

## Azure IoT Co-Sell Solutions 2020



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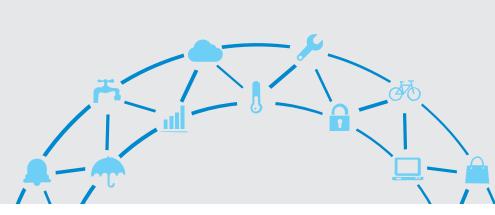
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## Welcome

Thank you for your interest in Microsoft IoT in Action and embracing the potential of the intelligent cloud and intelligent edge.

During the ten years it was in operation, between 1945 and 1955, ENIAC, the world's first computer, may have performed more calculations than previously done by all of humanity.

Today, computing devices and technoloc aren't just billions of times faster - with t average smartphone executing 25 bill instructions per second versus 5,000 for ENIAC – but fuel the transformation every aspect of society from agriculture t healthcare, manufacturing, municipalitie retail, and utilities.

The "Internet of Things" is quickly becoming the "Internet of Everything" and "Everywhere" from tracking at-risk wildlife to reducing carbon emissions, an improving vehicle safety.

### How do you keep up?

Success depends on teamwork. Microsoft IoT in Action provides the foundation for not only learning about and embracing evolving technologies, but connecting, engaging, and collaborating with other partners in the IoT ecosystem to turn brilliant ideas into marketable solutions.

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### Meet some of the Microsoft partners who are transforming their industries.

## Supporting the speed of innovation

Transforming your operations, introducing innovative new products and services, and taking full advantage of the possibilities of IoT is a process, not a leap.

Microsoft provides a comprehensive portfolio of solutions, platform services, edge and security technologies and expertise, which make it easier to choose the right devices, enable connectivity from the edge to the cloud, and turn collected data into organizational and operational intelligence.

These proven IoT solutions and operating systems provide the pivot for innovation:



### Azure IoT

Overcome the challenges of developing secure IoT solutions now and into the future with Azure IoT. Select from a breadth of applications, platform services, and industry-leading edge technologies that seamlessly integrate to provide the operational efficiencies, new revenue streams and customer experiences you need to grow your business.

Choose from fully managed and industry-specific IoT solutions or build a customized IoT application that provides fine-grain control. Getting started is easy.

Build confidence and discover what's possible by attending or watching on-demand webinars: → aka.ms/IoTIAWebinars

Explore a catalog of ready-to-use partner solutions: → aka.ms/IoTPartnerSolutions

Start building by choosing a solution accelerator: aka.ms/IoTSolutionAccelerator

> Learn more by watching a video: → aka.ms/AzureSphereVideo

security: us/services/azure-sphere/

Protect and power devices at the intelligent edge with Azure Sphere, which simplifies creating highly-secured, Internet-connected microcontroller (MCU) devices.

Azure Sphere includes three components:

### An Azure Sphere certified MCU

combines both real-time and application processors with built-in Microsoft security technology and connectivity.

The Azure Sphere OS offers unequalled security and agility that combines security innovations pioneered in Windows, a security monitor, and a custom Linux kernel to create a highly-secured software environment and a trustworthy platform for new IoT experiences.

IoT in Action | Welcome 4

## **Azure Sphere**

### Finally, Azure Sphere Security

Services is a turnkey, cloud service that guards every Azure Sphere device; brokering trust for deviceto-device and device-to-cloud communication.

Increase your confidence in IoT

→ https://azure.microsoft.com/en-

### Windows 10 IoT

The Windows 10 IoT platform makes building a device as easy as building an app. Two editions of Windows 10 IoT are available, offering simplified cloud connectivity, built-in security, machine learning capabilities, and integration with Azure IoT.

Optimized for smaller devices with or without a display, Windows 10 IoT Core can run on both Intel or ARM hardware.

Offering all the benefits and security of the worldwide Windows ecosystem, but designed for smart, dedicated devices, Windows 10 IoT Enterprise provides the same familiar development and management tools you're accustomed to for client PCs and laptops.

Learn how Window 10 IoT powers the intelligent edge: → aka.ms/Win10IoTEdge

Discover how customers are using Windows 10 IoT: → aka.ms/Win10IoTCustomers

## **Industry Categories**

ΟΝΕ

# Setting the pace with breakthrough solutions

Reaching the right customers, building relationships with the right partners and selling your solutions can be challenging.

That's why Microsoft is helping partners with solution building and transforming businesses around the world, starting with marketing and selling their IoT solutions. Microsoft's partners have the opportunity to amplify their solutions via the Azure Marketplace or AppSource platforms, tap into various marketing tools and programs, and can take advantage of our partner-to-partner and partner-to-customer matchmaking sessions. Working together, partners achieve more, helping one another raise the visibility of their solutions while also better servicing their customers. Regardless of where you are in the process, there is a place for you within the Microsoft ecosystem.

Here are some of the partners already co-selling with Microsoft:



### Herdx

Boerne, TX

USA

Sydney

Australia

https://herdx.com



LX Group

https://lx-group.com.au/sensors

The **HerdX Livestock Ecosystem** uses connected tags and data to help farmers and ranchers monitor animal movement to identify health anomalies, increase operational efficiencies, and provide unprecedented insights on each monitored animal from the amount of water they're drinking to activity level. The end-to-end animal solution uses smart "ear" tags and trough fittings to monitor herd movement and quickly identify at-risk animals. Daily insights can help producers identify and remedy inefficiencies and provide a distinct economic advantage in the marketplace.

Blue Node for smart agriculture is a battery-powered telemetry device that

enables farmers of all kinds to easily connect hundreds of different types of

off-the-shelf sensors across their farm and access the data from one, central

dashboard. With a ruggedized, low-power design, long battery life and

informed decisions based on real-time data.

the latest in long range communications technology, the Blue Node helps

farmers improve productivity and operate more efficiently by making fast,

### Arrow

Centennial, CO Santa Clara, CA (Intel)

USA

https://www.arrow.com/en/ campaigns/iot-intel-connectedlogistics-platform



Arrow and Intel, using the **Intel Connected Logistics Platform (Intel® CLP)**, together deliver a highly flexible IoT solution that enables companies shipping high-value goods to automate shipment tracking and gain consistent, real-time visibility into the condition of their assets whether items are sitting in a warehouse or in transit via truck, train, cargo ship, or airplane. The Intel Connected Logistics Platform consists of gateways, smart sensors and cloud connected services.

## Arundo

Houston, TX

USA

https://www.arundo.com/

**ARUNDO** 

**Arundo Edge Agent**, along with the Dell IoT Edge Gateway, enables crews, fleet operations and maintenance personnel, on ship and on shore, to quickly and easily select, buffer, stream, compute, and run advanced analytics on a range of signal data from critical equipment and systems. An IoT software as a service solution, Edge Agent is applicable for any maritime organization seeking to increase operational efficiencies, leverage data streams for predictive vessel maintenance and lower fuel consumption and improve safety and compliance across operations.

### Naviz Analytics, Inc (subsidiary of C2S Technologies)

### Bellevue, WA

USA

aka.ms/NavizAnalytics-NVino



**nVino** Smart Vineyard Management Solution from Naviz Consulting captures and analyzes critical data about the health of orchards, vineyards, and other crop-growing environments. From sensor-enabled hardware in the field to data processing and analysis in the cloud, it's an end-to-end solution that will have you rethinking how you manage your crops.

## **AutoModality**

Syracuse, NY

USA

http://www.automodality.com/



Using proprietary Perceptive Navigation, **AutoModality (AM)** drones can fly less than a meter from an asset being inspected, providing millimeterlevel resolution on captured imagery – without the need for GPS or radio connectivity. Using stereo computer vision technology and powerful artificial intelligence (AI) technology to detect and recognize objects in the world around it, the drone can adjust to changes in the environment or even in the asset itself. The technology has broad applications for subterranean use cases like mining operations and inspection of transportation assets like tunnels and culverts, as well as precision agriculture, aerospace, and other verticals.







### Accenture

### Dublin

Ireland

### aka.ms/Accenture-ConnectedFleet



The **Connected Fleet** is a multi-value solution that leverages mobile, tracking, analytics and cloud technology to more effectively manage industrial fleet operations. By aggregating fleet data into a cloud-based platform and by applying analytics and mobile alerts, the solution delivers a real-time holistic view of fleet operations, presented in a clear and insightful way. With the increased visibility provided, issues can be anticipated and gains can be made in production throughput, asset utilization, and operator performance.

### ELM



www.fieldsight.com



ELM FieldSight is a compliance as a service (CaaS) IoT solution for commercial and industrial applications, which leverages the Dell IoT Edge Gateway. The solution guarantees compliance monitoring with built-in indemnification and liability insurance - enabling businesses to simplify compliance, mitigate risk, and increase efficiency. The FieldSight Unit supports wireless monitoring of all equipment and integrates into existing IT infrastructures.

## **Avnet**

Phoenix, AZ

USA

aka.ms/Avnet-SmartAssetMonitor

aka.ms/avnet-smartfleet



IoTConnect<sup>™</sup> and Smart Asset Monitoring is a secure, Azure-based platform and a set of pre-built, industry-specific applications that provide everything you need create an IoT solution to monitor the health and efficiency of assets in a factory environments. Hardware support, artificial intelligence, and data analytics help quickly build innovative solutions that transform real-time data into valuable insights regarding each piece of connected machinery. IoTConnect takes the complexity out of IoT so you can maximize ROI from the start. Avnet also provides end-to-end IoT solution integration capabilities to get customer up and running quickly and easily.

A changing regulatory environment, increased traffic, rising labor costs, and the volatile nature of fuel prices can make operations challenging for transportation and logistics companies. Avnet IoTConnect Platform and Smart Fleet Management Solution, built on Microsoft Azure, uses sensors, mobile apps and cloud-based analytics to help you continually monitor your fleet and gain deeper insights to improve operational efficiency.

### Flex

San Jose, CA

### USA

https://flex.com/sketch-to-scale/ deliver/tracking-solutions

flex

### IER

**I**AR

Suresnes

France

Built on Microsoft Azure technology, IER FlowIDS is a packaged, real-time, end-to-end tracking and traceability solution that provides value across the product lifecycle from manufacturing through final customers. Using RFID and IoT-enable technologies, FlowIDS optimizes efficiencies, improve www.ier.com/en/solution/track-trace visibility, and increase collaboration.

## Bosch

Gerlingen

Germany

aka.ms/Trac360



Bosch Trac360 is a robust and innovative IoT solution that enables OEMs to perform real-time tracking of their parts and shipments, using integrated technologies like GPS, RFID, and Azure IoT Hub. Providing end-to-end product traceability and visibility based on demand rather than supply, Trac360 improves customers satisfaction, reduces inventory carrying costs, strengthens returnable bin management, and increases warehouse productivity.

10 IoT in Action | Setting the pace with breakthrough solutions



The flex **Solar Powered Trailer Tracker** enables logistics companies to track high-value assets in their fleet with a level of detail not found in traditional solutions. Featuring near-real-time 1-minute GPS fix capabilities (under normal conditions), the Solar Powered Trailer Tracker helps companies determine utilization percentages, lower maintenance costs, and accurately track location for their trailers and other important assets. The Solar Powered Trailer Tracker requires no configuration, comes pre-charged, and installs easily with only four bolts so you can quickly begin tracking your fleet. With normal use, a single tracker can last up to 7 years.



### Marquam

### Portland, OR

USA

### https://www.marquam.com/

MARQUAM

Many organizations rely on critical assets to ensure the smooth and safe operation of their business. Equipment loss, failure, and downtime are costly and sometime dangerous, yet human monitoring and inspection can be both costly and less than reliable. The Sentinel Smart Asset Monitoring Platform allows companies to quickly deploy automated asset monitoring without costly upgrades or retrofits to existing equipment. Valuable personnel time no longer needs to be spent visiting and visually inspecting equipment. Smart Monitoring Sentinel uses artificial intelligence and IoT with advanced computer vision capabilities to analyze and act on what it sees.

### Sunix

New Taipei City

Taiwan

http://www.sunix.com

SUNIX

server hosts.

## Mobiliya

Global

aka.ms/mobiliya\_assettracking



Mobiliya Asset Tracking and Monitoring solutions improve operational efficiencies, increase visibility and enhance supply chain management by using low-cost connected sensors, and Microsoft Azure and Azure IoT Hub technologies to relay critical real-time data (temperature humidity pressure, velocity, and location), which is aggregated, analyzed using stream and predictive analytics, and then reported via web dashboards and mobile applications.

### Synnex

Fremont, CA, USA (Synnex) Santa Clara, CA, USA (TFL)

USA

www.embeddedworks.net/ trackingforless.html





### Austin, TX

USA

www.stealthpower.net



Stealth Power develops and produces smart, integrated technologies for fleets seeking smart, mobile power to operate auxiliary electrical loads, including beacon lights, radios, laptops, cameras, power tools and more, without idling an engine or requiring access to power. Their intelligent systems have saved users millions of dollars, prevented the release of thousands of tons of toxic emissions, and preserved millions of gallons of fuel. An example of an implementation is a utility vehicle, which needs power to operate hand tools, test equipment, and PCs.

## QuEST

Singapore

https://www.quest-global.com

QuEST Fleet Management uses sensors to continuously assess the performance and efficiencies of fleet vehicles, and drivers' behavior. Easy to deploy, using smart dongles, and ideal for fleets of cars, vans, and light/ medium trucks, the solution reduces costs by forecasting the wear-and-tear on vehicles, optimizing routing, pinpointing inefficient driving, and delivering actionable real-time insights.





SUNIX IoT solution kits simplify connecting sensors, enabling workers and managers to monitor equipment through the cloud. The kits support many different vertical applications, including energy and environmental monitoring. A smart application can be deployed in a few simple steps with support for popular sensor interfaces. The kits are available for low monthly leasing fee, eliminating the costs associated with procuring and maintaining

Synnex TrackingforLess makes it simple to add GPS tracking, to any vehicle or asset to get real-time location tracking, theft detection, electronic logging device (ELD) compliance, sensor data maintenance reminders, and more. With real-time data about a fleet and ability to track anything that moves, it can help customers streamline operations, improve service, and reduce costs. The intuitive control dashboard makes it straightforward to track fleets and assets whether in one location or spread across multiple sites and regions.



### Genetec

Montreal, Quebec

Canada

https://www.genetec.com/solutions/ industries/education

Energy

### Genetec

Genetec Security Center for Higher Education is an open architecture system that unifies current security investments within a single screen. Using Microsoft Azure, it offers the scalability and security to safely and costeffectively store video footage and data, which require user permissions to access. It also provides accountability by delivering a complete record of those who access anything, and as a federated solution, it can be combined with multiple satellite campuses.

### Apergy

The Woodlands, TX (Apergy) Knoxville, TN, (Windrock)

USA

www.windrock.com/



Windrock Spotlight Monitoring System makes it simple for industrial customers to avoid catastrophic breakdowns of their equipment and machinery with an easy, affordable end-to-end monitoring solution that records sensor data for all assets, and sends it directly to the cloud, where KPIS and actionable insights, based on machine learning, can be accessed anytime, from anywhere.



Austin, TX	The Dov
USA	acts as a
https://doverfuelingsolutions.com/	by monit fixing dis
	keep dis
- DOVER	enabling
	dispense

## ABB

Austin, TX

USA

https://new.abb.com/abb-ability/ utilities/virtual-power-plants

https://new.abb.com/abb-ability/ utilities



The ABB Ability<sup>™</sup> digital platform helps organizations automate and optimize power generation, transmission, and distribution to make energy more green, affordable, and safe. ABB's flexible, scalable system architecture can be customized for various business models and help improve revenue streams.

ABB Ability energy management solutions include:

**OPTIMAX for Virtual Power Plants** seamlessly integrates, controls, and optimizes thousands of distributed energy resources (DERs) into virtual power plants so that the energy they produce can be optimized for energy markets.

**OPTIMAX for Industrial and Commercial Businesses** enables companies to connect energy-generating assets at one site to optimize power consumption, reduce energy costs and environmental impact, and efficiently address reporting requirements.

## eLynx Technologies

Tulsa, OK

USA

https://www.elynxtech.com/



eLynx Technologies combines hardware, software, and services so that oil and gas operators can more easily and effectively use data to monitor and improve oil field operations.

Scada Monitoring, which provides end-to-end data security, field-hardened senor and cloud communication networks, data normalization, and customer user configuration.

Operational Intelligence, which quickly assesses wells, identifies production opportunities and high-priority issues, and focuses on proactive solving problems instead of reacting to them.

Predictive Analysis, which offers digital twin modeling and data analytics to improve oilfield production and cut costs by suggesting optimal well settings and forecasting issues that can be fixed before they become problems.

Enerav



ver DFS iSense Remote Monitoring and Management Solution

virtual on-site technician for gas stations and convenience stores itoring potential problems with gas dispensers, and, in some cases, ispenser failures before the system goes down. The solution helps spensers continuously fully operational, reducing service costs and g remote management and installation of security updates at each er. As an IoT cloud-based solution, it integrates with other systems, boosting security and scalability.

The product family includes three related products:



### Halden

Norway

### https://www.esmartsystems.com/



eSmart Systems Connected Drone software utilizes deep learning to dramatically lower utility maintenance costs, reduce failure rates, and extend asset life. The system leverages Microsoft Azure image recognition to automatically document power line conditions and pinpoint defects in the grid. Leveraging AI (artificial intelligence) enables utilities to analyze more inspection data in an hour than can be done manually in a year. eSmart Connected Drone software can be used with any drone system eliminating the need to buy new hardware.

### **Global Hydro**

Niederranna

Austria

https://global-hydro.eu/en/



## Neudesic

Irvine, CA USA https://www.neudesic.com/ 

Few utility companies have a solution in place to handle the increasing crush of big data from more than one billion smart meters expected to come online by 2022. Smart Meter Analytics Solutions is a one-of-a-kind solution that combines Microsoft's on-premises SQL Server, BI Platform, and Azure Cloud in a unique hybrid cloud architecture that easily scales as your big data demands grow. You'll be able to quickly process, validate and prepare Smart Meter Big Data for visualization and analytics, giving you a better understanding of customer usage to achieve optimum efficiency.

## EY

London

UK

aka.ms/EY-DigitalGridServices



Digital Grid Services (DGS) is a cloud-based solution powered by Microsoft's Azure, analytics, and Internet of Things (IoT) suites created for utilities to better deploy digital grid technology. DGS supports two-way communication with smart meters, collecting, storing and processing smart metering data, and integrating it into core business operations. DGS can be offered to clients as an end-to-end managed service or software as a service model

### R3mote.io

Calgary, Alberta Canada

https://www.r3mote.io/



## **Genetec Energy & Utilities**

### Montreal, Quebec

Canada

aka.ms/Genetec-IntelligentSecurityForEnergy



### Intelligent security for energy & utilities

Genetec solutions help optimize security and compliance so energy businesses and utilities can meet or exceed increasingly prescriptive regulatory mandates for their industry, which is a prime target for both cyber and physical attacks. Genetec's suite of IoT-based solutions enables companies to monitor and protect their operations and investments using a unified security platform that blends IP security systems within a single intuitive interface. Genetec enables energy companies and utilities to simplify operations, improve internal and external communications and collaboration, enhance situational awareness, and unify command and control. Augmented by robust video management and access control capabilities, the Genetec platform provides end-to-end protection across your physical and virtual environments for optimized security, easier compliance, and better reliability.

Enerav



Many hydropower companies operate multiple plants across the country or around the world. Most of these can be monitored on-site or with conventional remote-control solutions. Remote-control options, however, don't work on mobile devices. Furthermore, not all plants run the same control system. HEROS Connect is a scalable remote-control solution supports monitoring and managing hydro power plants on one common platform, simplifying control, maintenance and operations improvement.

R3mote.io Remote Tank Management automates the entire remote tank management process by sending accurate daily data for every tank directly managed via a centralized cloud-based system. It can dramatically reduce the costs associated with monitoring and servicing tanks, while simultaneously providing the tools necessary to optimize operations.



## **Rockwell Automation, Inc.**

Milwaukee, WI

USA

aka.ms/Rockwell-ConnectedProduction



Quality, contextualized data can help producers improve nearly all aspects of oil and gas production: from maximizing equipment performance and meeting production targets to lowering operating costs. **ConnectedProduction** brings the digital oilfield to life by connecting production equipment, devices and systems; integrating and contextualizing all of the data into real-time diagnostics, production trends and KPIs for actionable operational intelligence.

## Schneider Electric

Rueil-Malmaison

France

aka.ms/realift

Schneider Gelectric



## T4G

Offices across Canada

www.t4g.com



decision making.

## **Saviant Consulting**

Portsmouth, RI

USA

https://www.saviantconsulting.com/ industries-served/utilities.aspx



### Saviant's Real Time Energy Monitoring Smart Analytics Solution is a

highly cost-efficient and rapidly deployable Internet of Things solution that provides real-time energy monitoring and operations intelligence for water, gas and electric utilities. It helps unlock the potential of asset data from millions of connected devices. Utilities can now bring the power of performance and intelligence to their assets by using technologies like Azure IoT Hub, Event Hub, IoT Suite, Stream Analytics and machine learning. The architecture, both on-premise and cloud, can scale to millions of devices, with high-performance storage and analytics for billions of data records. These records can then be used to provide feedback loop to help enhance products or optimize operations.

## Scality, Inc.

### San Francisco, CA,

USA

https://www.scality.com/products/ zenko/



Scality Zenko is a multi-cloud data controller that provides a unified interface to manage data across multiple private and public clouds. Zenko allows enterprises to avoid vendor lock-in, reduce cloud storage costs, and access best-of-breed cloud services from any public cloud provider. Available in both Open Source and Enterprise versions, Zenko includes advanced metadata search across clouds as well as an extensible cloud data workflow policy engine. Additionally, Zenko enables any Amazon S3 compatible application or data solution to use Azure Blob Storage immediately and without any application modification.

