless technologies for mobile devices, networks and services. The company has developed solutions used in digital cellular and wireless products and networks, including 2G, 3G, 4G and IEEE 802-related products and networks.

Iridium is a mobile satellite service company offering global coverage. The Iridium cross-linked satellites provide voice and data services for areas not served by terrestrial communication networks. The company's solutions are intended for industries such as maritime, aviation, government/military, emergency/ humanitarian services, mining, forestry, oil and gas, heavy equipment, transportation, and utilities.

Itron provides end-to-end solutions to measure, manage and analyze worldwide energy and water usage. These include smart electricity, gas and water meters, smart network technologies and meter data management software.

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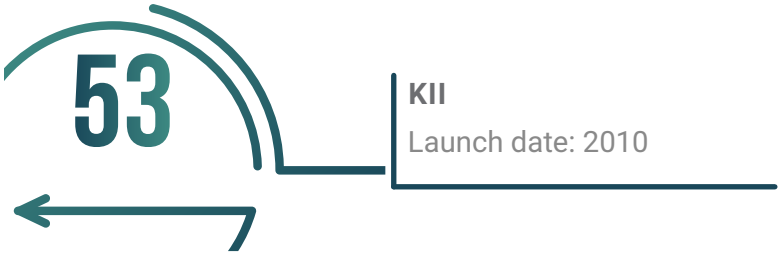
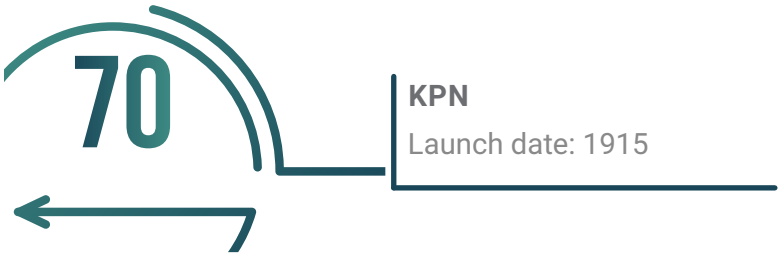


Kii develops platform which allows the building and running of IoT programs. The platform helps connect devices to the cloud and allows users to monitor and manage them. The service also provides analytic insights and app development tools and support features such as geolocation, user and data management and A/B testing.

KORE is an IoT/M2M service provider and developer of machine-to-machine network connectivity solutions, offering global coverage through GSM, CDMA and satellite data services. The company's products portfolio also includes Position Logic, a GPS tracking software, KORE Systems, an M2M connectivity management service, and Global Connect, a GSM-based, cellular IoT and M2M communications services available in 180 countries."



KPN is a telecommunications provider of network services such as IP-VPN, E-Line, E-LAN, corporate internet, managed videoconferencing, international private line, wavelength, IP transit and dark fiber. The company also offers device management and network analysis reporting.

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KYOCERA Corporation is an electronic technology provider manufacturing multiple mobile devices. The company offers multiband modules supporting LTE, UMTS and GSM, and are designed for automotive and various M2M applications.

Lantronix is a provider of secure data access, connectivity and management solutions for IoT and IT assets.

Link Labs offers low-power, wide-area network technologies for IoT. Its Symphony Link solution connects enterprise or industrial IoT devices to the cloud. The company also offers an end-device-certified LTE Cat-M1 modem for battery-powered application.

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LORIOT
Launch date: N/A

LORIOT AG develops enterprise software for LoRaWAN and end-to-end applications. It serves businesses, cities, municipalities and wireless network operators.

LPRS
Launch date: N/A

LPRS provides low power radio frequency solutions (LPRS) for original equipment manufacturers (OEMs). It manufactures and supplies radio modules, antennas and sensors for the industrial, scientific and medical markets.

M2M INTELLIGENCE
Launch date: 2011

M2M Intelligence offers multi-network SIMs letting users connect their IoT devices. The SIMs are designed to maximize the area from which the devices can get connected, enabling them to reach better, alternative networks. The firm has also deployed the M2M Insight, a management portal allowing users to manage the performance of every device's SIM on a one-page dashboard.

