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Industrial IoT Data Platform Value Matrix 2025

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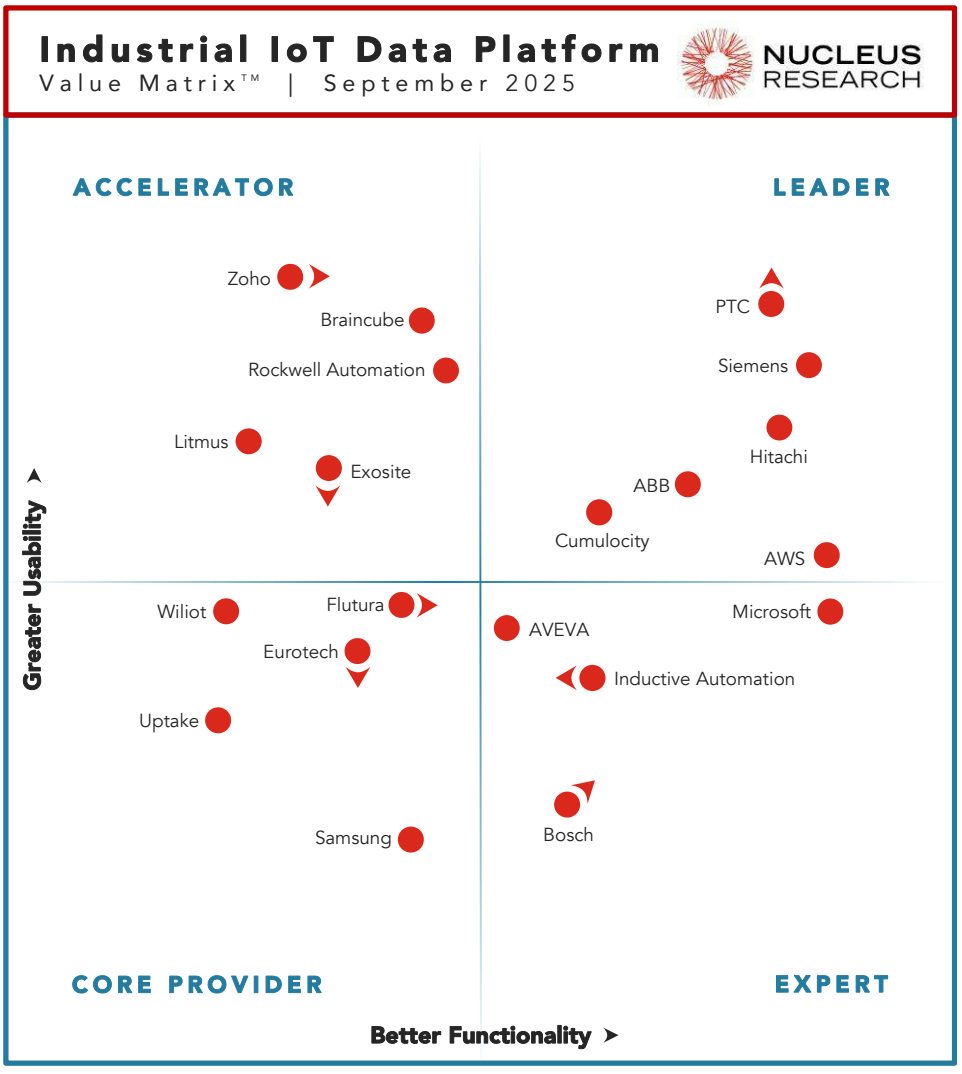
The Bottom Line

The Industrial IoT Data Platform market has transitioned from traditional device management solutions to data platforms that prioritize collection, storage, and advanced processing of industrial data at scale, serving manufacturing, agriculture, energy, and supply chain management. The 2025 landscape emphasizes unified data integration across IT, Operational Technology, and Enterprise Technology systems, creating centralized data lakes that connect legacy systems to high-performance IoT devices. Generative AI integration represents the most prominent trend, with vendors implementing production copilots, natural-language interfaces for industrial data interaction, and studios for building custom AI agents. Edge computing capabilities have advanced with lightweight runtimes for resource-constrained devices, AI-driven management, and hardware security integration, while security remains a critical focus with multiple platform updates throughout the year. Cloud marketplace expansion indicates growing adoption of cloud-native deployment models, and enhanced connectivity supports hundreds of device types and protocols natively. The market shows continued movement toward comprehensive solutions that bridge operational and information technology domains, delivering immediate business value through reduced manual effort and accelerated response times.