Enerav



Schneider Electric Realift Rod Pump Control, a predictive IoT analytics solution based on Microsoft Azure Machine Learning service and Azure IoT Edge is used by oil and gas producers to pinpoint which remote equipment needs repair. The solution reduces maintenance costs, optimizes production and profit, and increases safety for workers and the environment by using automated machine learning to identify potential problems before they start.

T4G Predictive Maintenance for Wind Farms is a customizable, scalable IoT and machine learning framework specifically designed to help wind farm operators reduce costs associated with unplanned downtime and system failures. The solution aggregates and organizes data from a variety of internal and external systems, such as wind turbine telemetry and local weather stations. It then uses machines learning to uncover insights for optimizing equipment performance, increasing efficiencies, and improving confidence in



## 128 Technology

Burlington, MA

USA

www.128technology.com



128 Technology Platform makes your network do what your business needs, by changing the way networks work. We make routers Session Smart<sup>™</sup>, enabling enterprise customers and service providers to create a service-centric fabric that delivers better performance at a lower cost. We enable our customers to simply, securely, and reliably connect to Microsoft services.

## **Actionable Science** Vera Virtual HR Assistant

San Ramon, CA

USA

www.actionable-science.com

® actionable

Vera is an Artificial Intelligence powered Virtual Employee for HR teams. She provides personalized, first-level HR support to employees across the enterprise by helping them with both simple and complex tasks at a fraction of the cost to the organization. Built and trained specifically for the first level HR Help Desk function, Vera handles processes end-to-end, beginning with talking to users through natural language processing, thinking about solutions via machine learning, and then acting on follow-up steps by connecting to robotic process automation. Built on Microsoft platforms in Azure, and pre-integrated with leading IT software, Vera easily connects to enterprise systems.

## **3Cloud Solutions**

Downers Grove, IL

USA

https://3cloudsolutions.com/



Through our Internet of Things practice, 3Cloud will advise you in the device or sensor selection and help you connect those devices to the cloud. We will design and develop solutions that leverage the unique capabilities of Microsoft Azure to capture, structure and utilize the new information to drive deeper insight and action.



Jacksonville, FL

USA

https://www.actsolution.net/

acts

Making the transition to the cloud can be complicated and daunting. ACTS' Cloud Envisioning Workshops provide a customized training experience for your organization. The experience is designed to educate your teams on the possibilities of cloud transformation to improve business operations and accelerate innovation. Our cloud architects will create Envisioning sessions tailored to your company's unique organizational needs and strategic goals.

### Accenture

Dublin

Ireland

aka.ms/Accenture-ConnectedConstruction



The Connected Construction solution captures real-time IoT information into Microsoft Azure about people, equipment, and materials. It enables building companies to help improve health and safety, site security, and productivity, as well as detailed accountability related to cost and schedule compliance for all parties involved in a build.

## alligatortek

Chicago, IL

USA

www.alligatortek.com

alligatortek•

Alligatortek develops solutions that connect your business with employees and customers alike. Our team uses industry-leading tools like Xamarin and Cordova to create native, cross-platform applications in Azure. Our clients move to an Azure-based mobile-friendly, web-based system to grow at a faster rate while keeping their team connected where and when it counts.

Solutions: Mobile Development with Xamarin **Cross-Industry System Integrations / Dashboard Solutions** Web Application Development





## AT&T

Dallas, TX

USA

www.att.com/iot

https://iotplatform.att.com/



AT&T Asset Management Operations Center enables the use of different hardware for different solutions through a centralized, customizable, and client-ready application that makes it easier to track, manage, and monitor all of your connected IoT assets. With AT&T solutions, you can use market-based hardware and an easy-to-launch platform and application that will allow your operations team to quickly deploy solutions to help transform your business.

Solutions: **AT&T Asset Management Operations Center AT&T IoT Platform** 

## **Bennett Adelson Consulting**

Cleveland, OH

USA

https://www.bennettadelson.com/ practices/business-intelligence



and Power BL

## BlockApps

Brooklyn, NY

USA

### https://blockapps.net/strato/



access and privacy.

## **Aureus Tech Systems**

Centennial, CO

USA

https://www.aureustechsystems.com/ products

https://www.commonsource.com/ anvesa/



Some business stresses are inevitable, but those caused by inefficient processes are not one of them. Aureus Tech Systems' anvesa™ was designed specifically for litigation attorneys to speed the initial review process and improve operational efficiencies. Searching, rendering, and navigating through documents and results becomes a breeze with our intuitive Azurebased IoT application. anvesa is the only product on the market that has combined multiple search methods into one cohesive platform.

**Blueprint Technologies** 

### Bellevue, WA

USA

https://bpcs.com/conduit



# environments

## Avanade

Seattle, WA

USA

aka.ms/Avanade-DataAnalytics



Avanade's Digital Analytics is a set of pre-built applications and a library of components ready to assemble in specific configurations to meet clients' business goals. The solution uses a design-led approach to analytics that is business outcome driven. Some of the key capabilities it offers include: Accelerated decision making with just-in-time insights, delivery of customer next best offer/action, advanced analytics capabilities on demand, along with the ability to ingest, process, and respond to IoT data streams and workloads.



Bennett Adelson Consulting's Data Platform & Analytics solutions provide data analysis and actionable dashboards that help businesses analyze data from their Internet of Things (IoT) devices in real-time with custom solutions built using Microsoft Azure Event Hubs, Stream Analytics, Machine Learning,

Launched on Microsoft Azure in 2015, STRATO Enterprise Blockchain is a flexible blockchain solution for building and running business networks that serve as the transactional and collaboration backbone for end-to-end business transaction and collaboration processes while enhancing security, performance, trust and transparency in the business value chain. STRATO can be deployed on any major cloud provider and can be configured for many types business activities. STRATO is built to integrate with other systems, applications, and business workflows while providing clear control over data

**Conduit** provides business with a secure data transit solution that connects data systems and sources to any business intelligence visualizations tools. It is a data virtualization solution based in Azure that enables real-time connectivity to data sources and combining multiple data sources into a single source. Conduit works in cloud, hybrid-cloud, and on-premise



### **Bright Wolf**

Durham, NC

USA

aka.ms/Brightwolf-Springboard



Bright Wolf's SpringBoard is an enterprise-ready industrial IoT application framework with building blocks for critical data management infrastructure for manufacturers and other industrial enterprises. It integrates with Azure for a tailored solution optimized for multi-tenant industrial equipment and manufacturing scenarios.

## Capgemini

### Paris

France

aka.ms/Capgemini-SmartServicesIoT

Capgemini

Capgemini's Smart Services and XIoT platform leverage proven IoT technologies from Capgemini and Intel, as well as a vast expertise in the utility, industrial, manufacturing, automotive, transportation and logistics sectors. These services and associated platform allow businesses to deploy solutions to meet the widest range of use cases through intelligent edge technologies, open machine-to-machine communications capabilities and big data/analytics.

## Cognizant

### Teaneck, NJ

USA

aka.ms/Cognizant-ConnectedFactories

Cognizant

Asset Performance Excellence (APEx) enablies integration of devices, systems, processes, and people, powered by Microsoft Azure IoT platform. APEx integrates operational data from manufacturing equipment to deliver applications and analytics helping streamline operations while reducing inventory, rework and maintenance costs. Cognizant's APEx accelerates the build & deployment of an enterprise's core IIoT (ex. OEE, throughput, utilization) by providing the required information meta-model and pre-built templates to drive outcomes.

## **Brillio Technologies**

Santa Clara, CA

USA

www.brillio.com



Brillio enables businesses to use analytics to harness the power currently locked in massive streams of unstructured big data. Data must be used to not only clearly articulate and simply present "what" is happening, but also reveal "why" it is happening, and "how" to use that knowledge for specific competitive advantage and in the service of customers. Brillio Data Platform is a tested and enterprise-ready solution for connecting, processing, analyzing, and reporting big data insights, quickly deployable to the cloud, or on premises. Now any size company can quickly generate high confidence Internet of Things insights to become truly data driven.

### Concurrency, Inc

### Brookfield, WI

### USA

aka.ms/Concurrency-DataAnalytics

Concurrency

## **Capax Global LLC**

### Chicago, IL

USA

### https://www.capaxglobal.com/ solutions



Capax Connex quickly and securely allows the integration of collected IoT data with existing enterprise data. The solution then rationalizes the massive amounts of data and an organization's downstream applications so decisionmakers can understand how their business works at a deeper level. Azure Cosmos DB replicates data securely wherever users are.

Solutions: Capax Connex | IoT | IoT Hub | Telemetry Data | Data Point Collection | Data Ingestion

Cosmos DB | Data Distribution | Multi-Model Database | APIs



From production line workers to executives, accessing data analysis dashboards and reports should be part of a day's work. So should interfacing with corporate, third-party and data recorded by IoT sensors. Data & Analytics can turn intelligent insights into prescriptive actions by leveraging a modern data platform and advanced analytics techniques. Concurrency's solution can analyze data that already exists within your organization, or help you create more to give you a competitive edge.



### **Crestron Electronics**

Rockleigh, NJ,

D2iQ

USA

San Francisco, CA

mesosphere/dcos

D2 IQ

https://d2iq.com/solutions/

USA

aka.ms/Crestron-Fusion

aka.ms/Crestron-Mercury

aka.ms/Crestron-XiOCloud

**CRESTRON** 

Crestron Electronics Azure cloud services help organizations increase employee productivity, improve facility efficiencies, and strengthen decisionmaking by enabling them to globally provision, monitor, and manage Creston IoT-enabled devices that control room scheduling, technologies, and environment. Real-time data, gathered at the edge, provides the intelligence and actionable insights organizations need to optimize efficiencies, productivity, and decision-making.

Mesosphere DC/OS (Datacenter Operating System) lets you pool all of your

and on Azure, using Apache Mesos technology proven by companies such as

Apple, Twitter, and Verizon. Whether it's traditional apps or modern data-rich

apps made of containers and big data services, DC/OS elastically runs it all for

faster rollout of new projects like personalization, machine learning, and IoT.

resources and manage your datacenter or cloud infrastructure like it's one

machine. Effortlessly deploy modern Docker applications at scale on-prem

Solutions: **Crestron Fusion Crestron Mercury Crestron XiO Cloud** 

### Element

San Francisco, CA

USA

https://www.elementanalytics.com/ assethub

AssetHuk:

Element AssetHub unlocks industrial data through IoT, enabling modern analytics systems to find insights that transform operational performance. This can result in hundreds of millions of dollars of value for customers. AssetHub, deployed on your Azure tenant, pulls data from thousands of enterprise sources and automates the creation of millions of data relationships to rapidly build, update, and manage asset twins of industrial equipment. With AssetHub, any person or system can access every reliable data point in the enterprise.

## **Ensono LP (Global)**

Downers Grove, IL

### USA

https://www.ensono.com/

https://www.ensono.com/resources/ video-citrix-microsoft-azure



## **DFocus**

### Shanghai

China

https://www.dfocuspace.com/ solutions-en.html



**DFocus Conference Room Booking & Management System** 

Greatly improve your team's collaboration efficiency by simplifying the room booking process and automatically releasing void reservation. Both enterprise deployment and Microsoft Azure cloud-based SaaS platform are available, with seamlessly integration of common office software, such as Exchange and Outlook. The data dashboard would help you know the actual meeting space utilization.

### 26 IoT in Action | Setting the pace with breakthrough solutions



Ensono Citrix to Azure provides full endpoint management for your organization, ensuring that remote workers can easily, quickly, and security access all the applications and data they need to perform their jobs. The Citrix to Azure journey helps businesses to construct the optimal deployment for their virtual workstations, data storage, operating systems and applications, enabling a happier, more productive mobile workforce.



## EY

London

UK

### https://www.ey.com/en\_gl/ search?q=secure+digital+enterprise

aka.ms/EY-IntelligentAutomation



### **Secure Digital Enterprise**

EY - Addressing digital enterprise with a layered security approach

**Performance.** Activate a cloud-based approach that propels and aligns every part of your business. We'll help you use the cloud and other digital technologies to enable greater employee collaboration, deliver tangible outcomes faster and create programs that drive business performance.

Trusted capabilities. Confidently grow your business around sound digital capabilities and a trusted, compliant cloud platform as you adapt to today's highly regulated world. We'll help you predict, monitor and manage risks while also advancing business growth and transformation on the Microsoft Azure cloud platform.

Sustainable results. Stay agile and adaptable for long-term success with scalable programs and cloud technologies. Our strong, strategic consultation and flexible digital technologies can help drive repeatable enterprise programs that can scale with your goals and sustain your business for years to come.

EY offers enterprises leading-edge digital Intelligent Automation tools that leverage cognitive technologies to support continuous improvement and intelligent decision-making throughout your enterprise. Built on Azure and using the connective power of the Internet of Things, it can create virtual employees throughout an organization. And digital security in the Azure cloud is scalable, reliable, and compliant globally.

### iLink Systems Inc

Bothell, WA

USA

iLink Systems Azure Adoption Framework is a streamlined set of processes, templates, and code to accelerate the Azure and IoT workload adoption for a customer in virtually any industry.

ps://www.ilink-systems.com/services/ internet-of-things/



## Jumptuit

New York, NY, USA

Jumptuit Finance connects a broad spectrum of IoT sensors and devices with consumer and business cloud services and platforms. It augments traditional user data points with behavioral data and generating predictive analytics to achieve the level of personalization and customization demanded by consumers.



https://www.jumptuit.co/

## **Larsen & Toubro Infotech Limited**

### Mumbai

India

aka.ms/LTI-MosaicDecisions



Insight

### Tempe, AZ

USA

aka.ms/Insight-BluemetalArchIoT

aka.ms/Insight-CloudFastStartIoT



Insight offers full-service IoT solutions customized for your enterprise. We can help enterprises achieve an IoT-powered business model that can drive new revenue opportunities and create a competitive edge through real-time data — all accessible on smart devices. When you gain real-time insight into how customers are using your products, you're able to pivot quickly to improve your services, increase customer satisfaction and stay ahead of the competition. Ensure your success by guiding your team on a short-term, structured engagement that will educate them on IoT. We'll select a worthwhile use-case and build a working proof of concept that will accelerate your team onboarding.

Solutions:

**BlueMetal Architects Cloud Fast Start** 



Mosaic Decisions is an analytics-as-a-service offering that helps organizations undertake quantum leaps in business transformation and accelerate an insights-driven approach to decision making. Mosaic Decisions is powered by Max IQ, designed to simplify analytics and deliver real-time, secure and actionable insights to business for competitive advantage.



### Mesh Systems

### Carmel, IN

USA

www.worXsmart.io

**MESH**SYSTEMS<sup>™</sup>

Ensuring the timely and accurate completion of workflow and compliance activities is simplified with the Mesh Systems worXsmart workflow solution, which requires team members to be in the proximity of monitored connected devices to perform assigned tasks. Leveraging state of the art wireless technologies, mobile applications, and Microsoft Azure, worXsmart utilizes logic and analytics to dynamically escalate issues, redefine tasks, and derive institutional intelligence.

## Nintex USA LLC

Bellevue, WA

USA

https://www.nintex.com/workflowautomation/nintex-workflow-cloud/

https://www.nintex.com/workflowautomation/office-365/



Nintex Workflow Cloud® is the leading intelligent process automation platform that leverages Nintex's Advanced Workflow, Modern Forms, DocGenTM and Process Intelligence capabilities to automate, orchestrate, and optimize every interaction across the modern workplace. The Nintex Workflow Cloud is designed to automate the simple and sophisticated business processes that fuel today's enterprise organizations as well as help the line of business to get more value from the many cloud-based applications they use every day. People who automate processes with Nintex typically experience multiple cost and productivity benefits throughout their organization. All without writing a single line of code.

### Workflow for Office 365

Easily automate and optimize any business process in Office 365: With Nintex Workflow for Office 365, you can empower anyone in your organization to transform any business process—no matter how sophisticated—using clicks, not code. Easily design and connect powerful workflows that extend the content and data you've entrusted to Microsoft Office 365, breaking down barriers between the people and processes your business relies on to succeed. Automated workflows can interact with your structured and unstructured content, across Office 365 and all your systems of record. Feature-rich Nintex Connectors make it easy to securely interconnect Nintex Workflow for Office 365 with leading cloud services and apps.

## Mindtree Ltd

Bengaluru, Karnataka, India and Warren, NJ, USA

aka.ms/Mindtree-ShotClasses



ShotClasses is Mindtree's Enterprise Learning Platform that helps your distributed workforce perform better every day by helping them know what they need, when they need it. Leveraging bite-sized content, mobile-first access, and ease of use for all users, it helps key stakeholders share relevant content easily-for on-the-go access by their frontline teams and on-thespot application of key knowledge. ShotClasses on Microsoft Azure offers fast go-live, easy scaling, and open integrations to realize better revenue and lower costs while capitalizing on existing investments. When you deliver bursts of engaging learning that your employees or partners can access anytime, anywhere, and on any device through our business training app, they learn more effectively and apply what they learn on the job. The result is superior employee engagement and performance and better business results.

## **Open Systems Technologies DE, LLC (OST)**

Grand Rapids, MI

USA

https://www.ostusa.com/



project.

### Nihilent Technologies, Inc

### Pune

India

https://nihilent.com/our-services/ data-science-analytics/



Nihilent Technologies, Inc., is a leading services and solutions company, with deep experience in data analytics and information management. With our Data & Analytics Practice, we help our customers solve business problems and foster a data-driven culture to drive improvements, innovation and transformations. Nihilent's diverse practices help you and your organization understand and manage your data more effectively, enabling decision makers to drive business performance.



Starting an IoT project can be intimidating. With so many possibilities, strategies, and implications to consider, the first step can feel risky and challenging. At OST with our IoT Cloud Architecture Workshop, we have experience creating IoT cloud architectures for clients such as Johnson Controls, Stryker, and Delphi. Clients will work with OST IoT experts to answer questions, explore options, and create a basic IoT cloud architecture for their



### **OSIsoft**, LLC

### San Leandro, CA

USA

### https://www.osisoft.com/pi-system/



**OSIsoft PI Integrator** brings OT and IT together through its PI System and PI System integration technologies. The PI System can capture, cleanse, augment, and shape OT data from thousands of disparate systems. PI integrator technology then transmits analytics-ready data in a coherent fashion to IT systems such as Microsoft SQL Server, R Services, Azure IoT, Power BI and Cortana Intelligence (Azure ML). By using PI System integration technologies like Industrial IOT data integration for Azure IoT Hub or Data Lake, companies can accelerate their digital transformation and IoT strategies.

### QUISITIVE

Irving, TX

USA

https://www.quisitive.com/services/ blockchain-solution-development/

Blockchain technology has the potential to solve enterprise problems more effectively than ever before. Yet it can be difficult to sift through the market hype to determine which scenarios are best suited to a blockchain solution. Quisitive Blockchain helps you cut through the noise with a commonsense approach and prioritize the blockchain opportunities that are right for your business. We leverage the latest innovations from Microsoft to capture the strategic advantages that enterprise blockchain enables. Quisitive's proprietary process offers our clients the ability to efficiently identify and prioritize blockchain opportunities, prove their value, and develop them in timely fashion to ensure full business value.

## Perficient, Inc.

St. Louis, MO

USA

https://www.perficient.com/services/ cloud



Perficient Cloud Solutions provides a number of Azure services for organizations of all sizes. From cloud migration to hybrid solutions, our 125+ certified Microsoft cloud consultants are ready to help. Perficient has deep partnerships across many enterprise partners and platforms, including Adobe, and we know how to put these solutions on Azure. We also have a strong background with IoT on Azure, including bots/Al, app development, custom analytics, and more. We offer solutions for the planning/design phase through the implementation phase of the Azure journey.

**Redapt Systems, Inc.** 

Woodinville, WA

USA

Transforming your organization is a matter of competitive survival. It's about seeing the big picture, setting a bold goal, and putting a digital roadmap in place to reach it. The Attunix Digital Transformation Strategy from Redapt Systems quickly guides business leaders to uncover an organization's potential and identify a clear road to success.

https://www.redapt.com/

ATTUNIX)) a Redapt Company

## Pointivity

### San Diego, CA

USA

https://pointivity.com/managedservices/



Managed Azure Services from Pointivity will manage your system software, configurations, and service consumption using proven monitoring processes and tools. Our managed services scale up and down to meet the everchanging needs of your business. We offer a customized managed service plan tailored to your overall objectives. Whether you have critical workloads that demand a full suite of services or you're just looking for a light-touch service to control costs, we can scale and align to meet your needs.

## **Redis Labs**

Mountain View, CA

USA

https://redislabs.com/redisenterprise-software/

https://redislabs.com/redisenterprise-cloud/



Redis Enterprise Cloud: The fastest way to deploy Redis Enterprise. A fully managed cloud service, hosted or in your VPC.



Redis Enterprise is available as a service in public and private clouds, as well as downloadable software, enhancing open source Redis with stable high performance, unmatched high availability, seamless scaling, and with the lowest TCO. It includes CRDT-based Active-Active geo-distribution and supports Flash for infrastructure cost efficiency at scale.

Redis Enterprise Software: Software for any cloud or private data center.



### Protoviti, Inc. (a subsidiary of Robert Half International)

Menlo Park, CA

USA

aka.ms/Protoviti-OPMI

### rh Robert Half<sup>®</sup> protiviti

O365 Planning, Management & Implementation (OPMI) is a group of offerings that is focused on the foundational activities required for an organization to build a stable, scalable and supportable O365 platform. They help our clients accelerate their deployment of O365 by enabling agility, reducing uncertainty and identifying the critical path required to begin their O365 deployment.

