

ZONES™

IOT SMART INFRASTRUCTURE

CLOUD & DATA CENTER

Presenter Name Here

Presenter Title Here

MM/DD/YYYY

Consider **IT** done.



AGENDA

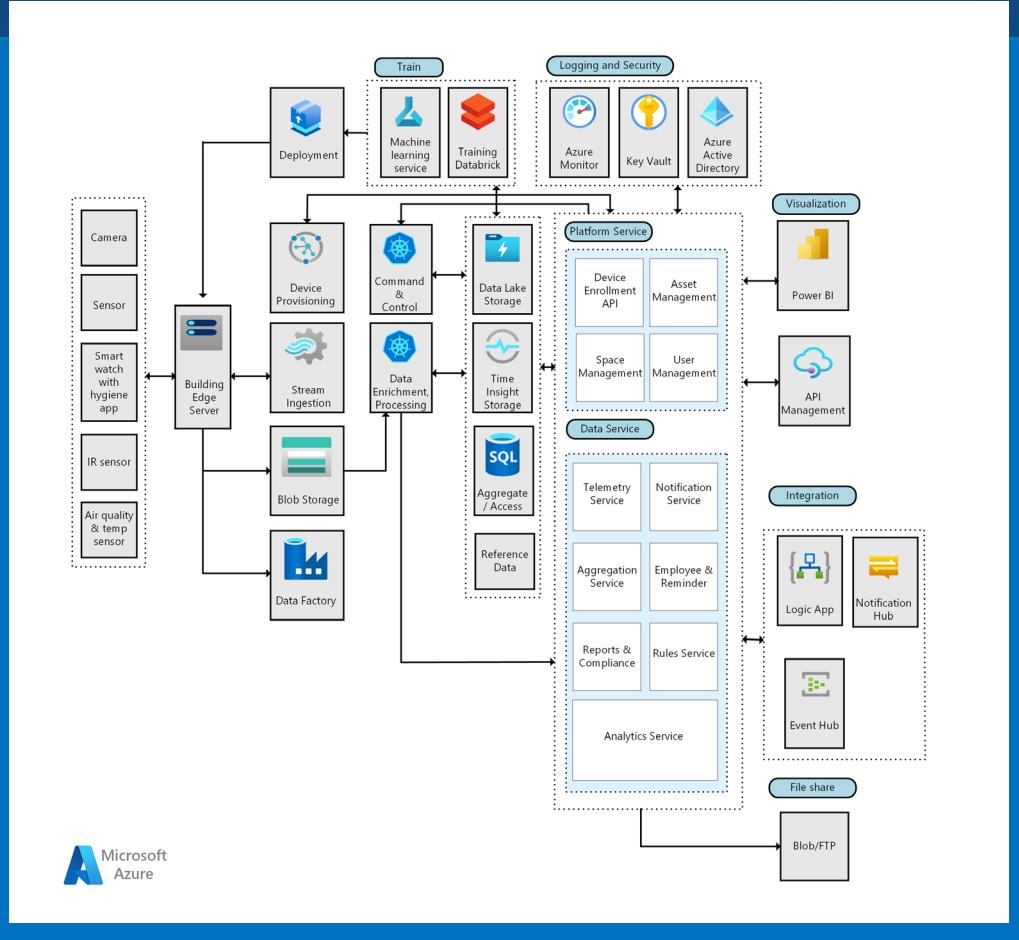
- Unlocking the Future with Smart Infrastructure
- Smart Safe Buildings with IoT and Azure
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- Zones IoT Smart Infrastructure Offerings
 - IoT Devices
 - Stream Processing for Analytics
 - Machine Learning
 - Device Provisioning
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UNLOCKING THE FUTURE WITH SMART INFRASTRUCTURE



In an era where sustainability, efficiency, and progress are paramount, the world is turning to Smart Infrastructure to reshape the way we live, work, and operate. Municipalities, enterprises, healthcare facilities, and the military are embracing this transformative concept, digitally enhancing physical assets to drive intelligent and effective utilization. With Smart Infrastructure, we can add value, enhance capacity, and achieve progress without resorting to traditional new-build solutions.

SMART SAFE BUILDINGS WITH IOT AND AZURE



Safe Buildings solution, powered by Azure IoT Hub and Azure services, is transforming smart buildings into safe havens for everyone. By seamlessly integrating people, regulations, analytics, and cutting-edge technology, our solution is leading the way in ensuring the utmost safety and compliance within your building environment.