Market Overview

The Industrial Internet of Things (IIoT) Data Platform market represents a continued evolution from traditional IIoT tools that were just device management solutions to data platforms that prioritize data collection, scale storage, advance data processing, analytics, and data integration. IIoT Data Platforms are designed to handle industrial data at scale, offering enhanced capabilities for ingesting, cleaning, and transforming vast amounts of industrial data in real-time or through batch processing, alongside machine learning and analytics designed for predictive insights. The platforms serve as foundational infrastructure for industries including manufacturing, agriculture, energy, and supply chain management.

IIoT Data Platforms are designed to handle industrial data at scale, offering enhanced capabilities for ingesting, cleaning, and transforming vast amounts of industrial data.



The 2025 landscape demonstrates a continued emphasis on data-centric approaches, with vendors positioning their solutions as

comprehensive data science platforms that enhance IIoT workflows within integrated frameworks. Modern IIoT data platforms emphasize unified data integration across IT, Operational Technology (OT), and Enterprise Technology (ET) systems, integrating geospatial, transactional, engineering design, and real-time operations data into single data lakes with centralized repositories that enable seamless connectivity from legacy systems to high-performance IoT devices.

Leaders have implemented production copilots using generative and agentic AI for operational queries and root-cause analysis.

Generative AI integration has become a prominent trend throughout 2025, with leaders implementing production copilots using generative and agentic AI for operational queries and root-cause analysis, alongside studios for building custom AI agents. Generative AI integration represents the most prominent trend among vendors across all categories, with platforms now offering natural-language interaction with industrial data, integrated with multimodal visual defect detection capabilities. Conversational AI chatbots enable natural-language conversations with connected products, democratizing access to complex industrial data.

Edge computing capabilities have advanced across vendor categories, with platforms now offering lightweight runtimes for resource-constrained devices with advanced networking support and hardware security module integration.

Edge computing capabilities have advanced across vendor categories, with platforms now offering lightweight runtimes for resource-constrained devices with advanced networking support and hardware security module integration. Edge enhancements include extended hardware flexibility and AI-powered management for fixed-function IoT devices. Security remains a critical focus across the industry, with vendors releasing multiple security updates for Industrial IoT Data Platforms throughout 2025. Leaders have developed specialized hardware designed for AI data centers with increased grid stability and cybersecurity components, while others have integrated secure remote access platforms for safer managed services in industrial facilities.

Cloud marketplace expansion represents a major trend across vendor categories, with platforms expanding cloud-based solutions to major marketplaces and enhancing SaaS offerings for industrial data operations and predictive maintenance. This indicates growing adoption of cloud-native deployment models across the industry.

Vendors continue developing industry-specific solutions with enhanced integration capabilities. Leaders have improved integration with manufacturing execution systems, enabling contextualized asset and process health analytics. Strategic acquisitions have expanded model-based systems engineering capabilities, enabling tighter hardware-software lifecycle integration across manufacturing

ecosystems. Enhanced connectivity remains a priority across all vendor categories, with platforms supporting hundreds of device types and protocols natively. Partnerships have added additional connectors for brownfield manufacturing capabilities, while cloud-based protocol capture without middleware and proprietary edge agents with offline buffering represent connectivity advances.

The 2025 IIoT data platform market demonstrates continued evolution toward comprehensive, AI-enabled solutions that bridge operational technology and information technology domains. The integration of generative AI, enhanced edge computing capabilities, and expanded cloud marketplace presence indicates a maturing market focused on delivering immediate business value while maintaining flexibility to adapt to evolving industrial requirements. The trend toward platform independence and specialized solutions suggests that focused, domain-specific offerings may continue to emerge alongside comprehensive enterprise platforms. This diversification enables organizations to select solutions that align with their specific operational needs and technical requirements while maintaining interoperability with existing systems. The growing emphasis on sustainability and decarbonization continues to align IIoT solutions with environmental objectives, helping businesses optimize energy use, reduce emissions, and meet regulatory compliance requirements.