### Sogeti (Technology and Engineering Services Division of Capgemini)





San Juan

Puerto Rico

https://www.simplement.us/

### >>> Simplement

Simplement Enterprise Reporting for SAP was developed to simplify implementation of SAP systems and find a better way to report on the vast store of data inside of SAP. Our flagship platform, the Data Liberator™, gives customers an easier way to explore and use live SAP data, leveraging the power of Azure and Power BI. This means every area of your business will have a better experience consuming SAP data. And they'll drive more business value once they get a piece of this. Add in our Smart Starts (prebuilt business content, including data models built for Power BI and business entities for data lakes, Machine Learning, Artificial Intelligence and other advanced analytics) and you're on your way to real digital transformation.

## Striim, Inc.

### Palo Alto, CA

USA

https://www.striim.com/



## Softweb

### Elgin, IL

USA

https://www.iotconnect.io/meetingroom-booking-system.html

softweb: solutions Smart Office, powered by beacon and sensor technology, makes it really simple, fast, and convenient to find and book a meeting room by simply entering the room with a smartphone.

## **SWIM**

Campbell, CA

USA

### https://www.swim.ai/



Swim.AI DataFabric transforms streaming data into real-time insights and uses only a fraction of the resources required by existing dataflow pipeline solutions. DataFabric allows you to connect real-time data streams from distributed assets and systems. It seamlessly builds a mesh of stateful, parallel processing to transform, analyze, and act upon data at the speed it's generated. DataFabric then streams the results and insights to users, applications, and cloud storage. DataFabric is fully integrated with Microsoft Azure services and can be quickly deployed and managed using Microsoft Azure IoT Edge. Edge and streaming data can now be economically collected and analyzed in real-time with insights and labeled data delivered to Azure Data Lake Storage for use by enterprise applications, Azure Power BI or Azure Power Apps.



Sogeti offers a suite of services specifically designed for PLM on the Cloud. It can move workloads to the cloud and help scale and reduce costs. It can connect PLM systems with CRM, ERP, MES, SLM and other systems. It can also deepen and broaden an existing PLM investment by enabling augmented reality, cognitive AI, simulation, 3D printing, and other functionality. It leverages high performance computing on Azure.

Striim Platform makes it easy to integrate, analyze, and visualize streaming data across cloud, big data, and IoT devices, helping you make smart and timely operational decisions. With Striim you can build streaming data pipelines for big data integration, cloud migration and integration. This enables you to detect cybersecurity threats, fraud, and other operational risks and opportunities in real time.



## Synegrate

Irvine, CA

USA

https://www.synegrate.com/



Enterprise Integration Strategic & Tactical Enablement from Synegrate helps customers encumbered by legacy IT implementations to unshackle their data. Our program is designed to fast-track our customers on their enterprise integration digital transformation journeys. We deliver our customers' data where and when it is needed to empower their businesses. Our program results in more customers doing more in the Azure cloud.

## TechData, IBM

Clearwater, FL (TechData) Armonk, NY (IBM)

USA

https://www.ibm.com/products/ planning-analytics

TRM D Tech Data

IBM Planning Analytics is an intuitive software solution that automates planning, budgeting, forecasting, and analysis processes so organizations from small businesses to enterprises can drive efficiency and improve business performance. Featuring an interactive, customizable workspace, the solution eliminates time-consuming manual tasks while offering the full functionality of spreadsheets. traditional solutions.

**TigerGraph Inc** 

Redwood City, CA

USA

https://www.tigergraph.com/



TigerGraph Enterprise Edition 2.1.7 helps transform structured, semistructured and unstructured data, and massive enterprise data silos, into an intelligent, interconnected, and operational data network that can reveal critical patterns and insights to support business goals. TigerGraph is delivering the next stage in the evolution of the graph database: the first system capable of real-time analytics on web-scale data. Our Native Parallel Graph<sup>™</sup> (NPG) design focuses on both storage and computation, supporting real-time graph updates and offering built-in parallel computation. With GSQL's expressive capabilities and NPG speed, you'll be able to perform Deep Link Analytics: uncovering connections that previously were too impractical to reach or too cumbersome to express.



### Phoenix, AZ

USA

aka.ms/avnet-health

## Wintellect, L.L.C.

### Atlanta, GA

USA

https://www.wintellect.com/softwaredevelopment/data-ai/



Wintellect Data and AI lets you turn insights into action with powerful applications built on Microsoft Azure. Take your data to the cloud and scale, at lower cost, with Big Data, Power BI, Cosmos DB, IoT and Machine Learning solutions. Discover insights and trends, and perform predictive analytics. Gather business data from your devices with IoT and support rich data visualizations and dashboards with Power BI. Easily scale up and down in minutes, build fail-safe distributed databases that operate worldwide, and lower your maintenance and operating costs. Choose hybrid architectures with both cloud-based and on-premise apps and data as desired.

### **GE Healthcare**

Chicago, I	L
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USA

https://www.gehealthcare.com/en-GB/ products/carestation-insights



GE Healthcare

GE Healthcare's **Carestation Insights** is a suite of cloud-based applications that securely gathers data from anesthesia devices to identify previously unseen patterns, and reveal opportunities to help improve clinical, operational, and financial outcomes. It enables anesthesiologists to provide better care to patients, administrators to more efficiently manage resources, and biomed professionals to glean the data they need to ensure the consistent performance of machines.





Avnet IoTConnect Platform and Smart Healthcare Solution, built on Microsoft Azure, helps healthcare and medical research organizations provide better patient care, improve data collection, and operate more efficiently. IoT-enabled remote clinical monitoring, healthcare wearables, and analytics help you manage and customize treatment for chronic disease, improve in-home patient care and make the clinical trial process more accurate and safer.



## KenSci Inc.

### Seattle, WA

USA

https://www.kensci.com/



KenSci's Clinical Analytics risk prediction Azure-based platform helps health systems identify population health risk, as well as optimize clinical outcomes and operational efficiency across the care continuum. KenSci offers a machine learning library of over 150+ prebuilt models and modular solutions for clinical and operational risk prediction. Average deployment takes 10 weeks and ROI visibility in 90 days.

### MJI

### Tokyo Japan www.mjirobotics.co.jp/en/ **M**ji

## Mariner

Charlotte, NC

USA

www.mariner-usa.com/manufacturing



Spyglass Connected Medical Device was created for medical device manufacturers. With Spyglass Connected Medical Device, manufacturers can monitor their connected devices securely, at scale, to enable predictive maintenance, connected field service and provide usage analytics. It can be deployed in less than 4 weeks.

**P360** 

Piscataway, NJ

USA

https://www.p360.com/poweredclinical-trials/

**POWERED** POSSIBILITIES

# of your company.

### **Softweb**

Elgin, IL

USA

https://www.iotconnect.io/loT-smarthealthcare-solutions.html

softweb: solutions

### MILL5

### Boston, MA

USA

www.mill5.com



IoT on the Edge for Healthcare is driving transformational business outcomes for the treatment of patients. It also monitors how healthcare professionals interact and perform daily tasks, as well as driving efficiencies across critical hospital assets and processes such as equipment maintenance and operating room readiness. IoT on the Edge enables healthcare organizations to automate many processes and uses artificial intelligence (AI) and machine learning to analyze data and provide valuable insights in near real time





The MJI Tapia robot healthcare solution connects with patients in hospitals, medical clinics, and other facilities, collecting relevant information before they meet with doctors to improve efficiency, reduce wait times, and shorten treatment cycles, freeing medical staff to focus on patient care while providing an engaging experience for patients. Tapia robots also function as companions and healthcare assistants for patients who need medical, physical, and emotional support at home.

Built on the Microsoft Dynamics 365 platform, Prescriber360's robust Clinical Trial Management System, Trials360, safeguards your clinical trial process by helping you better treat and prevent diseases, while improving lives. With over 20 years of experience within the life sciences industry and the power of Microsoft at our backs, we will guide you through your digital journey and help you unlock rich data that will empower effective outcomes for the future

The Softweb Smart Healthcare solution implements a Smart Clinical Trial Management System with an aim to address the pain points in the existing clinical trial process and make it more insightful. Patient vitals are captured in real-time and its report is made available to CROs even when the patients are at a remote location. Depending upon the status of drug and its effects on the patient's body, real-time data is a crucial factor to look upon. Clinical Research Organizations (CROs) require this data to monitor and inspect the overall progress of the process and know the effects of the drug.



### **SpadeWorx**

Campbell, CA

USA

www.spadeworx.com/



SpadeWorx Connected Patient Care is a connected IoT framework that enables medical device manufacturers to deliver the most current IoT healthcare technologies to their customers and transform their businesses. With a complete software backend, manufacturers can easily develop new IoT-enabled products, and in the process, enable more effective and affordable patient care.



Maplewood, MN

USA

aka.ms/3M-ConnectedSafety



3M Connected Safety is a platform of solutions that connects workers, places, and equipment to help you improve productivity, increase worker situational awareness, and enable a more efficient health and safety program. The platform is a highly customizable ecosystem of software solutions, analytics tools, and digitally enabled personal protective equipment (PPE).



## Suquino

Sunnyvale, CA,

USA

https://www.suquino.com/



Suquino Saffron Telehealth Intelligence is a plug-and-play intelligent telehealth solution that can remotely view and diagnose patient conditions in real-time or in asynchronous sessions. Because it integrates with multiple medical devices, it can better connect the entire healthcare ecosystem, bringing together a wealth of data that's self-learning and drives more personal and holistic care. It also brings together patients, physicians, and caregivers anywhere, at any time.

## Accenture

Dublin

Ireland

aka.ms/Accenture-ConnectedAssetMgmt

aka.ms/Accenture-ConnectedMine



Accenture offers manufacturers and mining companies unparalleled operational efficiency. Connected consulting and managed services are designed to improve the operational efficiency of physical plant assets. It does this through the application of specialized analytics, resulting in reduced operating and maintenance costs, while improving uptime and production.

Solutions:

**Connected Mine:** Connects specific points in a mining process to check machinery health and enable predictive maintenance through deep data.

## Wipro

### Bengaluru

India

### aka.ms/wipro-supplychain



Wipro Smart Pharmaceutical Supply Chain is a cutting-edge IoT and blockchain platform which improves supply chain security, supports regulatory compliance, and reduces cold chain wastage by generating geospatial alerts in near real-time should there be a deviation in temperature or attempt to counterfeit. Bluetooth-enabled tags, placed on boxes of drugs, generate the data necessary to accurately track pharmaceuticals across the supply chain, improving security, and supporting regulatory compliance requirements. Pharmacists can easily track the condition of drugs and pinpoint issues via flashing red lights when a constraint, such as high or low temperature, has been detected.

### **ActionPoint**

### Limerick

Ireland

www.iot-predict.com



ActionPoint IoT-PREDICT enables customers to reduce costs and improve efficiency by getting sensor data relevant to their operations efficiently captured at the edge and available in Azure IoT within 10 minutes of opening the box. IoT-PREDICT is a plug-and-play, infinitely scalable, end-to-end, industrial grade machine monitoring solution that delivers on the promise of IoT for smart manufacturing.



**Connected Asset Management (CAM)**: Connects critical factory components to monitor health and effectiveness.



### Aspen Technology

### Bedford, MA

USA

aka.ms/AspenTech-AspenEdge

( aspentech

AspenTech is a leading software supplier for optimizing asset performance. Our products thrive in complex, industrial environment where it is critical to optimize the asset design, operation and maintenance lifecycle. Aspen Edge **Connect** enables assets and sensors (wired or wireless) to existing systems. Through edge devices using the latest Industrial IoT technology, Aspen Edge Connect collects data from multiple assets, pooling it together for analysis with an edge processing device. Data can then be stored securely in the Azure cloud or with an on-premise solution.

## **AVEVA Group plc**

AVEVA puts the cloud, IoT, artificial intelligence, and virtual reality to work Cambridge for organizations and empowers people to improve asset and operations lifecycles. aka.ms/AvevaDynamicSimulation This is accomplished through an end-to-end industrial portfolio: aka.ms/Aveva-InsightPerformance

aka.ms/Aveva-OperatorTrainingSimulators

aka.ms/Aveva-ProllProcessEngineering



UK

and optimize operations.



Stuttgart

Germany

https://aucobo.de/en/home



The aucobo Wearable Platform enables hands-free communication for production, maintenance, and intralogistics teams so they can operate with maximum efficiency. Offering real-time communication, organizational, and reporting tools for critical tasks via smartwatch, the solution helps ensure that important information reaches the right person at the right time. By shortening reaction times and making notification processes more targeted, aucobo can help companies make better use of both machines and workers.



Phoenix, AZ

### USA

www.brainium.com



Avnet Brainium is an end-to-end IoT solution that combines certified, ready-to-use devices from Avnet with innovative software from Octonion to deliver AI and security at the edge, beyond the gateway, to the device and sensor level. Optimized for Azure, Brainium accelerates delivery of industrial IoT solutions with higher performance, security, and scalability while significantly reducing costs.



- **DYNSIM Dynamic Simulation** is a comprehensive, dynamic simulator that assists in process design, controls checkout, and control system designenabling users to improve the performance, productivity, safety, and profitability of modern process plants.
- **INSIGHT Performance powered by Wonderware Online** collects, analyzes, visualizes, manages, and secures industrial IoT (IIoT) and other big data to improve decision-making, uncover hidden insights, and gain visibility of operations from anywhere, anytime, with any device.
- **Operator Training Simulators (OTS)** are advanced computer-based training tools that enable plant workers to train in simulated work environments to improve worker competence; increase productivity, compliance, and safety;
- **PRO/II Process Engineering** is a steady-state simulator that optimizes plant performance by improving process design, operational analysis, and performing engineering studies.



### **Avnet**

Phoenix, AZ

USA

### aka.ms/avnet-iot



The Avnet IoTConnect cloud platform enables businesses to take full advantage of digital transformation by making it easier and faster to build smart applications and solutions, develop best-in-class device communications and management, and enable data-driven decision-making.

The platform includes a set of pre-built industry and vertical-specific solutions that include IoT hardware (sensors, gateways, etc.), artificial intelligence, and data analytics to jump-start the development of IoTenabled systems and services for smart buildings, smart offices, smart retail, smart healthcare, smart connected worker, smart asset monitoring, smart fleet management, smart warehouse, and smart factory.

The IoTConnect platform forms the basis of industry-specific monitoring solutions, including:

Smart Solutions to take the complexity out of IoT

Smart Cell Tower Monitoring for optimize the monitoring and managing cell towers

Smart Energy Monitoring in industrial facilities

Smart Diesel Generator Monitoring to control generators from anywhere

Smart Asset Monitoring to optimize asset use and reduce lifecycle costs

Smart Connected Worker to gain real-time visibility into worker health and safety

Smart Factory Hardware support, AI and data analytics to quickly transform real-time data into valuable insights

### Bosch

### Gerlingen

Germany

aka.ms/bosch-nexeed



## **Bright Wolf**

Durham, NC

USA

### www.brightwolf.com



scenarios.

## Cleidon

### Shanghai

China

http://www.cleidon-iot.com/site/ solution



基于智能云IOT的物联网平台 打造全新解决方案,实现创新和数字化转型

### www.beijerelectronics.com/ftttc Beijer

Beijer

Malmo

Sweden

Beijer Fast Track to The Cloud (FTTTC) takes the complexity out of automating and deploying operations by utilizing Beijer WARP Engineering Studio along with other Beijer technologies to graphically connect and configure any hardware, software, and communication protocols to collect, store and analyze business-critical data in the Azure Cloud. Leveraging Azure IoT Hub, FTTTC leads to improved efficiencies, optimized operations and reduced costs.

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The Bosch Nexeed Production Performance Manager increases the availability, consistency and performance of production and processes, especially those for joining and coating, in manufacturing facilities by collecting operational data from new and legacy Bosch and third-party machines, and then enabling quality and maintenance staff to more efficiently manage and optimize operations with real-time processing monitoring, live data analysis, and predictive maintenance.

Bright Wolf GearBox Edge Suite provides a flexible IoT software toolkit for gateway hardware and embedded systems. The suite enables industrial organizations to operate a customizable edge platform for on-premises data collection, processing, analytics, and HMI screens across a broad range of PLCs and industrial protocols — independent of hardware vendor or proprietary ecosystem. Web-based device management enables rapid configuration and secure cloud connectivity supporting web and mobile applications, enterprise system integration, deeper machine learning, and AI

Cleidon offers a range of solutions that utilize IoT to solve industry challenges, including asset management, remote monitoring, and integrate of discrete devices to optimize operational efficiencies and proactively identify and troubleshoot issues. One of their key focus areas is big data solutions for the medical industry, which leverage machine learning, advanced Power BI technologies, and AI interactive intelligence to accelerate innovation and optimize manufacturing processes.



## **COPA-DATA**

### Salzburg

Austria

### aka.ms/copa-smartfactory



For manufacturers looking for a complete IIoT software solution, **zenon** by COPA-DATA provides an open, flexible, and easy-to-use solution for the automotive, food and beverage, and pharmaceutical industries. With over 30 years of experience in process control, the team at COPA-DATA knows how to help customers optimize their operations and build the smart factories of the future.

Element

San Francisco, CA

USA

https://www.elementanalytics.com/ assethub



## ECS

Taipei Taiwan

www.ecs.com.tw



ECS Caterpillar - The IoT Messenger - enables factories and other enterprises to aggregate data from a breadth of existing and new wired and Wi-Fi sensors and IoT technologies to create a holistic data ecosystem that provides the visibility, advanced analytics, and extensibility to optimize operational efficiencies, implement predictive maintenance, and monitor air quality and other environmental factors.

## **Elogic Group LLC**

West Henrietta, NY

USA

aka.ms/elogic-equipment360

equipment360<sup>™</sup> is the manufacturing industry's most complete response to today's challenges of connected products and services. This Azure IoT solution enables predictive, remote service, and real-time monitoring and control. It does this through 360-degree views into equipment performance, utilization, and maintenance. equipment360 leverages Dynamics 365 Sales and Service, Azure IoT, Machine Learning, and Power BI.

### **Electric Imp**

Los Altos, CA

USA

www.electricimp.com

### electric imp

From prototype through end-of-life, the commercial-grade **Electric Imp** IoT Connectivity platform securely connects existing and new products to the Azure IoT Hub, enabling edge-to-edge intelligence to efficiently build, deploy, and continuously manage data from millions of diverse IoT products. Trusted by Fortune 500 companies and integrated with the Azure ecosystem, the platform reduces risk, time-to-market and total cost-of-ownership.

46 IoT in Action | Setting the pace with breakthrough solutions



Element AssetHub unlocks industrial data through IoT, enabling modern analytics systems to find insights that transform operational performance. This can result in hundreds of millions of dollars of value for customers. AssetHub, deployed on your Azure tenant, pulls data from thousands of enterprise sources and automates the creation of millions of data relationships to rapidly build, update, and manage asset twins of industrial equipment. With AssetHub, any person or system can access every reliable data point in the enterprise.



### **Emerson**

St. Louis, MO

USA

www.emerson.com/ConnectedServices

aka.ms/emerson-valve

aka.ms/emerson-steamtraps



The Emerson Plantweb<sup>™</sup> digital ecosystem is a scalable portfolio of technologies, software, and services that harnesses the power of industrial IoT (IIoT) to improve plant and equipment operations, strengthen decisionmaking, and institutionalize best practices.

Emerson Connected Services, a core component of the Emerson Plantweb™ ecosystem, pairs customers with Emerson experts who utilize analytics and Azure technologies to assess and interpret data from equipment and processes and provide insights to improve the reliability, safety, performance, and profitability of operations.

Several Connected Services are available:

Connected Services: Valve Condition Monitoring continuously and remotely monitors valves and actuators in process plants, gathers predictive data, generates actionable insights, and uses trend analysis to predict failures and reduce downtime.

**Connected Services: Steam Trap Monitoring** uses wireless acoustic transmitters to remotely monitor steam traps and help organizations assess performance, identify energy savings, and prioritize repairs and maintenance.

## Happiest Minds Technologies Pvt Ltd

### India

aka.ms/HappiestMinds-IoTsolution



## HCL

Noida

India

aka.ms/HCL-OEEAnalytics



## EQL

Taipei

Taiwan

https://www.eqltech.com/index.php/ en/platform-en/platform-eqlink-en



EQLink offers an end-to-end IoT solution from edge devices, to cloud, to application. The platform works with multiple types of architectures and business models enabling manufacturers of consumer products to deliver the state-of-the-art 'smart' products and services their customers want and need. Integration with Microsoft Azure provides the flexibility and reliability necessary to bring products to market faster and more affordably.



IoT Platform Development helps enterprises in many verticals adopt custom business-transforming Internet of Things platforms. Our IoT platform development is built on the secure Azure cloud and can be adapted to any enterprise system's monitoring needs.

The Overall Equipment Effectiveness (OEE) Analytics solution helps develop insights into improving manufacturing productivity and improving equipment health. The solution enables real-time monitoring of plant efficiency along with generating insights around asset performance management, downtime analytics, and in-premise tracking of asset movement along with external factor analytics.



## **Hitachi Solutions**

Tokyo

Japan

aka.ms/Hitachi-OptimizedFactory

aka.ms/hitachi-iothub

https://us.hitachi-solutions.com/ products/iot-work-safety/

aka.ms/Hitachi-IoTServiceHub

Hitachi Solutions

Optimized Factory improves operating efficiencies by using a costeffective, scalable IoT platform that enables data-driven decision making and continuous process improvements. To compete globally, manufacturers must improve operational efficiency, on-time delivery rates, product quality and manufacturing flexibility. The solution, built in Azure, aggregates OT, IT, and IoT data and uses predictive analytics and machine-learning methods to provide actionable insights to drive continuous improvement.