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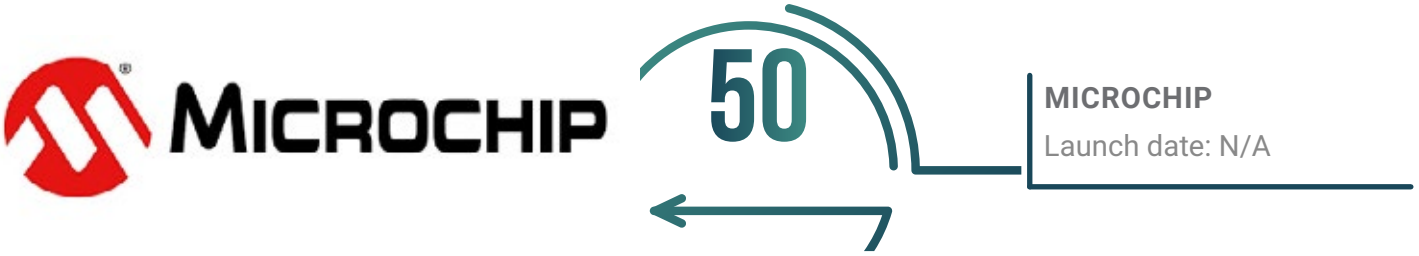

Microchip provides microcontroller, analog, FPGA, connectivity and power management semiconductors.

Mnubo provides Big Data and analytics to the IoT and machine-to-machine (M2M) space. The company assists with the development of "smart objects" and works with clients in the wearables, home, automotive, industrial and health care spaces.

Mobiquity is a mobile computing professional services firm that helps clients design, develop and deploy custom solutions.

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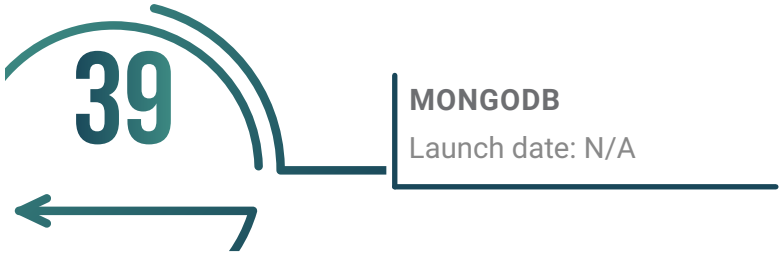

MongoDB offers a document database solution. It is designed to help businesses in a variety of industries leverage data to create new security applications and improvements.

Movidius develops vision processor chips, software and development tools. Movidius products can be applied in different industries like robotics or smart security.

Part of the Avanquest, myDevices develops a white label IoT platform providing a range of services, including device installation, activation, communication and management. The solution allows for data management capabilities, including real-time streaming and analytics/ visualization capabilities. The service also includes features like subscription management and back office tools.

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NetBurner offers development kits for IoT devices, enabling developers to create or modify IoT devices. NetBurner also offers Ethernet servers and core modules for network enabling.

Neura is an IoT data management company designed to protect the user's privacy. Neura establishes a digital identity for the user, which can be managed exclusively by him/her. It then allows the user to connect their account to the technology they use in order to exchange personal data for services that companies can customize.

NEXCOM is an intelligent solutions provider. Its primary focuses include the IoT, intelligent platforms and services, IoT automation solutions, intelligent digital security, mobile computing solutions and network communication solutions.

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Nexenta provides open-source, softwware-based enterprise storage solutions. These include cloud and virtualization-optimized storage management and plugins.

New!

Novelti is a Big Data software company that designs middleware for data scientists and developers.

Nutanix Inc. develops and provides enterprise cloud operating system software. Its offerings include infrastructure, data protection, big data and other solutions for the education, energy and utilities, financial services, healthcare, retail, service provider, state and local government and the U.S. government.

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NXP focuses on the development and deployment of automotive semiconductor solutions and general purpose microcontroller products.

Nwave is leveraging its low-power, wide-area wireless network, parking space sensor, analytics, and payment technologies to disrupt the transportation market by acquisition, analysis and real-time provisioning of vehicle parking data.