- **Data-Driven Safety:** Our solution collects biometric and environmental data from various devices, creating a comprehensive overview of your building's health and safety metrics.
- **Proactive Alerts:** When any deviation from health and safety protocols is detected, our solution springs into action, enabling you to take swift and informed measures.
- **Real-time Monitoring:** Safe Buildings layers safety controls to continuously protect, monitor, and respond to potential risks, all in real-time.

ABOUT ZONES IOT SMART INFRASTRUCTURE

Our customer-centric approach begins with an integrated Internet of Things (IoT) platform that is tailored to suit your requirements. What sets our platform apart is its foundation on mature, best-of-breed technologies. When tied with Zones process optimization expertise, it delivers three distinct advantages tailored just for you:

Environmental Sustainability



Our solutions empower you to reduce energy consumption and minimize your carbon footprint. By leveraging advanced technologies, we help you implement sustainable practices that align with your environmental goals.

Operational Excellence



With Zones' Smart Infrastructure, you get real-time insights that enable smarter decision-making. Whether it's optimizing processes, streamlining workflows, or enhancing resource utilization, we empower you to achieve operational excellence like never before.

Safety and Security



Zones solutions are designed to provide a robust framework for safety and security. From advanced surveillance to access control, we ensure that your spaces are safeguarded, fostering a sense of security for all.

ZONES IOT SMART INFRASTRUCTURE OFFERINGS



IoT Devices

Stream Processing for Analytics

Machine Learning

Device Provisioning

User management

Warm path storage

Cold path storage

Data transformation

Business process integration

Cloud Gateway

IOT DEVICES OVERVIEW

Connect, Process, and Optimize Unleashing the Power of IoT

Our solution ensures that devices can securely register with the cloud, providing a robust foundation for reliable and secure data transfer. These sophisticated devices can perform vital data processing tasks either on the device itself or through a field gateway.

This not only streamlines data handling but also significantly reduces latency, leading to quicker decision-making and enhanced operational efficiency.

Why Azure IoT Hub?

Azure IoT Hub stands out as the optimal choice for edge processing, and here's why:

- **Enhanced Security:** Azure IoT Hub ensures the highest level of security for your data, from the device to the cloud.
- **Scalability:** Effortlessly scale your IoT solutions to meet growing demands without compromising on performance.
- **Flexibility:** Tailor your IoT ecosystem to suit your specific needs, whether it's simple data collection or advanced analytics.
- **Real-time Insights:** Gain immediate insights with edge processing, enabling prompt and informed decisions.
- **Reduced Costs:** By processing data locally, Azure IoT Hub minimizes the need for extensive cloud resources, thereby reducing operational costs.

									
IoT Devices	Stream Processing for Analytics	Machine Learning	Device Provisioning	User management	Warm path storage	Cold path storage	Data transformation	Business process integration	Cloud Gateway

STREAM PROCESSING FOR ANALYTICS OVERVIEW

Elevate Your Data Stream Analysis with Azure Stream Analytics and Apache Spark on Azure Databricks

This process involves the examination, handling, and evaluation of real-time data streams as they are created, without needing to store them first.

Stream Processing is particularly valuable in scenarios where immediate insights and rapid response to data are crucial, such as in financial trading, online transaction processing, social media analysis, and real-time monitoring of various systems.

Azure Stream Analytics: Real-time Insights at Scale

- Complex Analysis Capabilities: Execute sophisticated analyses with ease, leveraging time windowing functions, stream aggregations, and more.
- Scale with Confidence: Designed to handle large-scale data effortlessly, ensuring your analytics grow with your data.
- Seamless Integration: Effortlessly join data from external sources, enhancing your analytical capabilities.

Apache Spark on Azure Databricks: Versatile and Powerful

- Highly Customizable: Tailor your data processing with a platform that adapts to your unique requirements.
- Optimized for Azure: Experience seamless integration with Azure services, enhancing your data processing and analytical capabilities.



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MACHINE LEARNING OVERVIEW

Advanced Predictive Analysis with Azure Machine Learning

Unlock the full potential of your historical telemetry data with our state-of-the-art predictive analysis solution. Utilizing Azure Machine Learning, this offer is tailored for businesses seeking to leverage the power of predictive algorithms to foresee and prevent equipment failures, reduce downtime, and enhance operational efficiency.