Hitachi Solutions IoT Service Hub enables service teams who manage industrial equipment to transform and maximize their operational efficiencies and reduce maintenance costs by using predictive analytics to pinpoint equipment issues and potential failures, and then initiate necessary corrective actions or repairs. Built on the Azure cloud, the turnkey platform provides the extensibility, scalability, security, analytics, and reporting capabilities to automate their service delivery now and into the future.

Hitachi Solutions IoT Service Hub for Worker Safety is an end-to-end, cloud-based solution that helps protect workers' well-being and ensure the safety of equipment and work environments by gathering data-at-the-edge, then using artificial intelligence to provide real-time visibility, actionable insights, and alerts when safety and environmental parameters are exceeded.

Hitachi Solutions IoT Service Hub provides a quick, easy, and low-risk way for manufacturing and industrial clients to build robust and scalable IoT solutions that transform operational efficiencies, reduce costs, increase worker safety, and create new revenue streams. Built on the Azure cloud and other proven Microsoft technologies, the turnkey IoT platform leverages predictive analytics, AI, and machine learning to automatically pinpoint anomalies and potential failures and initiative corrective actions designed to avoid and minimize impact.

### ICT

Barendrecht

Netherlands

www.orangenxt.com/solutions/connxt

ICT<sup>¬</sup>

conNXT bundles IoT software, communication infrastructure, data analytics, and business apps into a single end-to-end platform that makes it easy, fast, and affordable to digitally transform companies. Based on the Microsoft Azure IoT Suite, conNXT lets users quickly connect devices and collect information so they can better control their businesses with predictive services and optimize operations by ensuring efficiency and productivity.

## M&M Software GmbH

St. Georgen

Germany

WAGO Cloud Data Control helps OEMs optimize asset management and provide value added services with an end-to-end monitoring solution that records equipment sensor data and sends it to the cloud, where KPIs, analytics, and actionable insights can be accessed anytime, from anywhere.

aka.ms/wago-datacontrol



### Mariner

Charlotte, NC

USA

https://www.mariner-usa.com/ manufacturing/



Solutions: **Spyglass Connected Factory Spyglass Connected Product Spyglass Visual Inspection** 

## Hydro-Dover

Cincinnati, OH

USA

https://hydrosystemsco.com



Hydro Connect is an end-to-end IoT solution from Dover that gives chemical providers and their end users, like industrial laundries, increased visibility into their operations with actionable insights. The solution keeps systems running smoothly, with less expensive downtime, and with better results.



Mariner Spyglass Connected Factory Visual Inspection enables manufacturers to improve product quality while significantly reducing the costs associated with manufacturing flaws. Harnessing the power of image recognition, industrial internet of things (IIoT), and artificial intelligence (AI), the solution quickly and accurately detects product defects at every stage of the manufacturing process. There are platforms for large enterprises and small manufacturers, and all offer robust analytics tools that help determine the root cause of product flaws.



### Mentor

### Wilsonville, OR

USA

https://www.mentor.com/embeddedsoftware/linux/

Menlor

Mentor **Embedded Linux** helps embedded device manufacturers reduce time to market and simplify IoT development with two industry-leading, commercially supported, embedded Linux solutions, the Yocto Project-based Mentor Embedded Linux Flex OS and the Mentor Embedded Linux Omni OS, based on Debian. Both solutions are integrated with Azure IoT Edge using the Mentor Embedded IoT Framework (MEIF), enabling secure IoT device connectivity and management that easily scales from microcontrollers (MCUs) up to multicore application processors, and across processor architectures including Arm® and x86.

### MILL5

Boston, MA

USA

www.mill5.com



The Internet of Things (IoT) creates opportunities for growth and expansion up and down the value chain for our customers. At MILL5, we use **IoT on the** Edge for Manufacturing to partner with our manufacturing clients and look across their overall business to identify key indicators of a poor customer experience, trapped excess margin or untapped data that can become the baseline for transformation.

## **Neal Analytics**

### Bellevue, WA

USA

https://nealanalytics.com/solutions/ manufacturing/



prioritization

### Neudesic

Irvine, CA USA https://www.neudesic.com/

**() NEUDESIC** 

Neudesic helps organizations speed adoption and reduce development costs with cross-platform, intelligent mobile applications that leverage augmented reality (AR). Mobile Application with Augmented Reality (AR) and Xamarin - Proof of Concept uses the full suite of Microsoft tools. We build mobile applications that meet clients' exact specifications, while delivering native performance and superior experiences with the power of AR. We work with our clients to identify and build proofs of concept, usually within one or two weeks.

## Mesh Systems

Carmel, IN

USA

https://mesh-systems.com/

### **MESH**SYSTEMS<sup>™</sup>

Mesh Systems SensorSync is an IoT solution that simplifies connecting remote assets or assets in motion, gathering performance data in real time, and generating meaningful insights. With SensorSync, enterprises of all sizes can capture data at-the-edge, transfer it securely through cellular networks, and leverage the power of Azure IoT Central to guickly connect and easily manage their assets and business systems. A key advantage is the ability to connect devices at any scale without having to worry about infrastructure or security.

MESHVista® is a cloud-based component platform that helps customers unlock digital data stored in heterogeneous devices. MESHVista supports single node or multi-node local area networks and interfaces to these LANs via wired or cellular channel access. This in turn allows companies to make informed decisions, improve operating efficiency, enhance customer service, and drive new revenue streams.

The Connected Rental Equipment solution by Mesh Systems is a simple, enterprise-grade IoT solution that uses cellular networks to connect rental fleet equipment; obtain location, power, asset health, and environmental status of individual machines in real time; and generate meaningful insights. The solution can be deployed quickly with little to no custom development to extract intelligence from a wide range of new or existing assets, from generators or air conditioning units to towable tower lighting or boom lifts.

Mesh Systems Connected Heavy Equipment solution uses cellular networks to continuously connect portable, heavy equipment or high-value assets; obtain location and performance data in real time; and generate meaningful insights. Leveraging Azure IoT Central, the solution can be deployed quickly with little to no custom development to extract intelligence from newly manufactured or existing assets from cranes, forklifts, and commercial lawnmaintenance equipment to portable HVAC units or towable lighting.



Neal Analytics **Predictive Maintenance** solution helps industrial companies reduce production downtime, improve productivity and increase quality. Using advanced data analysis, artificial intelligence algorithms, and IoT technologies built on the Microsoft Azure platform, the solution monitors manufacturing equipment in real time and tracks its full lifecycle from installation to maintenance, upgrades, and repairs. It enables effective predictive maintenance, real-time incident response and operator tasks



## **NEXCOM**

### Taipei

Taiwan

aka.ms/nexcom-cloudscada



The NEXCOM iAT2000 CloudSCADA integrates critical hardware and software components to simplify expanding the functionality of factory- and process-based CNC machines, robotic, and PLC equipment by extending their control, monitoring, and dashboard capabilities into the Azure Cloud. Additionally, the solution generates operational intelligence and insights designed to increase efficiencies, improve organizational collaboration, and reduce costs.

## **Progress Software Corporation**

Bedford, MA

USA

https://www.progress.com/datarpm

**Progress**<sup>®</sup>

Progress DataRPM is the first Industrial IoT (IIoT) self-service solution for Anomaly Detection and Prediction, using Cognitive Machine Learning. With the explosive flood of data coming from connected sensors on industrial equipment, asset-intensive organizations have a tremendous opportunity to optimize output, increase overall equipment effectiveness, and prevent costly failures. DataRPM allows companies to load their data securely onto a private Azure cloud instance, detect equipment anomalies, and dramatically reduce unplanned downtime and unscheduled maintenance.

## Niteo

Sao Paulo

Brazil

https://niteo.com.br/niteo-apps/

Niteo Analytics for Smart Factory is a fully customizable artificial intelligence (AI) and machine learning (ML) solution that processes realtime data from IoT sensors for energy usage analysis in manufacturing environments. Leveraging key Azure services to make energy consumption data available in real time, the solution enables businesses to optimize their energy consumption, make more accurate predictions about energy usage, and improve production KPIs.

## PTC

Boston, MA

USA

capture

https://www.ptc.com/en/products/ augmented-reality/vuforia-expert-

https://www.ptc.com/en/products/ iiot/thingworx-platform







## **OSIsoft**, LLC

San Leandro, CA

USA

### https://www.osisoft.com/pi-system/



### **OSIsoft PI System on Azure – Industrial IOT analytics deployed in Azure** laaS

Businesses need insight into the past, to make informed decisions today, that positively influence tomorrow. OSIsoft PI System on Azure creates realtime data and event infrastructure that connects the right people with the right information at the right time, so they can analyze, collaborate and act. Together, OSIsoft and Microsoft offer enterprise manufactures and utilities a secure, highly scalable, real-time data and events infrastructure that can dynamically support ongoing business needs on a trusted platform used by 90% of the manufacturing industry.



### **Vuforia and ThingWorx**

As a global software company, PTC unleashes industrial innovation with award-winning, market-proven solutions that enable companies to differentiate their products and services, improve operational excellence, and increase workforce productivity. Industrial AR connects users across digital and physical worlds. With Vuforia, you can change more than just products, operations and services—you'll transform your business.

Vuforia Studio unleashes the power of the Microsoft HoloLens in the industrial enterprise with built-in support for gestures and voice commands.

Vuforia Expert Capture is the fastest and easiest way to create powerful, location-specific augmented reality guidance for frontline workers.

ThingWorx is a robust industrial IoT platform that includes technologies and tools to rapidly develop, deploy and extend apps and augmented reality, eliminates complex connectivity and programming, and speeds time to market for Azure deployments.



## **Rockwell Automation, Inc.**

Milwaukee, WI

USA

aka.ms/Rockwell-APM

aka.ms/Rockwell-FactoryTalkAnalytics

aka.ms/Rockwell-FactoryTalkAnalyticsForDevices



Rockwell Automation's Industrial Asset Management services can help you get the most from your operations, proactively address downtime issues, and manage risks by leveraging the power, scale, and security of Azure.

Asset Performance Management (APM) provides a cost-effective and scalable approach to monitor asset performance remotely from any device, gain real-time insights and historical analysis, and add predictive capabilities.

The **FactoryTalk Analytics** platform enables scalable analytics and can ingest data from a variety of data types. It also enables capabilities like self-service machine learning and data mash-ups for collaborative data analysis.

**FactoryTalk Analytics for Devices** is an industrial information appliance that can quickly deliver health and diagnostics from your devices to help you identify and reduce operational and maintenance issues.

### **SB** Technology

### Minato-ku

Japan

https://www.softbanktech.co.jp/ service/list/azure-iot/iot-coreconnect/



## Saviant Consulting

Portsmouth, RI

USA

**Fleet Management** enables organizations to track, monitor, and manage their fleet of vehicles in real time. This IoT solution is backed by Azure-based Fleet Analytics engine that provides deep insights into driver performance, fuel usage trends, real-time vehicle tracking and predictive maintenance of vehicles. These insights help in overall improvement of operational efficiency, thereby maximizing business outcomes.

### aka.ms/Saviant-FleetManagement

saviant

Intelligent Solutions

fuel usage t vehicles. T thereby m

## SaaSplaza Nederland B.V.

### Badhoevedorp

Netherlands

https://www.saasplaza.com/dynamicsax

https://www.saasplaza.com/dynamicsnav-azure



Exceed your Azure consumption goals with this premium workload called **Dynamics AX Azure Migration and Management**. By moving an existing AX application to Microsoft Azure, customers can benefit from the flexibility, reliability, and scalability that this enterprise-ready cloud provides. Backed by the industry-leading security and compliance of Azure, customers can rest assured of the safety of their data. Azure also supports customers who have hybrid deployment requirements, enabling them to move workloads between their own data centers, partner data centers and Azure.

By moving existing Dynamics NAV application or deploying new Dynamics NAV on Azure, customers can benefit from the flexibility, reliability, and scalability an enterprise-ready cloud provides. SaaSplaza has simple automation tools, **NAV Azure Migration and Management**, that makes it easy to set up and deploy NAV + Office 365, Microsoft CSP Services and any ISV or vertical specific solution. SaaSplaza Dynamics NAV on Azure is available rapidly—without long, complicated deployments, or the need to add additional connections, hardware or infrastructure.

## Schneider Electric

Rueil-Malmaison

France

https://ecostruxureit.com



Schneider Electric's **EcoStruxure IT Expert** is a cloud-based Datacenter Infrastructure Management (DCIM) solution which simplifies the way IT professionals optimize infrastructure performance and mitigate risk, by providing a secure, vendor agnostic solution that enables wherever-you-go centralized monitoring and visibility, analytics, and alarm consolidation for your distributed IT edge environment.



**IOT Core Connect** supports the commercialization of IoT by manufacturers and companies that provide B2B services by providing the services necessary to easily manage things, data and people. The solution includes basic functions that support one-stop management of IoT devices, management and visualization of collected data, and business-specific template, such as for field service and over-the-air (OTA) updates. Note: This application is available only in Japanese.



### **Seeq Corporation**

Seattle, WA

USA

https://www.seeq.com/



Seeq® SaaS is an advanced analytics solution for process manufacturing organizations to rapidly investigate and share insights. With Seeq, you can collaborate, analyze and publish insights from historians, IIoT platforms, and cloud data sources. By leveraging recent innovations in big data and machine learning technologies, Seeg makes any type of analytics faster. The result is shorter times between analysis, decision making, and impact, plus predictive analytics to address issues before they occur. And Seeq's publishing features enable employees to access the insights they need to deliver continuous improvements in quality, yield, and asset availability metrics.

## **Stratus Innovation Group**

Albany, OH

USA

https://stratusinnovations.com/ intelligent-factory



# replacement.

## **Siemens AG**

Munich

Germany

aka.ms/Siemens-MindSphere

### SIEMENS

MindSphere is a powerful cloud-based, open IoT operating system from Siemens that connects your products, plants, systems, and machines, enabling you to harness the wealth of data generated by the Internet of Things (IoT) with advanced analytics. It helps customers evaluate and use their data to gain breakthrough insights, drive improved performance, and optimize assets.

## Symphony AI

Los Altos, CA

USA

### https://www.symphonyai.com/



## Softweb

### Elgin, IL

USA

https://www.iotconnect.io/smart-iotconnected-worker-solutions.html

https://www.iotconnect.io/industrialautomation-solutions.html

https://www.iotconnect.io/remoteasset-monitoring-solutions.html

softweb: solutions Softweb Solutions is an Avnet company delivering best-of-breed AI software for IoT applications, along with providing data services and digital transformation to enterprises.

We help enterprises build and deploy IoT applications easily, quickly, and securely on a scalable IoT platform:

Softweb Smart Asset Monitoring helps organizations monitor and track assets remotely, gain insights into machine health and utilization, and apply predictive analytics to gain efficiencies and save money.

Smart Connected Worker provides real-time visibility into worker health and safety.

Softweb Smart Factory is a smart production line monitoring solution that enables manufacturers to connect multiple production lines and machines, acquire data from disparate sources, and develop remote monitoring, edge analytics, and predictive maintenance capabilities.

## TwinThread

Charlottesville, VA

USA

https://www.twinthread.com/



TwinThread is the first per-asset subscription service designed to open the doors to peak performance in all your equipment through the IoT, digital twins, and the power of advanced machine learning. It helps you isolate, replicate, and scale peak performance. By continuously monitoring your equipment and automatically identifying opportunities, a TwinThread subscription fully optimizes your most critical asset - your expertise - in your equipment and your industry.



With the Azure-based Intelligent Factory Solution from Stratus Innovations Group, which includes the built-in IoT Protocol Gateway Adapter, manufacturers can achieve a fully integrated IoT ecosystem that easily connects legacy devices and generates deep insights, enabling them to maximize quality, efficiency and output; predict device issues and perform preventive maintenance; and proactively manage machine loss and

Using a growing library of equipment and process templates (pre-packaged analytics) that accelerate implementation and time to market, Symphony Industrial AI solutions (such as Asset 360 AI) are focused on accelerating time to value through a scalable data and AI platform, with pre-built industry templates delivered through an SaaS model on Microsoft Azure. Asset 360 AI is a pre-packaged solution for asset performance intelligence and operations. Symphony Industrial AI focuses on using operations data (time-series, static, transactional, etc.) to enable and enhance our customers' performance management and operational excellence initiatives.



### **VMware**

### Palo Alto, CA

USA

### www.vmware.com/solutions/iot

**M**ware<sup>®</sup>

VMware Pulse IoT Center, Liota ("Little Internet of Things Agent") and supporting the software development kit (SDK) monitor, manage, and secure IoT infrastructures at scale. The solution extends from the edge to the cloud, managing and delivering software, firmware, and operating system updates and configurations for IoT gateways and infrastructure. Pulse IoT Center manages the software lifecycle on IoT devices with updates, patches, and new software functions/features delivered over the air. Liota is the agent that runs on the gateway or other IoT devices and provides the mechanism for connecting and routing data from edge devices back to the Pulse console/ control software.

### **WearHealth**

### Bremen

Germany

Connected Smartwatch for Fall Detection: aka.ms/wearhealth-falldetection

Connected 3D Camera for Ergonomics: aka.ms/wearhealth-3dcamera

Connected Smart Shirt for Stress Level, Fatigue and Fall Detection: aka.ms/wearhealth-fatique

Connected Smart Shirt for Stress Level, Fatigue and Fall Detection - Worker Safety Solution: aka.ms/wearhealth-smartshirt



The WearHeath Safety and Health Intelligence platform captures data from workers' wearables and IoT devices then uses artificial intelligence to generate actionable insights to improve employees' health, safety, and job performance, proactively identify workplace risks, and speed up responses to accidents and emergencies. WearHealth leverages the Azure Cloud to provide the storage, compute, and analytics to apply their proprietary machine and deep learning algorithms.

## **Advantech**

### Taipei

Taiwan

aka.ms/Advantech-WzzardColdChain

aka.ms/Advantech-WzzardMachineHealth

aka.ms/Advantech-DeviceOn

aka.ms/Advantech-EquipmentEdge

aka.ms/Advantech-WisePaaSEdgelink





Advantech collaborates with partners to provide complete solutions for a wide array of applications across a diverse range of industries, including smart cities and IoT solutions:

The Wzzard Mesh Cold Chain Refrigeration Monitoring Kit ensures the quality of temperature-sensitive goods, prevents waste and expensive losses, and supports regulatory compliance through refrigeration monitoring.

The Wzzard Mesh Machine Health Condition-based Monitoring Kit monitors the temperature and vibration of motors or bearings in rotating machinery and equipment to enable predictive maintenance plans, reduce equipment downtime and lower energy and maintenance costs.

DeviceOn makes it easy to onboard, monitor, operate, manage, and update IoT devices remotely at scale—from a single console—simplifying operations and reducing downtime.

**Equipment Edge** is a ready-to-use IoT management solution that enables manufacturers to view, manage, analyze, and visualize all their IoT device data in a single, consolidated way-regardless of device type or protocol.

WISE-PaaS/EdgeLink middleware integrates data from third-party vendors and sends field data from the edge to the cloud to monitor critical assets, helping optimize production output, raise service levels, and lower costs.



## Agilysys, Inc

### Alpharetta, GA

USA

aka.ms/Agilysys-rGuest

Agilysys.

**rGuest® Buy Kiosk** is a cloud-based point-of-sale solution that can be used in a variety of food and beverage locations to enable guests to browse meal and menu options, place orders, make payments, and participate in loyalty programs. The solution leverages the Agilysys InfoGenesis POS software and the Agilysys rGuest Pay payment solution. As a result, it speeds transaction processing, integrates with back-office technologies, provides a scalable architecture for adding other hardware, and increases customer satisfaction and loyalty.

Agilysys rGuest Buy Kiosk integrates with the following Azure services: Azure API Manager – Publish, manage, and secure kiosk management APIs

Azure VM with MongoDB – Optimizes using MongoDB across Azure VMs

### **Avnet**

Phoenix, AZ

USA

aka.ms/avnet-iot



campaig patterns.

Avnet **Guardian** is a wireless edge "guardian" module that uses Azure Sphere to deliver highly secure, end-to-end connectivity to existing devices, enabling quick-service restaurants to realize the benefits of IoT—such as predictive maintenance, reduced labor costs, improved food safety, and greater agility—without compromising security. Avnet Guardian also integrates with Avnet's IoTConnect, a secure, cloud-based platform and a portfolio of smart, industry-specific connectivity solutions that businesses can use to quickly build innovative IoT solutions and gain real-time data insights.

## Amadeus

### Madrid

Spain

https://amadeus.com/en/industries/ hospitality/property-management

**a**Madeus

Deliver exceptional, personalized guest experiences with the industryleading **Amadeus property management** solutions. Our secure, scalable cloud-native, above-property technology offers streamlined integration with third-party systems, innovative pricing models and the ability to respond rapidly to market shifts and new business opportunities. Amadeus Orange Box, which acts as a hardware gateway between property based systems and the PMS Subscription Product in the Cloud.

Amadeus Property Management System

Amadeus Orange Box

## **Brillio Technologies**

Santa Clara, CA

USA

https://www.brillio.com/alliances/ microsoft/

brillio

## Arrow

Centennial, CO

USA

https://www.fiveyearsout.com/v/ internet-of-things



Arrow **WonderStore** is an IoT-based visitor data collection platform built to help enterprises collect data about the characteristics and behavior of visitors to their brick-and-mortar retail stores—and generate actionable insights to help businesses understand their customers, improve customer experiences, and grow their business. The system relies on data gathered by IoT sensors about the shopping environment, store visitors, and their behaviors. Sensor data are aggregated in a gateway and leverages Microsoft Azure to generate insights into visitor experiences and predict customer behaviors.