Option offers wireless solutions enabling machine-to-machine (M2M) communication. The solutions also provide M2M security, processing and management services. Option´s solutions are designed for the retail, transportation, smart-building, smart city, smart energy and smart home markets.

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Oracle develops and offers cloud applications, platform services and engineered systems. The company's IoT solutions allow businesses to connect data from devices, perform real-time data, and predictive analytics and allow enterprise and mobile applications to control devices. Oracle IoT cloud services also allow for different features including endpoint management and integration standardization.

Orange is a Spanish telecommunications corporation that offers M2M connectivity solutions. The company has rolled out a range of complementary LPWA (long-range wide area) solutions as well as LTE-M technology across its 4G networks in Europe.

ORBCOMM is a machine-to-machine communications solutions developer which operates a commercial satellite network dedicated to M2M. The company's services include global satellites, cellular and dual-mode network connectivity, hardware, web reporting applications and software. The solutions are focused on the tracking, monitoring and controlling fixed and mobile assets in industries including transportation, oil and gas, heavy equipment, and government.

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Particle is an IoT device platform that enables businesses to build, connect and manage their connected solutions in an easy way. Particle securely connects devices to web and mobile apps so that users can securely control and collect data from their devices. Their portfolio of products includes the Particle Cloud, a cellular IoT SIM card and data plan, and cloud-connected microcontrollers.

Plume offers Plume Adaptive Wi-Fi, a self-optimizing network powered by a cloud that adapts to a user's home in real time so that every room and device receives optimized internet connectivity.

Progress Software offers platform and tools for the development of business applications. Its platform enables the deployment of interfaces for different types of devices and offers Big Data connectivity capabilities.

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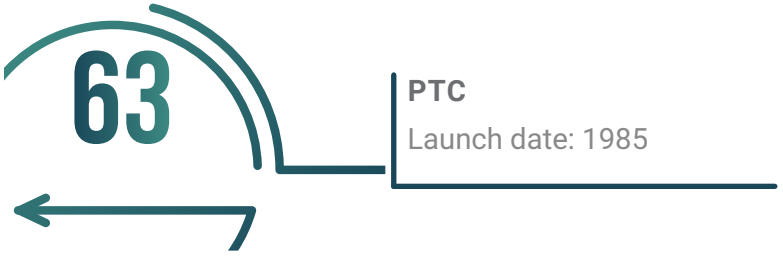
Prosegur provides comprehensive security services for homes and businesses.



PTC is an American software company that works on Internet of Things, Augmented Reality and Application Lifecycle Management in addition to other industries. The company's IoT solutions include the ThingWorx Platform, which allows businesses to develop IoT applications, the Axeda Machine Cloud, a cloud-based service for managing connected products and Coldlight, the company's analytics platform.

PubNub offers developers the ability to connect, scale and manage real-time applications and IoT devices. The PubNub Data Stream Network enables simultaneous device connections into a single network.

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QORVO
Launch date: N/A

Qorvo, Inc. provides radio frequency (RF) solutions and technologies for mobile devices, infrastructure, and defense and aerospace applications.

QUALCOMM
Launch date: 1985

Qualcomm designs and markets wireless telecommunications products and services. The firm has developed a wide portfolio of connectivity-based products, enabling connections and interactions across a variety of networks. Its technologies are designed for most of the IoT markets including automotive, smart homes, smart cities, wearables, health care and education.

RUCKUS
Launch date: 2004

Ruckus Wireless provides wireless systems for the internet infrastructure market. The firm has developed a wide range of smart Wi-Fi products for both indoor and outdoor usage. The Ruckus Wireless Wi-Fi platform offers various capabilities, including location analytics and engagement technology.