- **Comprehensive Data Integration:** Seamlessly integrate your existing telemetry data into Azure's robust cloud platform, ensuring secure and efficient data handling.
- **Advanced Predictive Algorithms:** Employ cutting-edge machine learning models that are customized to your specific industry needs. These algorithms analyze historical data patterns to predict potential equipment malfunctions before they occur.
- **Real-Time Insights and Alerts:** Get instant notifications and detailed reports on equipment health status, enabling proactive maintenance decisions.
- **User-Friendly Interface:** Access a simple, intuitive dashboard that allows your team to monitor and manage predictive maintenance schedules easily.



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DEVICE PROVISIONING OVERVIEW

Seamless Device Integration with IoT Hub Device Provisioning Service (DPS)

The IoT Hub Device Provisioning Service (DPS) is a powerful solution for seamlessly registering and connecting vast numbers of devices to Azure IoT Hub. It offers scalable, secure, and efficient device management, ideal for large-scale IoT deployments.

With DPS, scaling your IoT network becomes a streamlined and hassle-free experience. Whether you're adding dozens or thousands of devices, DPS handles it with ease.

Key Benefits:

- **Automatic Device Registration:** Say goodbye to manual setups. DPS automates the assignment and registration of your devices to specific Azure IoT Hub endpoints.
- **Scalable Device Management:** Effortlessly manage a vast array of devices. Whether your network is large or small, DPS scales to meet your needs.
- **Secure and Reliable:** Security is our priority. DPS ensures a secure, reliable connection for each of your devices.
- **Simplified Operations:** Reduce operational complexity with an intuitive, user-friendly system designed for efficiency.



USER MANAGEMENT OVERVIEW

Secure Your Device Operations with Azure Active Directory

In the interconnected world of device management, security and control are paramount. To ensure that only authorized users and groups have access to perform critical actions on your devices, such as firmware upgrades, we recommend Azure Active Directory (Azure AD) for robust authentication and authorization.

Why Azure Active Directory?

With Azure Active Directory, you gain peace of mind knowing your devices and data are accessible only to those with the right permissions while still enabling your team to perform essential functions efficiently and securely.

- **Enhanced Security:** Azure AD provides a secure, reliable way to manage who has access to your devices and what actions they can perform.
- **Customizable Access Control:** Easily define and manage user capabilities and permissions, tailoring access to fit your organization's needs.
- **Seamless Integration:** Azure AD integrates with a wide range of applications, offering a unified, consistent security experience across your systems.



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WARM PATH STORAGE OVERVIEW

Unlock Insights in Real-Time with Azure Data Explorer and transform your data into decisions

Azure Data Explorer is here to empower your business with lightning-fast, fully managed data analytics. It's the key to unlocking the full potential of your data - from human operations to IoT devices, and everything in between.

Warm path storage, essential for immediate data availability, is ideal for reporting and visualization directly from devices. We recommend Azure Data Explorer, a reliable and efficient solution, to ensure seamless access and management of your critical, real-time data needs.

Why Azure Data Explorer?

- **Handle Massive Data Effortlessly:** Whether it's business activities, applications, websites, or IoT devices, Azure Data Explorer makes light work of analyzing large volumes of data streams.
- **Real-Time Analysis:** Stay ahead of the curve by analyzing and visualizing data in real-time. Make decisions faster and more accurately than ever before.
- **Time-Series Analysis Expert:** Dive deep into your data's timeline. Understand trends, patterns, and anomalies over time to make forecasts that put you a step ahead.



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COLD PATH STORAGE OVERVIEW

Optimize Your Long-Term Data Storage with Azure Blob Storage

In the realm of data management, efficient long-term storage is key to unlocking valuable insights. Azure Blob Storage is our recommended solution for cold path storage, where data is retained for extended periods for batch processing.

With Azure Blob Storage, you're not just storing data; you're preserving it for future insights.

Why Azure Blob Storage for Cold Path Storage?

- **Cost-Effective Longevity:** Store your data indefinitely without breaking the bank. Azure Blob Storage offers an affordable way to keep large amounts of data over the long term.
- **Batch Processing Made Easy:** When it's time to analyze, your data is readily accessible for efficient batch processing.
- **Highly Secure and Reliable:** Trust in the security and durability of Azure Blob Storage to safeguard your data.