Avnet **IoTConnect Platform and Smart Retail Solution**, built on Microsoft Azure, helps retailers engage shoppers who are in or near the store with personalized offers that help drive store traffic and sales. Online dashboards and rich analytics allow users to create highly targeted, interactive marketing campaigns and gain valuable insight into shopper traffic and behavior

**Brillio Shelf Scanner™ for CPG** is an image analytics and artificial intelligence mobile-based solution to help retail sales associates and brand teams audit shelves, analyze findings, and recommend actions to reduce manual shelf audit programs that are time-consuming and prone to errors.



## Codit

### Ghent

Belgium

https://www.codit.eu/en/solutons/ nebulus-iot-gateway/

https://www.codit.eu/en/

codit

The Nebulus Connectivity Suite is a scalable IoT solution built on Azure IoT Edge that quickly and securely retrofits equipment with cloud connectivity, enabling manufacturers to create new business value using their existing capital investments. Because it is software-based, the Nebulus Connectivity Suite works with a variety of hardware-based gateways. It can also be combined with Codit's custom analytics solutions, based on Azure services, to enable real-time insights and machine learning.

Codit Track & Trace for Retail, powered by Microsoft Azure, uses IoT and blockchain technology to provide end-to-end traceability across the entire food supply chain, from farmers and food manufacturers, to transport companies and retailers. Track & Trace for Retail is a customizable, scalable solution that provides one, shared, immutable view of the fresh goods chain, helping businesses establish accountability, improve efficiency and ensure product quality.

## **Hitachi Solutions**

### Tokyo

Japan

aka.ms/Hitachi-RetailEdge aka.ms/Hitachi-RestaurantPOS

Hitachi Solutions

Food and Beverage POS helps restaurants manage and track all aspects of food creation and service - from cooking the meal to processing the customer's payment.

## L Squared

Austin, TX

USA

www.LSquared.com





Montreal, Quebec

Canada

aka.ms/genetic-retail

### Genetec

Genetec Solutions for Retail enable retailers of all sizes to efficiently unify and manage their current and future security and safety systems from a single, highly scalable, IP-based platform, which supports video surveillance, collaborative decision-making, digital evidence management, and automatic license plate recognition. Leveraging Microsoft Azure, the platform supports cloud-based storage, mobile access, data analytics, visualization, and other evolving technologies.

## HARMAN

### Stamford, CT

USA

https://services.harman.com/ solutions/internet-of-things



HARMAN Smart Cooler is a comprehensive monitoring and analytics solution that uses intelligent sensors, an IoT gateway, and Microsoft Azure cloud-based monitoring services to transform existing, standard coolers into secure, smart devices with real-time, remote monitoring of key metrics such as humidity, temperature, usage patterns, purity, and planogram compliance. The solution enables consumer packaged goods (CPG), retail, beverage, bottling, and other food services companies to more efficiently manage and scale operations, maximize asset lifecycles, and better understand customer behaviors that drive sales



Hitachi offers state of the art IoT solutions to keep both retail and hospitality operations running efficiently and securely.

Retail Edge is installed on existing retail store shelving that delivers an online experience and drives efficiencies through automation. It enables automated pricing, beacons, cameras, ambient lighting, out-of-stock indicators and environmental monitoring.

Hosted on Microsoft Azure and utilizing Windows 10 IoT, L Squared Hub improves corporate culture and reduces information overload by securely streaming the "right communications," to the "right people," at the "right time" by simplifying the creation, update and broadcast of relevant, engaging, and dynamic content on TVs across businesses and organizations.



### MeldCX

### Melbourne

Australia

### www.meldcx.com/features/

meld

The **meldCX IoT Platform** speeds up the development, deployment, and management of commercial IoT devices. After developing on a meldCX stack, apps will run on any major operating system - even if the OS is later updated or a new one introduced. The meldCX platform is extensible, enabling developers to build their own custom tools and making it faster and easier to scale up. The meldCX web-based dashboards can remotely control everything from scheduling and configuring multiple apps to receiving in-depth analytics and device health data from the mCloud. The platform also makes it quick and simple to securely install, schedule, and manage applications.

The meldCX IoT Platform for Integrated Software Vendors (ISVs) enables ISVs to more quickly, easily, and profitably grow their businesses with rapid zero-touch deployment and maintenance, standardization, and faster, better testing.

The meldCX IoT Platform for **Retail** makes it simpler and more cost-effective for retailers to develop, deploy, and manage applications and IoT solutions for connected devices such as interactive kiosks, digital signs, and smart point-of-sale (POS) systems.

The meldCX IoT Platform for **Hospitality** provides the buildings blocks for hotels, restaurants, and other hospitality businesses to develop, deploy, and manage applications and IoT solutions

### Mindtree Ltd

Bengaluru, Karnataka, India and Warren, NJ, USA

aka.ms/Mindtree-Flooresense



## **NEC Corporation of America**

Irving,	TX		
USA			
		_	

aka.ms/NEC-NeoFaceWelcomeSuite

NEC

NEC's NeoFace Welcome Suite empowers customers to replace ageing manual visitor registration processes with a modern digital solution that leverages facial recognition to provide a personalized experience and improve business efficiency. NeoFace Welcome can facilitate many types of customer interactions including registration, visitor management, VIP identification, order placement, payment, and facility access. There are significant benefits for operators, including greater streamlining with repeat customer interactions and more efficient use of staff. Another advantage of NeoFace Welcome is its ability to integrate with CRM and POS systems. NeoFace Welcome is built to use Azure services or can run on-premises. Advanced analytics of visitor metrics using PowerBI are optional.

## MJI

Tokyo

Japan

www.mjirobotics.co.jp/en/



The Tapia hospitality solution provides a smart communication robot that engages hotel guests and connects with hotel systems to provide in-room concierge services, enabling guests to remotely control the television, room temperature and interior lighting, and receive recommendations for restaurants and local attractions by speaking to Tapia in a variety of languages. The Tapia hospitality solution can help hotels increase efficiency, reduce labor and operational costs, and improve customer service.

### Netwoven Inc.

Milpitas, CA

USA

www.netwoven.com



Introducing Netwoven Employee Intranet Portal, a turnkey approach that allows you to set up an intranet in Office 365 with an accelerated out-of-thebox deployment. According to Gartner, 40% of intranet projects fail to get adequate adoption to achieve ROI. And 10% to 15% of initiatives are scrapped altogether. Remove the hassle, project and expense of doing it yourself. The Netwoven Employee Intranet Portal provides a fast, agile solution tailored to your business.



Flooresense is a real time, intelligent analytics solution. It understands and translates visitor behavior into rich actionable insights to maximize conversion and revenue. It uses patented video analytics and purchase-intent learning algorithms that work with multisensory data feeds to identify highpotential shoppers. To improve conversion rates, Flooresense delivers realtime alerts to sales associates' mobile devices and guides the appropriate store associate to a shopper who is likely to become a customer if given the necessary assistance. These and other insights lead to optimized operations and enhanced customer experiences, which result in increased revenue.



### **NexCOBOT**

### Fremont, CA

USA

Pune

India

analytics/

Nihilent

https://www.nexcobot.com/smartretail-solution

Nihilent Technologies, Inc

**NEXCOBOT** 

The NexCOBOT NexStore Smart Self-Checkout solution, designed for interactive signage applications, uses facial recognition and Microsoft Azure object detection to help customers save time during the checkout process and free retail personnel to focus their energy elsewhere in the retail store, assisting customers or elevating the customer service. Object detection identifies the product and retrieves the product description and price from the POS database to complete self-checkout. The system then searches for the face record in the database. Once matched, the user receives a personalized welcome message.

At Nihilent we partner with organizations to improve their Warranty

Management performance with SightN2<sup>™</sup> for Warranty Analytics. This

ground-breaking, pre-built solution optimizes warranty claims analysis using

a patented Control Chart Automation Process. We can help you deliver real-

improve cost management, profitability and customer satisfaction. SightN2™

time analysis and expanded insights customized to your organization that

for Warranty Analytics solution automatically ingests the heterogeneous

claims data from disparate sources to aggregate and analyse trends in

warranty claims and processing.

## Thingscare

### Seoul

South Korea

http://www.thingscare.com/?page\_ id=491

**B**thingscare

## Plexure

Auckland

New Zealand

### www.plexure.com





## **TechData**

Clearwater, FL, USA (TechData)

https://nihilent.com/warranty-

Barcelona, Spain (Keonn)

www.keonn.com

"D Tech Data" () keonn

Tech Data offers Keonn RFID-based hardware and software solutions to improve retail customers' experiences and boost retail sales using a flexible, scalable IoT platform:

Keonn Intelligent Inventory Management from TechData provides a single, end-to-end inventory management system to lower operational costs and increase efficiencies.

Keonn Interactive Product Recommendation solutions from Tech Data is a complete, seamless retail store platform that uses interactive screens, mobile devices, data analytics and self-checkout to enhance the customer experience and increase conversion rates and sales.

## **Saviant Consulting**

Portsmouth, RI

USA

https://www.saviantconsulting.com/ logistics.aspx



Saviant's Supply Chain Management Solution can help to deliver highquality food items using 500+ IoT connected mobile devices to serve over 30,000 customers and deal with over 60,000 orders per month, processing 2.5 million events per day, and 1.5 million mobile transactions per month. The solution addresses scenarios such as Remote Monitoring, Real-time Operational Intelligence, Real-time Asset Monitoring etc. The solution provides real-time visibility of supply chain, enabling highly efficient operations and increased customer service quality. The field service mobile app works in both online and offline mode and displays data on the fly, providing valuable insights on real-time data. It creates an efficient and automated mobile workforce that delivers high-quality goods on time and collects payments with accuracy, heightening customer satisfaction.



TRA (Thingscare Remote Access) is a web-based tool for remotely monitoring the status of kiosks, vending machines, digital signage and IoT devices, and gathering data to proactively pinpoint issues and detect anomalies to minimize unplanned downtime. The solution supports Windows and Linux platforms, enables remote control, such as updating settings, and generates alarms and alert when issues are detected.

Plexure Mobile Customer Engagement Platform powers customer engagement. It provides customer and contextual data, and the insights customers need to create next-level marketing. Global brands use Plexure to engage customer on mobile devices and drive them to their stores with personalized offers and smart marketing campaigns based on artificial intelligence and machine learning. Plexure makes the sales process for physical retailers seamless, engaging and profitable by identifying where customers are, what they want, and then facilitating their purchases. Plexure's software platform integrates with operational systems to remove friction and create a seamless purchase experience for consumers. Brands that use Plexure experience an increase in customer numbers and visit frequency, higher average transaction values, larger share of wallet and improved customer satisfaction scores.



### **Stratuscent**

### Montreal, Quebec

Canada

https://stratuscent.com/

STRATUSCENT

Stratuscent delivers business intelligence using a breakthrough electronic "nose" that detects and digitizes everyday scents. The company's innovative end-to-end solution combines unique chemical sensors with artificial intelligence (AI) and a simple user interface where customers can see chemical fingerprints of their products in real time. Customer engagements include applications where scent-based detection, analysis, and digital metrics can be used to make intelligent decisions for yield enhancement, and quality control.

## **Avigilon Blue**

Vancouver, BC

Canada

https://connect.blue.avigilon.com

**AVIGILON BLUE** 

Avigilon Blue is a cloud-based video surveillance and security platform. It offers a plug-and play solution that works with almost any camera, so businesses can self-monitor their physical sites. In addition, video analytics and automated notifications highlight suspicious activities on properties. A mobile app enables users to access this information on any device. Avigilon partners and customers can also remotely diagnose and troubleshoot certain issues by viewing the status of cameras and hardware and acting on reported health notifications.

## Xogo

Seattle, WA

USA

www.xogo.io



XOGO Decision Signage enables customers to easily and affordably turn any Windows 10 device into an interactive digital sign that can be securely managed with a PC, tablet or smartphone. Setting up signs takes only a few minutes, then control them and the associated playlists from a PC, tablet or smartphone. Choose between a free model and a pro model that comes with monthly and annual subscription fees.



Calgary, Alberta

Canada

https://aware360.com/



Aware360 SafetyAware is a software-as-a-service solution that helps organizations protect the health and safety of their workers. Using a mobile app, a central portal with real-time data, and response centers staffed 24/7/365 with live support, SafetyAware ensures employees get the help they need anytime, wherever they are. Powered by Microsoft Azure and designed to meet the requirements of health and safety legislation, this flexible, customizable solution helps employers simplify compliance and secure sensitive data.

## Zebra

Lincolnshire, IL

USA

aka.ms/ZebraWorkforceConnect



Workforce Connect PTT Pro cloud-based services deliver enterprise-level communications for entire workforces. The IoT-based push-to-talk (PTT) solution, part of the Workforce Connect suite of services from Zebra, allows rapid connection with another worker, less lost time waiting for calls or texts to be answered, more secure encryption for all communications, visibility into others' availability, and the means to keep a record of all communications.



Raleigh, NC

USA

www.BeSafe.net



BeSafe Technologies ActiveShield introduces a new level of safety and security management by combining its renowned digital facilities mapping with on-the-ground IoT sensor data. As a cloud-based platform, it helps security teams stay aware of every situation within their buildings in realtime, helps emergency personnel respond faster than ever, and keeps communities connected easily and affordably.







### **FootMarks**

#### Bellevue, WA

USA

#### https://www.footmarks.com/



SmartConnect is Footmarks' secure iBeacon solution that brings digital intelligence to real world surroundings. It allows consumers to connect with the places and brands they love. By placing Footmarks beacons throughout any physical location, Footmarks brings the power of contextual awareness to consumers, facilities managers, and businesses alike.

### Innodep

#### Seoul

South Korea

http://innodep.co.kr/new/eng/ product/type01.php?ckattempt=1



## Genetec

#### Genetec provides IP-based security solutions for a variety of industries: Montreal, Quebec Genetec Solution for Justice and Public Safety helps city stakeholders Canada proactively assess, prepare and respond to emergency situations in www.genetec.com/public-safety education, public utility, and other municipal areas. Genetec Security Center blends IP security systems within a single interface aka.ms/genetic-securitycenter to simplify operations, improve communication and collaboration, enhance aka.ms/genetic-autovu situational awareness, and unify command and control. aka.ms/genetic-clearance Genetec AutoVu automatic license plate recognition (ALPR) system makes it easier to locate vehicles and enforce parking restrictions. aka.ms/genetic-stratocast Genetec **Clearance** is a flexible investigation management system that allows Genetec

organizations to securely collect, share, and manage the storage of evidence from different sources.

Genetec Stratocast is a cloud-based monitoring platform that continuously runs and optimizes the internet usage of cameras located on a Local Area Network (LAN).

## **Insight Digital Innovation**

Tempe, AZ

#### USA

aka.ms/InsightConnectedSafety

Insight.

instructions.

## **Mindtree Ltd**

Bengaluru, Karnataka, India and Warren, NJ, USA

https://www.mindtree.com/ about/resources/intelligent-videosurveillance-solution



Today, surveillance is all pervasive, cutting across many different industries, and surveillance technology is transitioning from standalone and analog video to networked (IP) and digital video. Gladius Video Management Software (VMS), the intelligent video surveillance solution from Mindtree, is a comprehensive, open-platform, video surveillance solution that is ideal for small, medium and large-sized installations. Gladius is ONVIFcompliant and supports a wide range of IP cameras and encoders from leading manufacturers. This enables the system to scale up and adapt to the changing needs of the user.

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Vurix is a hybrid cloud-based video management solution targeted to the public safety and security markets. The solution aggregates data from hundreds of edge devices, such as from CCTV cameras, and uses intelligent analytics, including facial recognition, license plate recognition, geographic information systems (GIS), and big data, to generate actionable insights. The all-in-one system supports all camera types and brands and third-party analytic applications for real-time monitoring and recording,

The Insight Digital Innovation safety and alert notification system **Project** Edison improves users' situational awareness, using IoT devices, and fosters collaboration and sharing via a centralized communication hub. The open source, highly customizable platform can be used in a wide range of safety scenarios and includes a consumer app, which provide real-time information to administrators during crisis, and conversely, receive information and



## Mobiliya

Global

aka.ms/third-eye



Mobiliya **ThirdEye** is a cost-effective vision analytics system that uses machine learning to increase the efficiency of gathering operational intelligence, responding to events, and automating premises monitoring. The solution uses Azure Cognitive Services to analyze live and recorded video streams to extend the capabilities of existing camera infrastructures to detect and distinguish people, objects, license plates, activities, and much more.

## Accenture

#### Dublin Ireland

accenture

## **NEC Corporation of America**

Irving, TX

USA

aka.ms/NEC-NeoFaceReveal



NeoFace Reveal from NEC is a latent face workstation, which enables law enforcement and crime laboratory agencies to enhance poor quality latent face images, search against their mugshot repositories, and locate potential suspects. NeoFace Reveal allows authorities to match facial images against these potential suspects, ranking the database images against the probe image and providing a ranked suspect list. The solution allows operators to easily scroll through and review the list, enabling a quick assessment by skilled experts. Independent testing confirms that NeoFace Reveal provides the fastest, most accurate matching capability and is the most resistant to variants in age, race, and pose angle



aka.ms/Accenture-ConnectedCampus

#### Atlanta, GA

USA

#### aka.ms/Acuity-AtriusIoT



# geospatial analytics.

**ANS** 

#### Manchester

#### UK

https://www.ans.co.uk/

ans

## 9am

#### Beijing

China

9amtech.com



Smart Workspaces is a robust, end-to-end solution that utilizes IoT technologies, booking systems, and powerful analytics to deliver spatial and usage insights to help optimize the use of space and boost the productivity and satisfaction of workforces. With Smart Workspaces, businesses can capture occupancy and usage data in real-time, generate useful analysis, and leverage the power of Azure IoT Hub to connect and manage their dynamic workplace.

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Connected Campus helps enterprises, hotels, hospitals and other large venues improve their facility management processes. It does this by combining and integrating multiple functions into a single, integrated solution with preconfigured digital services. These include management of office space and buildings, access and security, value added services (e.g., taxis, parking), wayfinding, energy and sustainability, and health and safety.

Atrius Acuity software services provide customers with a flexible, opensource platform on which to build industry-specific solutions that solve business problems. LED lighting equipped with sensors enable this functionality and bring energy savings as well. These services, hosted in Microsoft's Azure cloud, are delivered via a set of easy-to-use APIs allowing for precise indoor positioning, optimal space utilization, and robust

The ANS Intelligent Campus solution retrofits buildings with sensors that provide real-time data on space occupancy, power consumption, and indoor environmental factors, such as temperature, humidity, and noise. Because the solution is built on an open architecture, it can be customized to help higher education institutions solve a wide variety of challenges, with the ability to expand as needs evolve. Leveraging a unique, agile engagement model and extensive experience in the higher education sector, ANS helps universities get started quickly on their digital transformation journey, empowering them to improve student retention, better utilize spaces, and reduce costs.



## Arrow

Centennial, CO

USA

https://www.arrow.com

Arrow Electronics guides innovation with products, services, and solutions for industrial and commercial organizations. With a complete technology stack—from sensor to sunset—along with a robust ecosystem, Arrow helps organizations scale efficiently and cost-effectively.

The Arrow Condition Monitoring Platform monitors the conditions of rotating machinery and equipment to help minimize downtime, reduce maintenance costs, and improve machine reliability and production.

The Arrow Energy Monitoring Kit is an integrated energy metering system that uses a combination of hardware and software to enable companies to collect, analyze, and visualize energy consumption data

#### Crestron

Rockleigh, NJ

USA

https://crestron.com/Products/ Featured-Solutions/Flex-for-Teams

aka.ms/crestron-xio



employee productivity, optimize space utilization, reduce energy usage, and make informed decisions about current and future resource needs based on real-time data gathered at the edge. The Crestron XiO Cloud helps organizations increase employee productivity, improve facility efficiencies, and strengthen decision-making by enabling them to globally provision, monitor, and manage Creston IoT-enabled devices that control room scheduling, technologies, and environment. Realtime data, gathered at the edge, provides the intelligence and actionable insights organizations need to optimize efficiencies, productivity, and decision-making

## Avnet

Phoenix, AZ

USA

aka.ms/avnet-smartbuilding

aka.ms/avnet-smartfactory

aka.ms/avnet-smartoffice

aka.ms/avnet-smartwarehouse

aka.ms/avnet-smartfacility

The Avnet IoTConnect cloud platform enables businesses to take full advantage of digital transformation by making it easier and faster to build smart applications and solutions, develop best-in-class device communications and management, and enable data-driven decisionmaking. The platform includes a set of pre-built industry and vertical-specific solutions that include IoT hardware (sensors, gateways, etc.), artificial intelligence, and data analytics to jump-start the development of IoTenabled systems and services for facilities, buildings, retail, healthcare, asset monitoring, fleet management, and connected workers. Built on Microsoft Azure, the platform connects devices, systems, and people, and uses a centralized dashboard to surface real-time data and analytics that help companies identify areas for improvement, predict future trends, and make more informed, timely decisions.