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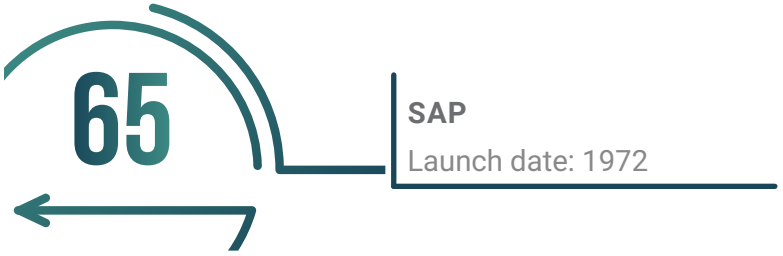
Salesforce is a developer of cloud computing services for sales, service, marketing, community, analytics, apps and the Internet of Things. The Salesforce IoT cloud enables users to connect data from every device, sensor, website, and interactions and take smarter, more personalized actions by getting better insights and real-time customer actions.



SAP develops a range of products such as a cloud platform that allows users to manage and monitor remote devices, create M2M apps and develop IoT solutions. The company covers many industries, including consumer products and retail, energy and natural resources, and financial and public services.

The global specialist in energy and automation management Schneider Electric has developed a software infrastructure for smart cities which enables devices, systems and people to connect. The company also offers a real-time condition management solution that collects real-time data from sensors to the cloud, analyses and converts it into meaningful analytics.

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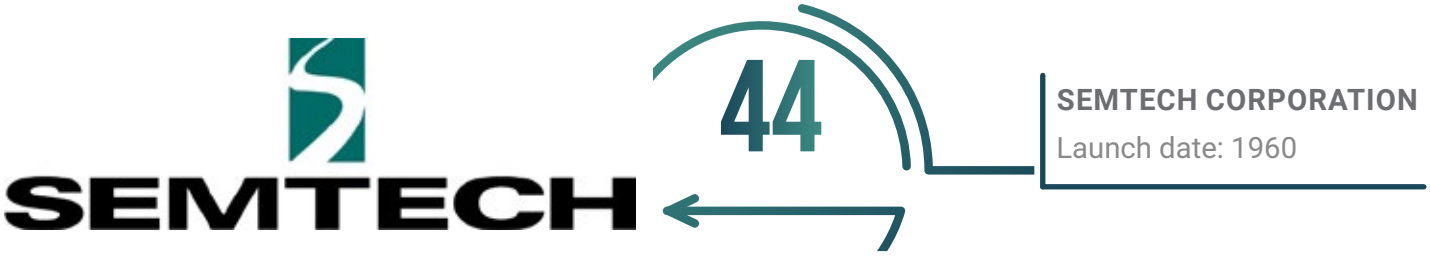

Semtech Corporation develops analog and mixed-signal semiconductor products, and created the LoRa® RF platform, a two-way wireless solution that works as a complement for M2M cellular or Wi-Fi infrastructure. It provides a way to connect battery-operated and mobile devices to the network infrastructure or endpoint. Semtech products also include power management, video broadcasting and circuit protection between others.

Sequans Communications is a 4G chipmaker, offering WiMAX and LTE chips designed for IoT devices. The company develops LTE chips for devices such as wearables, smart utility meters, industrial sensors, vehicle telematics, alarm panels and retail kiosks.

Siemens is a technology company offering electronics and electrical engineering services for the automation industry, energy and health care markets. The company offers applications of IoT technologies focusing on electrification, automation and digitalization. Applications include wind turbines connected with sensors, smart factories and IoT security solutions.

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Sierra Wireless offers wireless solutions and has developed a portfolio of 2G, 3G and 4G embedded and networking solutions (routers and gateways), integrating with their secure cloud and connectivity services and management solutions. Its networking solutions provide connectivity, location-based services and remote monitoring.

Sigfox is wireless network provider with networks designed to connect low-energy devices. Sigfox works to enable low energy consumption, device-to-cloud connectivity and a system to collect data from sensors and devices.

Silicon Labs is a provider of silicon, software and tools for the IoT, internet infrastructure, industrial automation, consumer and automotive markets. Among others, the firm offers microcontrollers, wireless system-on-a-chip services and sensors for the IoT as well as advanced timing and power management chips for internet infrastructure and industrial automation.

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SilverSpring Networks offers a comprehensive suite of IoT networking solutions for critical infrastructure. The SilverLink Network provides cities and utilities worldwide with solutions for smart electricity, gas, water and city services.