It's an ideal solution for businesses looking to maintain extensive historical data for thorough analysis and informed decision-making.



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DATA TRANSFORMATION OVERVIEW

Streamline Your Telemetry Data with Protocol Gateway and Azure Functions

In the dynamic world of IoT, efficiently managing your telemetry data is crucial. Whether it's transforming data formats or combining data points for richer insights, we have the perfect solutions tailored to your needs.

Whether you need to transform your data at the source with a protocol gateway or prefer to do it post-IoT Hub with Azure Functions, our solutions ensure your telemetry stream is managed effectively and efficiently.

Protocol Gateway: Optimal for Pre-IoT Hub Transformations

- Seamless Data Conversion: Easily convert binary data to JSON or other formats before it reaches IoT Hub.
- Custom Protocol Support: Ideal for scenarios where data must undergo transformation or aggregation at the source.

Azure Functions: Post-IoT Hub Data Transformation

- Integrated Data Handling: If your data transformation needs arise after reaching IoT Hub, Azure Functions is your go-to tool.
- Effortless Integration: Seamlessly works with IoT Hub, Azure Data Explorer, and Blob Storage, providing a unified approach to your data processing.
- Scalable and Efficient: Handle large volumes of data with Azure Functions' scalability and efficiency.



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BUSINESS PROCESS INTEGRATION OVERVIEW

Elevate Your Business Processes with Azure Logic Apps

With Azure Logic Apps, you're not just processing data; you're transforming it into meaningful actions that propel your business forward. This tool is designed for businesses seeking a streamlined, efficient way to integrate device data insights into various business processes.

Why Azure Logic Apps for Business Process Integration?

- Automated Actions:** Whether it's storing messages, triggering alarms, or sending notifications via email or SMS, Azure Logic Apps automates these actions based on device data insights.
- CRM Integration:** Enhance customer relationship management by integrating insights directly into your CRM systems.
- Flexibility and Efficiency:** Tailor your workflows to meet specific business needs, ensuring processes run smoothly and effectively.

Azure Logic Apps empowers you to seamlessly act on these insights, enhancing efficiency and responsiveness in your business processes.



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CLOUD GATEWAY OVERVIEW

Elevate Your IoT Ecosystem with Unparalleled Connectivity and Management

Our Cloud Gateway solution, powered by IoT Hub, stands as the pillar of this connection. It is a central hub for devices to connect securely to the cloud, enabling seamless data flow and enhanced security protocols. Implement our Cloud Gateway with IoT Hub and witness a transformative shift in your IoT operations. It's more than just a gateway; it's a comprehensive solution for secure connectivity, efficient management, and intelligent device interaction in your IoT ecosystem.

- **Scalable Architecture:** Designed to adapt and scale, IoT Hub supports your growing IoT needs without
- **Robust Security:** Ensuring each device-to-cloud connection is protected against threats and vulnerabilities.
- **Streamlined Data Transmission:** As a powerful message broker, IoT Hub excels in event ingestion, ensuring smooth and uninterrupted data flow from devices to the cloud.
- **Two-Way Communication:** Beyond receiving data, IoT Hub enables sending instructions back to devices, enhancing interactive capabilities.
- **Efficient Device Management:** Manage your IoT fleet effortlessly with IoT Hub's intuitive device management tools.



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VALUE PROPOSITION

Data-Driven Safety

Harnessing biometric and environmental data, we offer a 360-degree view of your building's safety landscape, ensuring that health and safety metrics are not just numbers, but a gateway to a secure environment.

Proactive Compliance

Stay ahead of regulations. Our solution proactively alerts you to any deviations, allowing for immediate action to maintain compliance and safety standards.

Real-time Assurance

With continuous monitoring and instant response capabilities, Safe Buildings provides an unwavering layer of protection, delivering real-time peace of mind.

Integrative Technology

By combining people, analytics, and the latest in IoT advancements, our solution is at the forefront of safeguarding building occupants, making smart buildings not only intelligent but vigilant.



DO YOU HAVE ANY QUESTIONS ABOUT BEST PRACTICES?

Just let us know, we are happy to help.

Visit zones.com or call 800.408.ZONES today

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SEE HOW WE CAN PARTNER WITH YOU TO SUCCEED.

CTA – Schedule a follow-up meeting

CTA – Review best practices

CTA – Provide SoW or other materials



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Consider  done.

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