The IoTConnect platform forms the basis of infrastructure monitoring solutions, including:

Smart Building improves the efficient operation and control of building devices and systems along with detect areas for improvement, predict future trends, and identify unmet tenant/consumer demands

Smart Factory helps manufacturers optimize output, quality and consistency

Smart Office makes it simple, fast and convenient for employees to find and book meeting rooms with their smartphones from anywhere in the building

Smart Warehouse uses IoT-enabled equipment and wearables—combined with mobile apps, analytics, and the power of the cloud—to help customers boost efficiency and speed throughout your entire supply chain

Smart Facility optimizes office space use, energy, and capacity by providing everything necessary to jump-start development of IoT-enabled systems and services

### Datahoist

#### Austin, TX

#### USA

www.datahoist.com





## Genetec

Montreal, Quebec

Canada

aka.ms/genetic-synergis



The Genetec Synergis Access Control System heightens the security of organizations and increases the readiness to respond to incidents and threats, while leveraging existing network and security equipment investments. With advanced security measures and support for an ever-growing number of 3rd party access control devices, such as non-proprietary, access control modules and electronic locks, the Synergis system provides staff with the confidence to respond to physical security issues that impact people, infrastructure, and assets.



Crestron **Flex** systems provide a scalable solution to transform meeting experiences—in rooms of any size—from scheduling to enabling seamless communication and collaboration. Built on the Crestron XiO Cloud and supported by Microsoft Azure, Crestron IoT-enabled automation and control devices also support the "smart" workplace, helping organizations improve

Datahoist is the only elevator maintenance solution that provides rich, comprehensive data on the overall health of any kind of elevator. It combines IoT data for each elevator with the latest cloud-based predictive analytics and machine learning so that customers can monitor the health of elevators in real time, simplify maintenance, and dramatically lower maintenance costs.



## **HARMAN** Connected Services

Mountain View, CA,

USA

aka.ms/Harman-IoT



HARMAN'S Managed IoT Solutions encompass system integration, sensor solutions, gateway solutions, Azure solutions, connectivity, user experience, and analytics for virtually any industry that needs to monitor points of contact or pieces of machinery. The solutions harness the power of the Internet of Things to offer a complete, end-to-end service, scalable into the future.

### Honeywell

Charlotte, NC

Honeywell

USA

aka.ms/Honeywell-Pulse aka.ms/Honeywell-VectorOccupant aka.ms/Honeywell-VectorSpaceSense aka.ms/Honeywell-OB

The Honeywell Vector Occupant platform, which connects people, spaces and assets and is available for iOS and Android devices, represents the first step toward an IoT-empowered workforce, driving occupant engagement, safety, productivity, and helping boost an organization's overall brand by incorporating forward-looking, connected technology that meets the expectations of today's tech-savvy users.

Honeywell Vector Space Sense is a modern software solution that harnesses the power of IoT and data-driven analytics and enables building managers to make better decisions about underused and overused space in their offices. It reduces costs and maximizes productivity by consolidating the real estate portfolio, strengthening facility operations, and driving occupant productivity.

Building owners and facility managers are focused on outcomes like energy cost reduction and a minimum number of user complaints. But they also want bottom line benefits fast. They are requesting solutions that can help them rapidly respond to incidents, enable compliance with local standards, and improve their key performance indicators (KPI). Honeywell **Outcome** Based Service uses the growing connectivity in today's facilities to deliver greater return on investments and enhance the experience for those who visit and work inside these facilities.

### **Hewlett Packard Enterprise**

Phoenix, AZ

USA

aka.ms/HPE\_IntelligentWorkplace



The Intelligent Workplace & Facilities solution is an end-to-end offering that elevates workforce productivity, enhances employee and visitor experience, improves talent retention, optimizes space efficiency, and helps businesses manage energy costs. Intelligent Workplace & Facilities uses latest Internet-of-Things architectures to blend digital tools with physical spaces, creating a dynamic workplace that not only empowers and engages employees, but also generates actionable insights helping facility managers to optimize the use of space and map energy usage to actual workspace utilization in real-time.



Part of the Honeywell Building Solutions cloud portfolio, Honeywell Pulse uses Azure and IoT technology equips building owners and facility managers to help balance escalating security threats against tighter budgets. Faster risk detection and instant access to critical building information are crucial business drivers. Pulse connects vulnerable points in a building with a mobile app that rapidly deploys responses to real-time alerts. That in turn maximizes user experience, building efficiencies, and performance of connected buildings and facilities.



### **ICONICS**

Foxborough, MA

USA

#### https://www.iconics-uk.com/solutions/ intelligent-building-software



ICONICS **Intelligent Buildings Software** is an advanced IoT-enabled software platform that provides comprehensive monitoring, management and reporting capabilities for buildings, including space utilization, occupant wellness, identify management, room booking, digital signage, visitor management, IoT electrical vehicle charging, bike services, employee ID and boarding passes, and wayfinding. Its back-of-house functions include predictive fault detection and diagnostics (FDD), building and energy management systems, advanced alarming, connected lighting, building information modeling (BIM), fire, security, and elevator monitoring, and much more. The solution makes buildings "tenant smart," not just "engineering smart."

## **Insight Digital Innovation**

Tempe, AZ

USA

aka.ms/InsightConnectedSafety



Insight **Connected Safety** is a complete safety and alert notification system that helps companies become aware of safety concerns in their buildings and help resolve them quickly and effectively. It features a wide variety of notifications and alerts, integrates with IoT security and sensor devices along with third-party systems, and provides formalized methods of connecting people so that everyone is aware of the situation.

## Johnson Controls, Inc.

#### Cork

Ireland

aka.ms/JohnsonControls-DigitalVault

aka.ms/JohnsonControls-FalseAlarm

aka.ms/JohnsonControls-JEM

aka.ms/JohnsonControls-SmartChillers

Johnson Controls

inefficiencies to reduce energy costs. **Smart Connected Chillers** maximize chiller uptime and occupant comfort through advanced Azure-based algorithms that run 24x7. Issues are detected before they become problems.

## **KGS Buildings**

Somerville, MA

USA

www.KGSBuildings.com

**Clockworks from KGS Buildings** is an end-to-end cloud-based, facility fault detection and diagnostics (FDD) solution, which aggregates, normalizes, stores, and analyzes IoT data from building automation systems and utility metering infrastructure. Leveraging the Azure Cloud and Azure IoT Hub, it provides intelligence on facility performance and operations, prioritized and predictive maintenance needs, strategies for extending the longevity of systems, and potential cost savings.

## JLL

Chicago, IL

USA

aka.ms/JLL-IntelliCommand

**())** JLL

Real estate and facility teams are under increasing pressure to aggressively manage costs, risks and energy consumption while enabling growth and productivity. **IntelliCommand** is an innovative IoT solution that can improve efficiency and lower costs without sacrificing service levels or taking on more risk. It provides real-time monitoring and building optimization to identify trends, patterns, and anomalies that often go undetected. Seamless work order integration combined with our facility management expertise dramatically improves building operations and occupant satisfaction.

## Microshare Inc.

Philadelphia, PA

USA

aka.ms/Microshare-SmartFacilities

microshare\*

**Microshare Smart Facilities Management** connects, manages, and analyzes enterprise IoT sensor data. It provides detailed insight into occupancy, washroom use, and environmental factors to cut real-estate costs by 25%. Unlike other IoT solutions, Microshare Smart Facilities Management combines the output of hundreds of sensor types into a single view that can be safely shared between organizations and third parties with full data compliance.



Johnson Controls offers a variety of Azure-based IoT solutions to connect buildings with function optimization.

**Digital Vault** reaches across silos to gather data from disparate sources, store it securely, and standardize it.

**False Alarm Reduction** delivers actionable insights into security alarms and system usage, so building owners can reduce false alarms, protect assets, and decrease operational costs.

Johnson Controls Enterprise Management is a comprehensive analytical platform with cloud-based versatility. It proactively analyzes building data across your enterprise, identifying issues and faults. It also pinpoints inefficiencies to reduce energy costs.



## Mindtree Ltd

#### Bengaluru, Karnataka, India

Warren, NJ, US

#### https://www.mindtree.com/products/ connected-buildings



Gladius Connected Buildings goes beyond automation of air-conditioning and lighting systems in isolation. Capable of connecting geographically dispersed buildings, it can manage multiple building systems, including access control and video surveillance, while integrating IT systems. As a result, you can achieve energy efficiency, better asset life, cost optimization, increased occupant comfort, and centralized management. Most buildingmanagement systems, capable of operating in a lights-on mode, are inflexible when it comes to adding new solutions. Gladius Connected Buildings brings together mobility, cloud and the Internet of Things (IoT) to make facility management dynamic and responsive. The platform is also centralized, empowering the senior management team to get access to realtime data from a central location.

### S3 Innovate

Midview City

Singapore

www.s3innovate.com

**53 INNOVATE** 

S3 Building Insights optimizes building performance and enhances occupant experience in one platform.

Ensure User Satisfaction are always at the Optimal



## Softweb

Elgin, IL	Softweb's lo
USA	building mo and buyers. <sup>-</sup>
https://www.jotconnect.jo/	can be used

softweb:

## Soloinsight

Chicago, IL

USA

https://www.soloinsight.com/

SOLOINSIGHT

## Mobiliya

Global

aka.ms/mobiliya-energy



Mobiliya Energy Management enables organizations to optimize energy consumption, identify inefficiencies, and make informed decisions about energy usage in buildings and campuses based on data gathered at-theedge. The solution uses predictive analytics, including machine learning, to automatically make changes to energy consumption and continuously derive findings, which are accessible via their web- and mobile-based dashboards.

## RELOGIX

#### Ottawa, Ontario

Canada

https://relogix.com/

#### RELOGIX

The Relogix workspace analytics platform is a sensor-as-a-service solution that helps businesses make data-driven decisions to improve workspace effectiveness and utilization. It enables organizations to design and monitor their ideal working environment, using advanced sensors and Microsoft Azure to precisely measure how employees are using a variety of workspaces across an entire office space portfolio.

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Enhance Sustainability and Environment Impact

T-based Smart Building solution can help you make your bre energy efficient and also deliver better service to your tenants The connectivity and data generated by IoT-enabled buildings to identify and solve unmet tenant/consumer demands.

Soloinsight delivers Authentication as a Service by providing unfettered identity-based physical, virtual and logical security for enterprises and multi-tenant buildings. CloudGate features 24 different authentication options including our proprietary, patented 3D facial recognition putting customers in control of every access point in their buildings. Integrated with Microsoft Azure, customers can quickly monitor and analyze the movement of contractors, visitors, employees, customers and vehicles to provide facility security, ensure compliance and safety and reduce building expenses.



## Tonly

Huizhou, Guangdong

China

http://www.tonlyele.com/EN/

TONLY

Tonly **EXOffice** is a smart office solution that reduces office management costs, increases employee efficiency, and improves employee satisfaction. With an all-in-one platform, It integrates peripheral access devices, BLE (Bluetooth Low Energy) mesh networks, the internet, and a SaaS App including employee, asset, and environmental tracking solutions. It then delivers detailed office analytics and improved visibility into key processes, leading to improved meeting room management, enhanced hot-desking management, better asset utilizations, and expanded employee interactions.

#### **AAEON**

Taipei

Taiwan

www.aaeon.com/en/ac/intelligentstreet-lighting



networks.

## Xompass

Boulder, CO

USA

aka.ms/xompass-wildfire



Xompass Fire Surveillance uses machine learning to recognize abnormal site behavior as it relates to smoke, fire and activities. Personnel can be notified within seconds when a potential fire is detected so they can provide warnings, anywhere, at any time. Once cameras are installed within forests or other nature locations, they can be set to record images within time intervals, ranging from seconds to minutes or hours. Xompass uses a smoke and fire algorithm, which is applied to the images, and then combined with map data and weather variables, enabling Xompass to assign a risk level index for fire.

## **Advantech**

Taipei Taiwan

Advantech SRP-E2i320 Smart Street Lighting Control solution provides real-time monitoring and remote-control capabilities of streetlights and integrated environmental sensors and surveillance cameras to help cities save energy, lower costs, reduce maintenance fees, and increase vehicle and pedestrian safety.



https://www.advantech.com/srp/

Bosch

Germany

Gerlingen

https://www.bosch-iot-suite.com/

aka.ms/Bosch-WrongWayDriverWarning



Bosch IoT Suite, which includes Bosch IoT Gateway Software and Bosch IoT Remote Manager, solves the challenge of connecting almost any asset, device or thing to create transformative end-to-end IoT or machine-tomachine solutions. These technologies provide out-of-the-box support for most connectivity protocols and offer backend device management and monitoring for various classes of devices and gateways.

The Bosch Wrong-Way Driver Warning solution utilizes the cloud to detect vehicles traveling the wrong direction on roads and highways. Within seconds, it alerts and relays precise instructions (customizable by partner) to wrong-way drivers along with other motorists and possibly safety professionals in the vicinity. The solution can be used by any driver via multiple platforms - embedded, integrated, smartphone - and installed in any car by any manufacturer.



The AAEON Lighting Control System provides wireless-connected streetlights that can be remotely monitored to help reduce energy consumption and carbon emissions while increasing urban safety within municipalities. The solution uses Sub-GHz technology along with an Intelbased gateway, and multi-sensor wireless communication to connect and communicate with street lights. The system can also be customized to provide connectivity such as NB-IoT, LoRa or Sigfox to form a mix of wireless



#### Chordant (an InterDigital company)

Buffalo, NY

USA

https://www.chordant.io/



**Chordant oneTRANSPORT** is an intelligent transport solution that enables governments and enterprises to consolidate varied and disparate data feeds, while also enabling third parties to both access and contribute their data. The solution integrates transport applications that include multi-modal travel, predictive travel analytics, event management, traffic congestion, and incident management. This compelling solution is powered by Microsoft Azure cloud infrastructure, making it easy to deploy and scale across geographies and industries.

## Intercomp

Verona

Italy

http://smartparkingsystems.com/en/



With Smart Parking Systems from Intercomp, cities can increase parking revenue and decrease air pollution from the first day of installation, ensure high rotation and maximum availability of parking spaces, and provide innovative services to make everyday life easier for all city residents, including people with disabilities and users in other protected categories. Smart Parking Systems is a complete, integrated solution that enables cities to efficiently manage all activities, processes and issues related to on-street parking, including parking search and payment, installation and maintenance, violations and enforcement, and many others.

## **COPA-DATA**

Salzburg

Austria

aka.ms/copa-smartcity



For public sector organizations looking for a complete IIoT solution, **zenon** by COPA-DATA provides an open, flexible, and easy-to-use solution for Smart Cities across energy, water, public transportation, and smart buildings. With over 30 years of experience in process control, the team at COPA-DATA knows how to help cities find the balance between modernizing existing infrastructure and creating new systems.

## Genetec

Montreal, Quebec

Canada

aka.ms/genetic-community

aka.ms/genetic-citigraf



The Genetec Community Connect framework builds and strengthens ties between public and private sectors, fostering community-driven solutions that enhance public safety and livability. Built on a foundation of technology that reinforces community policing, the solution allows members of a community to participate and work towards common goals such as public safety, economic growth and operational efficiency. For example, it enables private businesses to share their security video with the police, aiding in public safety efforts and improving quality of city life

## Crate.io

#### San Francisco, CA

USA

https://crate.io/products/cratedb/



CrateDB for Azure IoT is a distributed SQL database purpose-built to handle the scale and complexity of industrial use cases, making it easy and economical to analyze and act on enormous amounts of industrial time series data in real time. It can simultaneously process complex sensor and metadata in real time and has unlimited scaling and10x better price-performance than other time series databases, such as InfluxDB. The solution complements and extends Azure Time Series Insights when dealing with large industrial use cases. It can be deployed in the cloud or on premises.



**Genetec Citigraf** is a decision support system that unifies public safety operations, including fire and law enforcement, across city departments, improving situational awareness and the timely dissemination of information. The solution supports tapping into multiple data sources to gather intelligence, which is used to generate a comprehensive macro understanding of situations in-progress, and foster coordination across safety organizations and responders. The Citigraf correlation engine also derives intelligence from trends and correlated historical and live data.



## Hewlett Packard Enterprise, Aruba, Meylah

#### HPE in Phoenix, AZ

USA

www.hpe.com www.arubanetworks.com www.meylah.com

meylah

Hewlett Packard Enterprise



Developed in co-partnership with Hewlett Packard Enterprise (HPE), Meylah, Aruba, and Microsoft, Smart City Tourism helps cities and towns draw more tourists by leveraging cloud technologies to create an integrated, hospitable, and cultural experience. It provides digital access to local merchants, helps people find the best places to visit, create a schedule of activities, locate parking, access Wi-Fi, and explore educational opportunities. The solution also increases visits and revenues to local merchants, restaurants and other local businesses. Smart City Tourism also provides analytics that help to proactively improve public convenience and safety, and increase tourism commerce.

## Neudesic

Irvine, CA

USA

https://www.neudesic.com/

Neudesic helps organizations unlock the potential of the Internet of Things to demonstrate real enterprise value, using Internet of Things (IoT) with Event Grids Proof of Concept. Neudesic's team of experts can align and implement IoT solutions to maximize the impact on your organization. Customers are in control—collecting new data, surfacing actionable insights, and setting their enterprise on the road to digital evolution. Neudesic works with enterprise customers to build a proof of concept (usually within one or two weeks), create a roadmap, and plan next steps for the pilot program and/ or enter new use cases for exploration. As an example, the City of Los Angeles worked with Neudesic to develop a smart parking solution that increased revenue and reduced traffic congestion.

## ZenCity

#### Tel Aviv

#### Israel

http://help.zencity.io/by-feature/introto-zencity



## Hitachi

Tokyo

Japan

aka.ms/HitachiSmartSpaces

#### HITACHI

Hitachi Smart Spaces enabled by Lumada Video Insights delivers realtime intelligence and insights to enhance safety, operations, and customer experience for retail, campuses, transportation, and public areas are the building blocks for smart, safer, and thriving cities. Organizations can leverage modular solutions that combine IoT, big data, analytics, and machine learning with Hitachi Video Analytics to gain an end-to-end solution for their smart spaces.

NC4

#### El Segundo, CA

USA

https://www.nc4.com/safety



NC4 Street Smart Suite is a law-enforcement solution that equips your police officers with the sophisticated technology and critical resources they need to fight crime. This state-of-the-art tool provides real-time data to keep your force up-to-speed, informed, and protected as they patrol our streets. Officer-driven, to provide essential facts about incidents and crime patterns in your area, NC4 Street Smart goes above and beyond the standard CAD and RMS search by supplying up-to-the-minute data feeds, maps, blogs, bulletins and case management tools. With the Microsoft Windows 10 application, NC4 Street Smart is accessible from mobile devices, laptops, and tablets as well as large scale displays, including the Microsoft Surface Hub.





ZenCity uses artificial intelligence and big data to reinvent the way local governments make decisions by gathering, aggregating, and analyzing millions of data points from citizens' online and offline interactions. This data is then distilled into reliable, actionable insights to help local municipalities more knowledgeably prioritize resources, connect with their communities, and integrate resident feedback into city policies. The solution categorizes the data by department and analyzes the resident sentiment, transforming otherwise unstructured data into valuable, quantitative metrics that enable better performance management.



## AirMap

Santa Monica, CA

USA

www.airmap.com

#### AIRMAP

**AirMap** is an airspace intelligence platform that connects airspace managers, authorities, and stakeholders with the drone ecosystem with easy-to-use tools and services for registration and identification; geo-awareness and geofencing; real-time traffic deconfliction; flight planning, notification, and authorization. AirMap UTM meets the standards of NASA, the FAA, and Europe's U-space.

#### Genetec

Montreal, Quebec

Canada

aka.ms/genetic-traffic

aka.ms/genetic-transit

Genetec

Genetec **Solutions for Traffic Operations** unify data from traffic sensors, parking systems, dynamic signs, video cameras, third-party apps, and historical metrics, enabling traffic authorities to more knowledgeably monitor and control traffic flow, detect incidents, and collaborate on responses. Open and expandable, the platform utilizes Microsoft Azure to improve the availability, usability, and storage of information, rapidly conduct advanced analytics, optimize operations and foster the adoption emerging technologies.

Genetec **Solutions for Transit** enables transit authorities to efficiently unify and manage their current and future security and safety systems from a single, highly scalable, IP-based platform, which supports video surveillance, collaborative decision-making, digital evidence management, and automatic license plate recognition. Leveraging Microsoft Azure, the platform supports cloud-based storage, mobile access, data analytics, visualization, and other evolving technologies.

## **Cubic Transportation Systems**

San Diego, CA

USA

aka.ms/Cubic-RevenueMgmt

aka.ms/Cubic-RoadUser

**CUBIC** Intelligent travel made real Cubic Transportation Systems provide solutions to keep transit systems running smoothly and to manage road use charging (tolling) easily, simply, and fairly.

**Road User Charging** solution is designed for multi-agency use while giving each entity control over its own business rules, revenue apportionment, and general ledger.

## **NEC Corporation of America**

Irving, TX USA

https://www.necam.com/loT/

NEC

The NEC **Intelligent Transportation Suite** provides the specialized business logic required by public transport authorities and bus fleet operators and allows it to be delivered from Azure as part of a Smart City platform offering. The Intelligent Transport Suite helps cities and transport agencies provide better transit services for passengers by using the power of big data, analytics, and modern transit management tools. Delivery from Azure is a disruptive approach to this industry, which shortens sales cycles and places Microsoft products at the front of the one of largest entry points for Smart City adoption.

## EastBanc Technologies

#### Washington, DC

USA

aka.ms/Eastbanc-SnowIQ

aka.ms/Eastbanc-TransitIQ

EASTBANC TECHNOLOGIES EastBanc Technologies provide a variety of IoT tracking solutions to keep snowplow fleets running efficiently, and to connect transit riders with real-time bus tracking.

**SNOWiQ** provides a 360-degree view of snow removal operations, without costly hardware investments. A SaaS and Internet of Things solution, SNOWiQ allows dispatch and monitoring by supervisors through tablets, while residents can see snow removal efforts through a public web portal.