Skyworks wirelessly provides analog semiconductors to connect people, places and things across applications within the automotive, broadband, cellular infrastructure, connected home, industrial, medical, military, smartphone, tablet and wearable markets. Its IoT product portfolio includes amplifiers, attenuators, front-end modules, power management and switches.

Soracom is a platform enabling data transmission and connectivity for IoT/M2M. The firm offers mobile data transmission using LTE/3G lines as a means of communication. The platform also allows users to manage and monitor the IoT devices.

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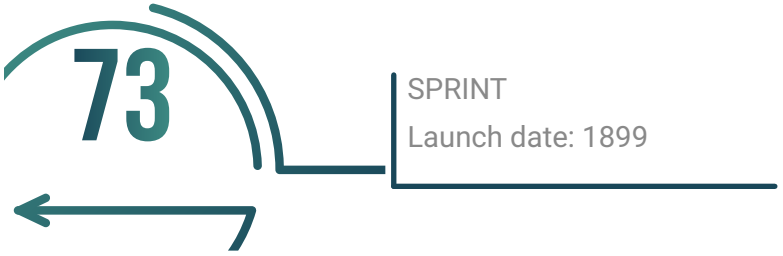
SORBA provides platforms and services. The company's offerings are designed to gather and analyze data from sensors, and include industrial data collection, machine learning and predictive analytics.



Sprint provides wireless and wireline telecommunication services to consumer, business and government users. Through its various subsidiary companies, Sprint also offers wireless voice, messaging and broadband services.

STMicroelectronics is a semiconductors producer for several industries, including micro- electro-mechanical systems and sensors, power discrete, advanced analog products, and embedded processing solutions. It also has an automotive products portfolio including elements going from powertrain, safety and car body to infotainment.

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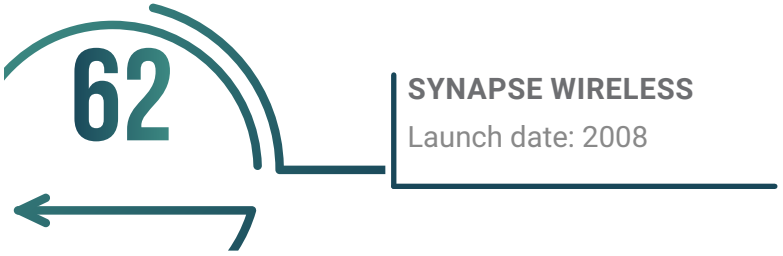
StorMagic provides a digital storage area network. Its offering can be used IoT projects that require small IT footprints.



Synapse Wireless provides software, hardware, and networking solutions to develop, deploy and manage connected devices. Its SNAP solution is designed to help businesses develop, connect, control and manage networks of "Things" (devices and gateways), securely. SNAP enables the integration between the Things of IoT with Cloud-based IoT Platforms. Synapse also offers a range of hardware products including modules and wireless lighting controls.

Taoglas is a provider of external, embedded and base station antenna solutions for M2M applications. The firm enables wireless device manufacturers with telematics and automotive, smart-grid, metering and telemetry, home automation, remote monitoring and medical applications.

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Tele2 is a telecom operator offering mobile services, fixed broadband and telephony, data network services, cable TV, and content services. The company delivers connectivity and enables management of the IoT connections.

Telefonica is a platform provider enabling an automated communication process between machines. The company offers connectivity services to a range of industries including automotive, utilities, vending machines, e-health and consumer electronics, among others. Telefonica´s platforms boast features like smart device control, business and fleet management as well as connected car and tracking intelligent solutions.

Telecommunications company Telenor offers voice, data, Internet, and content services. Telenor Connexion is a Telenor´s dedicated IoT company which offers: a global Managed Connectivity solution that automates the delivery and management of mobile services to connected devices; Telenor Cloud Connect, an end-to-end solution allowing users to add digital services to their products and Telenor ARTS, a data analytics solution especially designed for IoT devices that enables customers to collect data and insights.

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TELIT
Launch date: 1986

Telit's portfolio of IoT products includes cellular communication modules, GNSS, short-to-long range wireless applications and IoT connectivity plans. The firm also offers IoT platform services, a suite of management tools enabling connectivity, device and data control. Telit's solutions are used by the smart transportation, agriculture, retail, health care, automotive, oil and gas, smart manufacturing, smart energy and smart buildings industries.

TELSTRA
Launch date: 1901

Telstra offers telecommunications service and information service technologies. The company provides internet solutions for mobile phones, tablets and smart homes. It has also developed a kit of smart home devices including energy automation (with smart plugs and sensors) and a monitoring system (with cameras and sensors).

TEMPOIQ
Launch date: 2016

TempoIQ is real-time IoT analytics platform which offers storage, analysis and insights of data from connected applications. Besides, the service enables users to create alerts and monitor the stream of IoT data and analytics, warning them of any change or critical condition.

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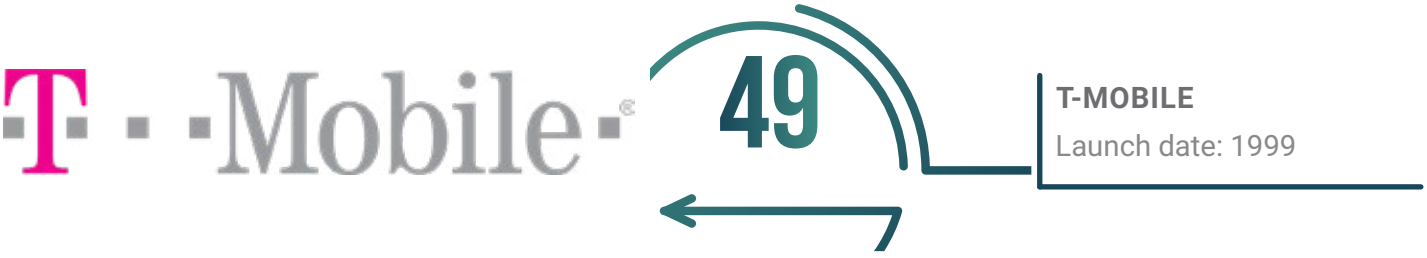
Texas Instruments (TI) develops and commercializes semiconductors, wireless connectivity technologies, microcontrollers, processors and analog solutions. The company offers IoT solutions for multiple industries, including wearables, smart manufacturing, health care, automotive, smart cities and home automation.

ThroughTek is a solution provider for cloud connection platform. Their main product is the Kalay Platform, an end-to-end IoT solution and software service, enabling solution providers and device manufacturers to easily create their own IoT ecosystems.



T-Mobile´s 4G LTE network delivers wireless experiences to customers. The company offers the M2M Hub, a solution that provides businesses with an online tool to deliver and manage IoT connectivity. T-Mobile also manufactures modules and chipsets to enable connectivity.

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Ubiquiti Networks manufactures wireless data communication products for enterprise and wireless broadband. Ubiquiti products range from connectivity software, wireless radios, routing and switching products to Wi-Fi-connected video cameras and intelligent phones.

UnaBiz is the exclusive operator of Sigfox low-power wide-area networks (LPWAN) in Singapore, Taiwan, designed to support IoT products. The company also provides energy-efficient IoT wireless infrastructure and devices.

Verizon Enterprise offers networking products, security solutions and cloud and IT infrastructure services. The company also offers ThingSpace Develop, an IoT platform that allows the users to develop, simulate and test creations.

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Vodafone is a communications company that offers business, mobile, hosting and cloud services. The company also works in the machine-to- machine industry, developing M2M terminals, asset tracking, energy data management and retail solutions between others.

ZTE Enterprise develops connectivity products. Its offering includes smartphones, routers and cloud-based management systems. The company also develops railway communication solutions and provides technical consulting services in the energy sector.

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ABOUT

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The PYMNTS IoT Tracker™ brings you the latest news, developments and insights from the biggest players across the IoT ecosystem. Each month, we look at what companies are doing across the ecosystem and in terms of bringing greater connectivity to everyday items and expanding connected networks.

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