**TRANSITiQ** connects riders with their transportation options. Mobile apps for riders let them track bus arrivals in real time, explore different transportation options around them, and plan the most efficient trip. For transit agencies, an intelligence portal measures on-time performance, monitors "bus bunching," detects anomalies, evaluates delays, and more





PwC's **Predictive Maintenance for Airlines**, built on Microsoft technologies, provides an agile, analytical, and adaptive platform for sustained performance and profitability. For aviation companies, delays and cancellations are a huge and expensive problem. Up to 30% of the total delay time is due to unplanned maintenance. PwC uses advanced analytics to rationalize, predict and streamline maintenance, helping aviation clients increase maintenance efficiency, improve the health of their fleet, and reduce costly delays and cancellations. This predictive maintenance approach can also help improve areas like supply chain optimization, inventory allocation and planning, aircraft reliability improvement and operation and schedule



<sup>1</sup>How Much Do Organizations Understand the Risk Exposure of IoT Devices?, Deloitte, August 1, 2019, https://www2.deloitte.com/us/en/pages/about-deloitte/articles/press-releases/deloitte-cyber-shares-topcyber-risks-for-iot-environments.html?nc=1

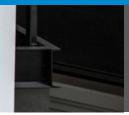
## Bolstering security to create immunity against vulnerabilities

According to a poll conducted by Deloitte and Dragos, Inc., "The number of cyberattacks, data breaches and overall business disruption caused by unsecured IoT/IIoT devices are increasing because many companies don't know the depth and breadth of the risk exposures they face when leveraging IoT devices and other emerging technologies." <sup>1</sup>

Azure Sphere is the answer, providing protection from the edge to the cloud, starting with a secured microcontroller (MCU) that combines both real-time and application processors with built-in Microsoft security technology and connectivity. A secured OS and proven security services extend protection into the cloud.

For existing devices and systems, such as consumer appliances, indoor LED lighting, and environmental detectors, Azure Sphere can be built into a guardian module that can be paired with existing equipment to enable secured connectivity. In these scenarios, Azure Sphere, not the device, communicates with the cloud.

Check out several Microsoft partners who've begun to integrate Azure Sphere into their solutions:





#### **E.ON**

Location: Essen, Germany

The E.ON Home Energy Management System (HEMS) focuses on energy management, combining data from all electrical devices within a home including heating and cooling systems, solar (photovoltaic) systems, battery storage or chargers for electrical vehicles – into a single platform, which provides customers with an overview of energy usage and control options via a dashboard.

HEMS uses artificial intelligence to continually monitor and assess energy usage patterns and trends. These learnings provide users with insights to lower their energy costs and carbon footprint, increase the comfort of their homes, harvest their own energy, and automate and optimize the use of household electrical devices.

Solution URL: www.eon.com



## GOJO

#### Location: Akron, OH, USA

Good hygiene is the foundation of preventing the spread of disease. That's why GOJO Industries, a manufacturer of hand cleaners and dispensers used in healthcare facilities, will be using Azure Sphere in its battery-powered dispensing units to monitor the use of hand sanitizers in hospitals and trigger alerts when the batteries in units are running low. Azure Sphere will be a replacement for Raspberry Pi, based on in-room gateways for the GOJO Smartlink solution.

Solution URL: www.gojo.com



#### **Glen Dimplex**

Location: Dublin, Ireland

Glen Dimplex is a leader in development of intelligent heating, renewable energy solutions and domestic appliances that are shipped to customers in over 80 countries on 4 continents. They are integrating Azure Sphere into their product lines of connected devices to support security at every layer and ensure the integrity of the millions of connected microcontrollers within their products.

Solution URL: www.glendimplex.com

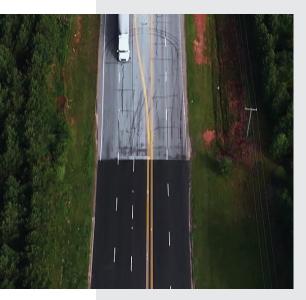


# **Kongsberg Gruppen**

Kongsberg builds high-end, mission-critical systems with extreme performance for extreme conditions, for defense and civilian applications. It specializes in the field of autonomy, providing complete autonomous systems such as autonomous underwater vehicles (AUVs) and recently the world's first autonomous, fully electric container ship. The use of Azure Sphere supports the security and performance their customers demand when developing applications for global defense, maritime, oil & gas, fisheries and aerospace.

Location: Kongsberg, Norway

Solution URL: www.kongsberg.com



## LEONI

**Location:** Nuremberg, Germany

LEONI iCable technology adds intelligence to electric vehicle charging stations, making it possible to capture and measure in real-time critical parameters for high-voltage DC cables in charging columns. The solution also supports real-time communication with columns, strengthening grid stability. Fifty times smaller than comparable solutions, and dramatically less expensive, iCable can reduce charging time by up to 50%, reduce unplanned downtime of charging stations, and make electro-mobility more convenient and secure.

Solution URL: www.leoni.com

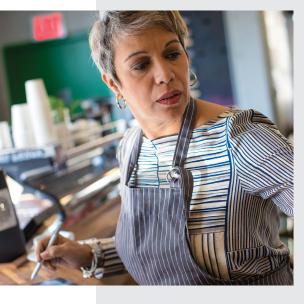


## qiio

#### Location: Zurich, Switzerland

managed by a brewery.

Solution URL: www.qiio.com



## **Starbucks**

#### Location: Seattle, WA, USA

Starbucks' mission relies upon high quality products, produced consistently across all of its stores worldwide. To instill confidence that Starbucks' coffee machines remain online and in optimal condition to serve their customers, Starbucks have deployed Azure Sphere into a fleet of their coffee brewers, espresso machines and blenders. Azure Sphere allows Starbucks to securely connect to their central network and gather telemetry from sensors within the devices in global stores, to indicate the production of the perfect pour. Starbucks was the first customer to deploy Azure Sphere into stores worldwide and report immediate operational efficiencies, confidence in the secure architecture of Azure Sphere and new innovation to maintain the quality of each cup.

Solution URL: www.starbucks.com

**Ready to start** integrating Azure Sphere into your products?

Explore Azure Sphere:  $\rightarrow$  aka.ms/azuresphere

The initial deployment of Azure Sphere by qiio will be targeted to beverage companies, such as breweries. The giio Concentrator Sphere will measure the amount of beer left in a barrel then send the information to Azure where it's integrated into customers' CRM systems, and used to generate a fleet management plan for beer delivery trucks. The solution incorporates predictive maintenance, which is estimated to save over \$2M per year in maintenance costs for each 1,000 beer barrels - typically 1,000 liters in size - produced and

Order an Azure Sphere development kit:  $\rightarrow$  aka.ms/sphere-devkit

Contact Azure Sphere sales and technical support: → Nextinfo@microsoft.com



## **Exploring what otherwise** wouldn't be possible

Mixed reality – from augmented reality to virtual reality, and everything in-between – unleashes a world of creativity, changing the way people collaborate, create,

Fueled by the intelligent edge – devices, sensors and sensor fabrics, mobile devices, and especially devices with human interfaces – mixed reality moves from the world of single devices to a world of multiple devices that take advantage of artificial intelligence and serverless computations.

Learn how Microsoft partners are using mixed reality to collaborate, create new perspectives, and learn from novel points-of-view:







## Enabling highly-effective, touchless physical therapy

### Ö.

#### Key technologies:

Kinect HoloLens Azure IoT Suite

Ð Learn more at aka.ms/inail

The National Institute for Insurance Against Accidents at Work (INAIL) in Italy wanted to accelerate recovery times and serve more patients, but they have limited therapy space and resources. They developed the Kinect HoloLens Assisted Rehabilitation Experience (KHARE) platform which offers the real-time insights and guidance necessary to create personalized physical therapy for each patient, wherever they're located.

Leveraging Microsoft HoloLens technology, the platform simplifies creating videos of the movements and exercises patients need to follow. Kinect technology captures data from 25 joints every second in 30-minute physical therapy sessions. The information is streamed to the cloud, where it's analyzed and presented in dashboards. Doctors can then evaluate the effectiveness of their protocols and fine-tune therapies.

Future enhancements include adding 3D or virtual reality to HoloLens-assisted physical therapy sessions, giving doctors the technology necessary to re-create patients' work environments and associated movements that lead to recovery and prevent reoccurrence of injuries.

#### Ö.

#### Key technologies:

loT Edge HoloLens MixedRealityToolkit-Unity Azure Machine learning Azure computer vision



## Increasing worker safety on oil rigs

The drill floor on an off-shore oil rig can be very dangerous. To quickly determine whether a worker is in an unsafe zone, The Marsden Group is working with Microsoft to develop a Seadrill Drill Floor Safety solution that uses an array of LiDAR sensor packages, equipped with Nvidia Jetson TX2 embedded computers to capture a 3D point cloud of the floor of an oil rig. The captured point cloud and color camera data are analyzed to pinpoint unsafe environments and activities.









#### **Ö**

#### Key technologies:

Azure Storage **Azure Functions** Azure Bot Service Azure Machine Learning Azure Cognitive Service App Service

Furniture maker Natuzzi Spa recognized the challenge of visualizing how a new piece of furniture would look in one's home. They developed the Customer Experience Journey, which uses intelligent cloud and intelligent edge services, along with virtual reality and mixed reality to enable customers to customize furniture and then visualize how they'll look in a specific room, using photographs they've previously taken inside their home. This technology improved the order conversion rate by 30% and reduced customers' decision times by 50%.

#### Ö.

#### Key technologies:

Azure Storage **Azure Functions** Azure GPU Streaming IoT Hub, Azure Bot Service Azure Cognitive Services

Paccar, a global leader in the design, manufacture, and support of premium trucks, wanted to speed up its full-scale modeling process, which typically takes up to six months. Partnering with Microsoft, Paccar developed 3D model visualization and data integration. Using 3D holograms, revisions to models now take hours instead of months and teams can assess the benefits - and sometimes the issues – associated with each revision. This capability minimizes production costs, reduces waste, enables design efficiencies, and helps Paccar beat competitors to market.







## Seeing what's underground without digging

#### \*

#### Key technologies:

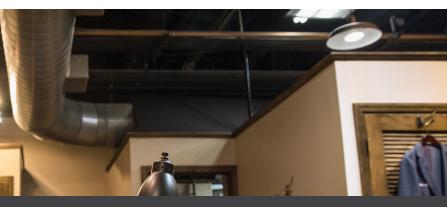
Azure Storage Azure Linux VMs IoT Hubs loT Edge Azure Service Bus **Azure Cognitive Services** App Service

To perform maintenance or install new infrastructures, utilities face the challenge of identifying above-ground and underground pipes, cables or valves. To solve this challenge, Meemin, Inc. created vGIS Utilities, the world's first holographic Geographical Information System (GIS), a comprehensive, multi-device augmented-, mixed- and virtual-reality platform. Municipalities and public utilities in over 30 cities and townships are using vGIS Utilities to convey real-time and in-the-field holographical visualization of their infrastructures. Promark-Telecon in Montreal, Canada, rely on vGIS Utilities to quickly map out customers' structures to avoid comprising them during servicing and new construction.

#### Ö.

#### Key technologies:

Microsoft HoloLens Windows Mixed Reality Platform Azure SQL Azure Storage Azure Compute Azure Web apps **Azure Function** 



## How to do in-store training without being in the store

Studio 216 Altoura software is an immersive visualization solution for developing multi-device, collaborative XR (cross reality) experiences for the modern enterprise. Sprint Corporation is using Altoura to create a training experience for their sales associates that uses a digital twin of one of their retail stores. Sales associates will be able to go through new product training, and live role-play and practice their sales pitches inside a virtual store.







#### Ö

#### Key technologies:

Azure Storage Azure Linux VMs loT Hub loT Edge Azure Service Bus Azure Cognitive Services App Service

Ð Learn more at aka.ms/visual3dmedical

Visual3D StarAtlas and StarLink, a set of 3D medical visualization and distance collaboration tools, powered by Microsoft HoloLens and Azure, provide physicians and medical students with 3D representations of the human body, increasing their precision and confidence when treating patients.

The solution turns 2D CAT or MRI images into 3D models, which are viewed using HoloLens. The resulting holographs enable physicians to see and "see through" patients' organ orientations, morphology, blood vessels, and neural networks so they can more knowledgeably plan surgeries and other treatments. Additionally, the solution can be used for virtual, interactive training labs or for remote viewing of surgeries and procedures.

StarAtlas consists of a 3D reconstruction workstation, which converts 2D CT and MRI data to 3D holographs. An associated cloud server, and mixed reality (MR) space station make the holographic images available for display. StarLink adds visual clues and gestures, making it intuitive to interact with holographs and manipulate them, such as rotate and bring them to the foreground. Additionally, StarLink supports collaborating with physicians in other locations and accessing remote assistance.

### Ö.

#### **Key technologies:**

Azure Storage **Azure Functions** Azure Bot Service Azure Machine Learning **Azure Cognitive Service** App Service

How do you improve the experience of making an expensive purchase like a car? Working with Microsoft, Volvo developed a holographic solution that lets customers experience in real-time the exteriors and interiors of cars as they choose custom options, such as upholstery and type of wheels. The solution helps reinforce Volvo as a premium, innovative brand by making it possible for customers to interact with a holographic model as if it's a real car.



Models

Folders

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All

**Factory Floor** 

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Since the Microsoft HoloLens started shipping over two years ago, Microsoft has been identifying capabilities professionals, such as physicians and researchers, need to improve their efficiencies and confidence in doing their jobs.

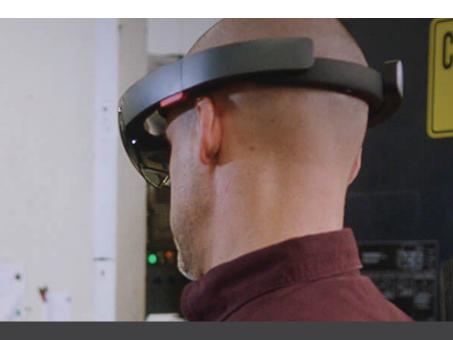
#### Two new mixed reality applications

B

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1 Microsoft Remote Assist: Supports collaborating with experts to solve problems faster from anywhere, at any time with hand-free video calling, imaging sharing, and mixed reality annotations. Discover the advantages of mixed reality remote assistance: → aka.ms/MicrosoftRemoteAssist

2 | Microsoft Layout: Enables teams to design spaces and visualize and interact with 3D models in realworld size and context, along with share and edit with stakeholders in real-time. Learn how to bring design from concept to completion with more confidence: → aka.ms/DynamicsLayout



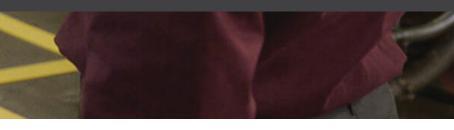
#### Start creating mixed reality solutions today

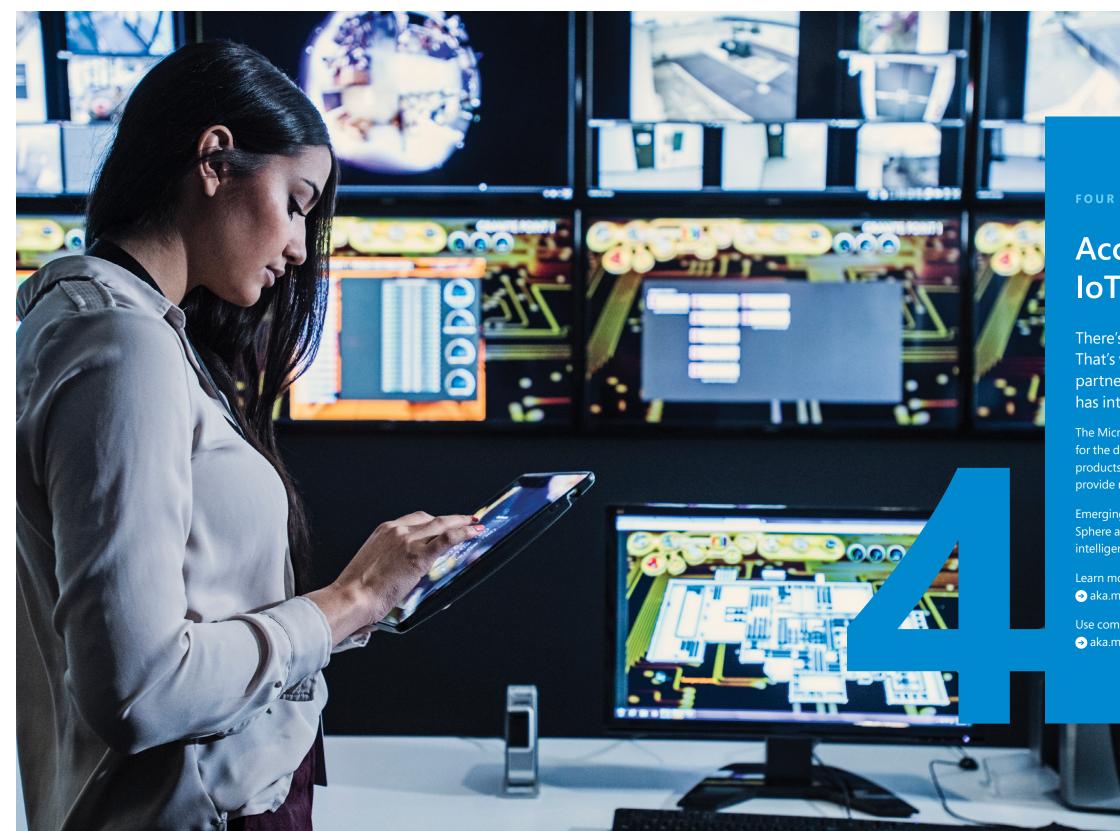
With free solution trials, breadth of software, support and documentation, Microsoft paves the way for modernizing your organization with mixed reality:

Learn about the latest in mixed reality: → aka.ms/Mixed\_Reality

Shape the future of productivity with HoloLens: → aka.ms/WhyHololens

Discover mixed reality apps for HoloLens: → aka.ms/MRMWTechReadyDocs







# Accelerating innovative IoT solutions

There's no one formula for growing the IoT ecosystem. That's why Microsoft has a range of programs to support partners, building new IoT devices and applications, and has internal development teams.

The Microsoft IoT Solution Accelerator program provides technical support for the development, proof-of-concept, and piloting of innovative partner products and services. The resulting solutions, built on the Microsoft stack, provide ready-to-use, open source code, available through GitHub.

Emerging from Microsoft are innovative solutions and devices, such as Azure Sphere and the Vision AI Developer Kit, which simplifies adding artificial intelligence to edge devices.

Learn more about the IoT Solution Accelerator program: → aka.ms/AzureIOTSolutionAccelerators

Use common, preconfigured solutions to accelerate your IoT projects: aka.ms/IoTAccelerators



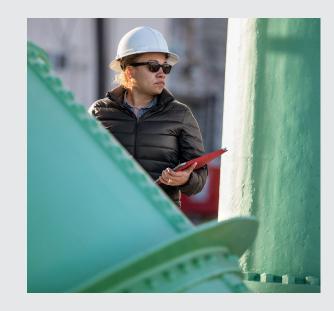


#### Avocor

**Demo:** Windows Collaboration Display

Avocar Windows Collaboration Displays enhances teamwork and collaboration by extending familiar Office 365 solutions to room-scale. It supports seamlessly pairing laptops and other mobile devices to the display with a single-cable connection. The advanced monitoring hub improves facility usage and comfort levels. Fully compatible with Windows 10, the display solves the frustrating and often time-consuming problem of connecting devices and people in meetings, whether a huddle space, conference room or across the globe. The collected data can be used to analyze and more efficiently use meeting and building spaces.

Download the code: aka.ms/avocor



## **Insight Digital Innovation**

#### Solution Accelerator: Safety notification

Project Edison is a safety and alert notification system that helps communities increase awareness and resolution of safety concerns. It features a breadth of notifications and alerts, along with formalized methods of connecting people, increasing the effectiveness of ensuring security personnel, first responders and safety teams are kept up-to-date of identified and emerging situations. Project Edison is an open source solution that can easily be customized and deployed as a stand-alone system or integrated into more complex safety solutions that already exist.

Download the code: https://github.com/litebulb/ProjectEdison

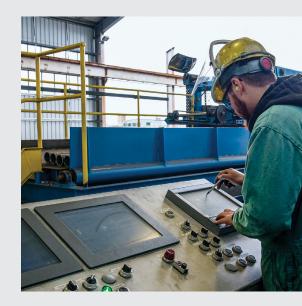


## **Azure Sphere**

**Demo:** Powered appliances

Azure Sphere showcases Microsoft's leadership in the intelligent edge and IoT, extending our scope and influence to a whole new world of devices at the outer edge – with a surprising, open approach. This demo highlights the power and connectivity Azure Sphere brings to everyday devices and systems, with security at the forefront. Order an Azure Sphere development kit and get started today, creating highly secure, connected Microcontroller (MCU) devices.

**Download the code:** aka.ms/AzureSphere

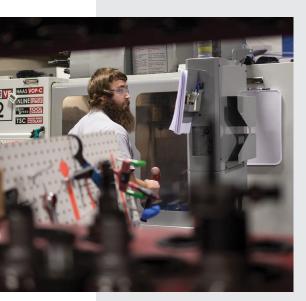


**Demo:** Oil & gas dynocard solution accelerator

Sucker pumps, used by oil and gas companies, work continuously, often in remote locations, using dynamometers (dyno) to determine pump performance and conditions. A company might have thousands of pumps, making it logistically difficult to individually inspect the records or dyno cards from each pump. The Insight Oil & Gas solution accelerator complements dyno cards by using IoT sensors and technology to detect potential catastrophic issues with sucker pumps, capture historical data about anomalies, and alert field technicians when needed. Additionally, it can be used for remote monitoring, such as drill bit optimization.

Download the code: https://github.com/BlueMetal/iot-edge-dynocard

## **Insight Digital Innovation**



## Mobiliya

Solution Accelerator: Video analytics

The Mobiliya video analytics solution accelerator is a cost-effective vision analytics application to increase the efficiency of gathering operational intelligence and making decisions based on tracking data. Powered by the Azure Cloud, the solution uses machine learning to analyze live and recorded video streams to extend the capabilities of existing camera tracking infrastructures to detect and distinguish people, objects, license plates, activities, and much more. This solution is applicable for scenarios such as retail, smart parking, security and surveillance, and asset utilization.

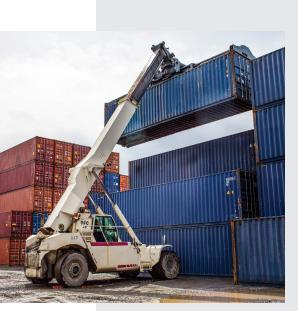
Download the code: https://github.com/MobiliyaTechnologies/ SecurityAndSurveillance



# Microsoft | Qualcomm

using Azure IoT Edge.

Download the code: https://www.visionaidevkit.com



## Mobiliya

#### Solution Accelerator: Asset tracking

Mobiliya's Asset Tracking and Monitoring solution enables the user to monitor asset status, and track asset positions. Asset and sensor data are transferred to a gateway which is then manipulated and managed through different cloud services then represented to show asset status to the user. This solution works in both indoor and outdoor environments and it also gives the user the freedom to define rules. These rules could be as simple as grouping the assets to creating a geofence for certain detections. And finally, cloud services such as Azure IoT hub, Stream Analytics, Event hub, and PowerBI are used for data visualization purposes.

Learn more: aka.ms/mobiliya-assettracking

Download the code: aka.ms/mobiliya-github



## Sharp

Meetings should be simple and all about working together easily. The Sharp Windows Collaboration Display allows users to efficiently and intuitively collaborate in real-time, by combining the best of Microsoft 365 collaboration tools with Sharp's award-winning professional displays, all backed by the cloud for quick and easy collaboration. Imagine a collaboration or meeting space where the interactive display automatically determines how many people are in the meeting—then adjusts the room's temperature, lighting and air quality for optimal comfort.

Learn more: https://business.sharpusa.com/windows-collaboration-display

Developer Kit: Vision AI developer kit

The Vision AI developer kit is a collaboration between Microsoft and Qualcomm, which enables on-device inferencing for AI on the edge. This device serves as a reference platform for developers and manufacturers to create AI products and runs in the family of devices that leverage the new Qualcomm platform. It runs on Qualcomm's Vision Intelligence Platform for on-device edge AI/compute and takes advantage of Azure Machine Learning to easily create and customize advanced AI applications that can be deployed

**Demo:** Windows Collaboration Display



# momentum of innovation

## The validity of an IoT solution is its successful

Our customer evidence teams are dedicated to elevating partners' innovative solutions, which incorporate Azure IoT and Windows 10 IoT to transform their operations and introduce new products and services.

Learn how Microsoft partners are making a difference in the marketplace, such as helping save lives in the open seas, dramatically speed up deployment of predictive maintenance programs, intelligently track fleets of trucks, and increasing the accuracy of medical procedures.







## Connecting streetlights in Taipei saves money and boosts safety

→ View the full case study: aka.ms/AzureAAEON A bustling center of industrial growth and thought leadership, the City of Taipei needed to accommodate its growing population, enhance citizens' safety, and uncover ways to cut costs. Microsoft partner AAEON created an IoT solution that connects the city's 150,000 streetlights, reducing costs by leveraging predictive and preventive maintenance, and optimizing when the lights are lit, making it safer for drivers and pedestrians. Leveraging Microsoft Azure cloud services, the solution helps ensure deep data collection and analysis, with unparalleled security.

→ View the full case study: aka.ms/ActionPoint Many leading manufacturers still use paper checklists, manual processes, and legacy closed-loop technologies to monitor and maintain their equipment, in part because the challenge of launching technology that could help them automate their operations and take them online is often daunting. To make the transition easier, custom software developer ActionPoint partnered with Microsoft and Dell Technologies to develop IoT-PREDICT, an industrial IoT solution for predictive maintenance that incorporates machine learning, data analytics, and other advanced capabilities. IoT-PREDICT helps manufacturers quickly reduce downtime, lower costs, and increase the overall efficiency of their equipment and operations.



## Helping manufacturers proactively predict and fix problems



# Insight.







# Transforming emergency preparations and responses

→ View the full case study: aka.ms/InsightandBeSafe To help save lives, Microsoft partners Insight and BeSafe Technologies created an IoT building safety solution, based on the Microsoft Azure platform, which connects thousands of sensors, cameras, and other devices with cloud services. The solution combines an emergency notification system with a real time "digital twin" of building floor plans that security staff can share with first responders to more rapidly react during crisis in schools, hospitals, public buildings, and other locations. The Aldine Independent School District in Houston, Texas with 84 schools, implemented the cloud-based solution for its emergency response strategy, providing the means to more rapidly counteract incidents without having to invest in costly server and storage hardware.

→

View the full case study:

aka.ms/

AmpelmannOrangeNXT

Transporting workers from land to sea- or ocean-based work platforms can be hazardous. Using the OrangeNXT ConNXT IoT platform, Ampelmann, a developer of high-tech offshore personnel transfer system, makes it safer for workers to move between vessels and off-shore energy platforms. The solution monitors Ampelmann telescopic gangway systems to ensure they precisely connect to fixed or floating installations, so on the open sea, workers have a safer way to "walk to work." With the conNXT IoT gateway, Ampelmann can process more than 400 parameters locally at the edge, with no gaps in information, no matter the location of the vessel.

#### A ORANGENXT



## Helping employees "walk to work" safety across the open sea

## avacon









 $\ominus$ View the full case study: aka.ms/AvaconNatur

Avacon Natur, a subsidiary of AG, one of Germany's largest regional energy providers, sought a cloud-based monitoring system that could scale at every point, assessing customers' energy demands, their energy output, and projected output based on weather and other conditions. German M&M/ WAGO created an IoT solution that enables Avacon Natur to deliver tailored customer solutions, which improve energy efficiency, reduce costs, and produce a lighter carbon footprint. The solution leverages Azure, which supports, deep data collection and analysis with unparalleled security.

 $\ominus$ View the full case study: aka.ms/RoyalBAM

When BAM Infra Nederland, a multinational construction company, needed a more efficient and cost-effective way to visually inspect and maintain asphalt paving, it turned to OrangeNXT, a leading software integrator. The resulting smart solution uses Microsoft Azure, machine learning, and artificial intelligence to accurately detect and classify various types of damage on paved surfaces. The solution reduces cost and increases efficiencies by improving the speed, quality, efficiency, and accuracy of visual road checks, and enabling predictive asphalt maintenance.

#### **ORANGE**NXT









→ View the full case study: aka.ms/Bosch-NDrive Bosch, a multinational engineering and technology company headquartered in Gerlingen, Germany, used Microsoft Azure to create the Bosch Wrong-Way Driver Warning solution, which improves traffic safety and can help save lives by detecting vehicles that are traveling the wrong direction on freeways and divided highways. Within seconds, the solution alerts wrong-way drivers and other motorists in the vicinity who may be at risk, and then relays precise instructions for corrective actions they can take to avoid a collision. Drivers can access the solution on multiple platforms, and manufacturers can install it in any car or after-market vehicle system.

View the full case study: aka.ms/Bosch-VehicleSafety Headquartered in Gerlingen, Germany, Bosch has partnered with the worldwide automakers to developed networked safety and assistance systems that support drivers today and pave the way for fully automated driving. Their wrong-way driver warning service and software development kit (SDK) leverages innovative map-matching algorithm and the scalability of Microsoft Azure Kubernetes Service (AKS) to accurately locate in real-time vehicles that are traveling the wrong direction and then alert other drivers in the vicinity via a smartphone app. The solution is targeted to app developers and original equipment manufacturers.



## Increasing vehicle safety by using map-matching algorithms







## Boosting harvest and peace of mind in traditional winemaking

→ View the full case study: aka.ms/BucherVaslinWine Winect, an IoT and Azure solution developed by Microsoft partners AIS and TechData for French wine giant Bucher Vaslin, monitors the condition and status of grape and wine processing operations from pressing and destemming through tangential filtration to bottling. The solution streamlines operations by enabling employees to monitor equipment from anywhere, follow the progress of production, and receive alerts in real-time when issues are detected. Additionally, it can be adapted to the role of each user, including harvesters, winemakers or oenologists.

→ View the full case study: aka.ms/BunnBeverage What's true 175 years ago when Jacob Bunn opened his grocery story, is true today. People enjoy a good cup of coffee. What's changed is the capabilities of Bunn-O-Matic beverage equipment. Because it's often challenging to troubleshoot an issue over the phone, BUNN Corporation introduced the BUNNlink program, a proactive service tool that connected its espresso makers to datacenters for remote diagnoses, and then provides data and reports to customers on the status of their equipment.



# Now the cloud's in your coffee







# Using data from IoT and the cloud to more safely and efficiently operate ships

→

View the full case study:

aka.ms/ByTheOceanWeUnite

According to the International Maritime Organization, more than 90% of cargo worldwide—from finished goods to raw materials—is transported by sea. ABB, a pioneering technology leader in digital industries, is using Microsoft Azure and IoT to help the maritime industry chart a course for digital transformation. The ABB Ability Marine Advisory System – OCTOPUS is a digital solution that enables vessel owners to gather and analyze data from both onboard sensors and external sources in real time, helping them optimize operations, improve crew and cargo safety, and maximize fuel efficiency.

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Dover Fueling Solutions turn the routine chore of getting fuel into an opportunity to build customer loyalty, along with increase the efficiency of monitoring pumps and tanks, and proactively identify small issues before they become costly maintenance problems. Using Windows 10 IoT Enterprise and Microsoft Azure IoT Hub, Dover introduced a remote monitoring and diagnostic solution, iSense, which measures fuel flow rate, actual volume dispensed, volume removed from storage tank, fuel temperature, and more. Leveraging Azure Cognitive Services, it pushes out targeted advertisements and offers to consumers while they're fueling up their vehicles.



## Making fueling stations smarter and more personalized





# Reducing installation from six to one week

→ View the full case study: aka.ms/emersoncasestudy Emerson tackles the most complex and profound challenges facing the world today. It estimates that \$1 trillion is lost every year because of manufacturing operations and monitoring inefficiencies. The Emerson Plantweb industrial IoT solution can help companies move from reactive to proactive and predictive maintenance by leveraging Azure to analyze equipment data in real-time to identify and remedy potential and evolving issues. In a pilot program for a global energy company, Plantweb reduced the amount of time it took to install and commission new equipment from six to one week.

View the full case study: Aka.ms/JohnsonControlsGlas Johnson Controls GLAS smart thermostat, based on the Windows 10 IoT Core operating system, enables property managers and owners to affordably control the comfort level of their buildings. Connected to the Azure IoT solution accelerators, GLAS provides remote access through web and mobile apps to monitor and control features of heating and cooling systems. The end-to-end solution includes a touchscreen thermostat integrated with cloud services and mobile devices, making it intuitive to manage through touch and voice commands.



## Creating smarter heating and cooling systems with cloud-connected IoT solution

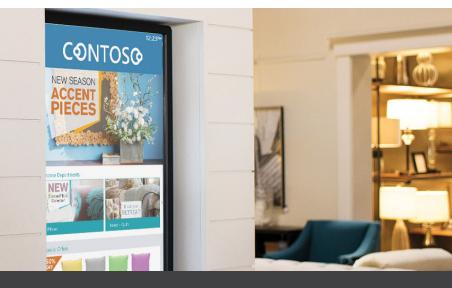




## Visualizing and improving the scalability of connected equipment

→ View the full case study: aka.ms/Komatsu-KOMMICS Komatsu, one of the world's foremost construction machinery companies, migrated KOM-MICS, its smart factory platform, to Microsoft Azure, increasing its scalability, security, and visibility into manufacturing processes and those of its partners. KOM-MICS collects and analyzes data from machine tools and robots to visualize situations and reduce machine downtime, improving productivity, fine-tuning operations, and optimizing the use of personnel and equipment.

→ View the full case study: aka.ms/LGDigitalSignage Essential "always-on" digital signage, such as in elevators, lobbies, convenience stores and shopping center kiosks, is designed to remain lit 24 hours a day, 7 days a week, for years. Like all electronics, issues occur, such as overheating. The LG Electronics' Digital Signage management system, based on Microsoft Azure, predictively detects and remotely remedies issues with "always-on" digital signage.



# Keeping always-on-digital signage services on





## Protecting at-risk animals with IoT tools and technologies

→ View the full case study: https://project15. iotinactionevents.com/ Every 15 minutes, poachers kill an African elephant. Repurposing technologies, such as RFID tags, heat mapped cameras, and solar-powered drones can be used to monitor and track the behavior of wildlife, apprehend poachers, and identify irregularities, such as an animal wandering away from its herd. An animal conservation initiative, Project 15 aims to build a bridge for the scientific community to learn what solutions are available and collaborate with Microsoft and their IoT partner ecosystem to solve pressing issues, surrounding the protection of wildlife and their habitats.

→

View the full case study:

aka.ms/MarsSupplyChain

Mars Food is leading the way to sustainable food production by using Transparency-One supply chain software to monitor its global rice supply chain. Using Transparency-One, which runs in Microsoft Azure, Mars Food can closely track its global supply chain and give consumers instant insights into where and how their rice was grown.

134 **IoT in Action** | Showcasing the momentum of innovation



# Using the cloud to track rice from farm to fork



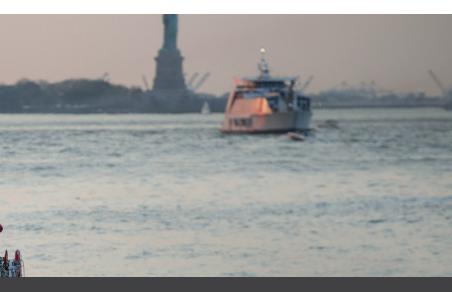




## Using IoT and data science to reduce downtime and costs

→ View the full case study: aka.ms/NewcrestInsight-Mining Newcrest Mining Limited, an international mining company based in Australia, faces the dual challenge of keeping essential machinery running continuously in extreme environments, and creating and maintaining a safe workplace for mine employees. Working with Insight, they implemented IoT, intelligent-edge, and data-science technologies to optimize and automate many of their operations, improving worker safety, increasing productivity, reducing unplanned downtime, and decreasing costs. One improvement was to use a sensor in a crushed ore bin to continuously measure ore levels, helping ensure the continuous operation of the associated ore conveyor and crusher.

→ View the full case study: aka.ms/SafeTrxCaseStudy Searching for small vessels like kayaks and kiteboards is challenging for coast and marine search and rescue agencies. SafeTrx, a Microsoft Azure–based system developed by 8 West Consulting in Cork Ireland, modernizes tracking and monitoring even the smallest vessels. The Royal Netherlands Sea Rescue Institution deployed SafeTrx to empower rescuers. Accessible from mobile devices, SafeTrx provides rescuers with essential information to more rapidly locate missing boats, and assist boaters who're encountered dangerous situations, such as incremental weather or rough waters.



## Making the seas safer for small vessels with mobile tracking

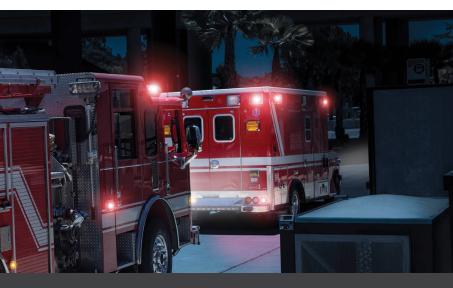




## Accelerating and streamlining product development

→
View the full case study: aka.ms/Siemens-Healthineers Any time you interact with technology in a healthcare setting, there's a good chance you will encounter a solution from Siemens Healthineers, which offers a broad portfolio of leading-edge, high-quality medical technologies that touch the lives of approximately five million patients every day. Siemens Healthineers uses Microsoft Azure to make solutions more accessible, and it uses Azure Kubernetes Service (AKS) and other tools for a fast, efficient, and competitive development pipeline.

View the full case study: aka.ms/StealthPower The New York City Fire Department (FDNY) is committed to helping New York become not only the safest big city in the world, but also the most energy efficient. To cut fuel consumption and emissions, they installed Stealth Power's idle reduction technology, running on Windows 10 IoT Core, in more than 300 ambulances. The largest and busiest fire department in the United States, the FDNY has more than 400 ambulances in the streets on standby 24 hours a day, seven days a week, with engines idling up to 15 hours each day. Installing the Stealth Power solution reduced noise and pollution from idling ambulances, and also provides real-time and predictive insights to decrease unexpected maintenance and minimize vehicle downtime.



## Keeping NYC ambulances rolling while cutting fuel consumption and costs

## stryker



# Improving healthcare with IoT solutions

→

View the full case study:

aka.ms/Stryker

Stryker, one of the world's leading medical technology companies, has created a portfolio of smart devices with IoT technologies that collect, store, analyze, and share real-time performance and usage data from thousands of intelligent Stryker medical devices, located around the world. The Microsoft Azurebased platform, and data-driven insights it provides, has enabled Stryker to improve the quality and performance of its products while building a portfolio of customer-facing applications focused on data. From a service perspective, data-driven insights can help streamline service delivery and supply-chain practices while reducing costs and improving the overall customer experience.

→

View the full case study:

aka.ms/SynnexCaseStudy

TrackingForLess from Synnex and Embedded Works helps businesses like Quality Logistics, a fast-growing trucking company in Greenville, SC, track their assets with greater accuracy and efficiency while reducing costs. Using TrackingForLess, Quality Logistics saves hundreds of hours and thousands of dollars each month on routine operations. They also avoid potential liability costs related to damaged or misdirected cargo and other issues that could equal hundreds of thousands of dollars annually.



## Enabling businesses to costeffectively track their assets





## Leveraging machine learning to optimize building operations

→

View the full case study:

aka.ms/Takasago-HVAC

The Takasago Thermal Engineering Company designs and manufactures building air conditioning equipment. Their solution, TSP, collects and analyzes data from sensors installed on equipment then uses machine learning to optimize equipment operations. The need to automate heating, ventilation, and air conditioning (HVAC) and building systems is driven by a declining workforce, paperless and remote initiatives, and desire to cut costs by reducing energy consumption.

→ View the full case study: aka.ms/TestifyCaseStudy Headquartered in Linz, Austria, Testify automates quality-control processes for industrial and manufacturing companies like Bombardier, Inc., a transportation manufacturer. The Testify paperless quality-control solution eliminated paper checklists, providing Bombardier with greater efficiency, faster response times, better collaboration, and less risk of costly errors. With immediate access to real-time data and advanced analytics, Bombardier can test and inspect products up to 50 percent faster, identify and correct quality issues more quickly, and gain business insights to help avoid future problems.

# 87,61<sup>BAR</sup>

# Going paperless reduces test times by up to 50%





Microsoft is committed to your success, which is why we're constantly gauging partners' needs and providing the most up-to-date information on solutions, webinars and online training, and programs to help develop repeatable IoT Solutions.

## Driving the fusion of art and community to create new experiences

Ð View the full case study: aka.ms/ArtsTowada-VehicleLocationandSafety

Located in the Aomori Prefecture, the Towada Art Center uses art to provide new experiences, both indoors and outside. The LOST TERMINAL project by Japanese artist June Kitazawa imported Indonesian vehicles and loaned them to visitors, blending the vehicles of another country into the scenery of Japan. The project used a location tracking solution, developed by Nissho Electronics, which leveraged the Microsoft Azure platform as a service (PaaS). The solution made it possible to monitor in real-time the location and safety of vehicles and its riders.

#### **IoT Resources**

Visit the Devices Partner Center: → aka.ms/DPC

Learn more about IoT Accelerators: → aka.ms/

AzureloTSolutionAccelerators

Preconfigured solutions from IoT Accelerators: → aka.ms/IoTAccelerators

## Webinars and Training

View an IoT in Action webinar: → aka.ms/IIAWebinar

Get Azure Training: → aka.ms/AzureTrainingFree



## **Get Started**

#### **IoT Offerings**

Azure: → aka.ms/AzureloTProduct

Azure Sphere: → aka.ms/AzureSphere

Windows 10 IoT: → aka.ms/WindowsIoT

This booklet doesn't represent all partners who've participated in IoT in Action programs and events.

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# **IOT** in Action

## Mark your calendar

Visit us at future industry and IoT events

#IoTinActionMS	Register for an IoT in Action eventExplore sponsorship opportunities> https://iotinactionevents.com> contact iotess@microsoft.com
• February 24	Embedded World, Nuremberg, Germany
March 5	Melbourne, Australia
March 9	Orlando, FL, USA
March 9-13	Health Information and Management Systems Society (HIMSS), Orlando, FL, USA
March 11	Osaka, Japan
• April 1	Washington, D.C., USA
• April 7	Dubai, UAE
• April 15	Beijing, China
• April 22	Busan, South Korea
April 28	Amsterdam, Netherlands
May 19-21	Microsoft Build, Seattle, WA, USA
May 20	Shanghai, China
• May 27	Bangalore, India
June 2-6	Computex
Industry event Industry event	Action event Note: The dates of events are subject to change.

View the current schedule and get more details