ABB Ability Genix's value applications are one of its distinctive characteristics. These are industry-specific applications designed to address companies' specific needs and challenges.

Leaders

The 2025 industrial IoT Data Platform Technology Value Matrix leaders include ABB, AWS, Cumulocity, Hitachi, PTC, and Siemens.

ABB

ABB is a leader in the 2025 Industrial IoT Data Platform Value Matrix for its ABB Ability Genix IIoT offering. Due to its modular construction, users can customize the ABB Ability Genix's deployment to meet their specific requirements. The platform is designed to integrate locational data from geospatial systems, transactional data from information technology (IT), engineering design parameters from engineering technology (ET), and real-time operations data from operational technology (OT) into a single data lake. The objective of this integration is to present a comprehensive view of the data environment within an organization.

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solutions includes machine performance analytics, opportunity loss management, system anomaly detection, analyzer fleet monitoring, and asset performance management.

The ABB Ability Genix Industrial Analytics and AI Suite aims to enhance productivity and efficiency by utilizing data from multiple sources to provide insights. The platform connects technical, business, and operational systems and then uses analytics to transform this data into actionable insights.

ABB Ability Genix's provides a degree of deployment flexibility by enabling users to select the capabilities and modules that best suit their needs. The platform's components, which offer different analytics and data processing capabilities, such as the Contextual Fusion Hub and the Cognitive AI & Apps Hub, serve as additional examples.

ABB's partnership with Microsoft will integrate generative AI capabilities into its ABB Ability Genix Industrial Analytics and AI Suite, aiming to enhance efficiency and sustainability by utilizing contextualized data. The organization's partnership with China Telecom will establish a digitalization and industrial IoT lab in Hangzhou, China, to provide process automation and IoT solutions to various industries.

Recent updates include:

- **AI Data Center Solutions**
  In July 2025, ABB announced the launch of the SACE Emax 3 circuit breaker designed for AI data centers and advanced manufacturing resilience, featuring increased grid stability and cybersecurity components.

- **Enhanced Security Partnerships**
  In August 2025, ABB entered a global partnership with Dispel, integrating their OT Secure Remote Access platform for safer, managed remote services in industrial facilities.

AWS

AWS has been recognized as a leader in the 2025 Industrial IoT Data Platform Technology Value Matrix. Its platform serves various industries, including automotive, commercial, consumer, and industrial sectors. AWS provides the capability to securely connect and manage billions of devices, with analytics and storage functionality included. Recent enhancements in mid-2025 expanded out-of-the-box

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functionality, including advanced SQL support and ODBC driver integration for AWS IoT SiteWise Query API, native multivariate anomaly detection capabilities that enable predictive maintenance without requiring machine learning expertise, and standardized asset model interfaces that simplify scaling operations across thousands of assets while maintaining equipment flexibility. AWS IoT services emphasize security and ensure data protection across all application layers, utilizing preventative techniques such as encryption and access control, device security, and continuous monitoring using AWS IoT Device Defender.

AWS advanced its IIoT capabilities by enhancing data integration with S3 Tables and zero ETL, introducing the sub 5 MB IoT Greengrass Nucleus Lite for edge devices.

The platform provides ML integration, allowing users to develop models in the cloud and effectively deploy them to devices. AWS's IoT platform has been engineered to be scalable, readily supporting trillions of messages and directly integrating with additional AWS services. AWS offers device software solutions like FreeRTOS, AWS IoT Greengrass, and AWS IoT ExpressLink, making the management, installation, and modification of embedded devices straightforward.

Control and connectivity are provided through AWS IoT Core, AWS IoT Device Management, AWS IoT Device Defender, AWS SiteWise, and AWS IoT FleetWise. To manage and gain insights from the vast amounts of data generated by sensors, AWS delivers analytics services including AWS IoT SiteWise, AWS IoT TwinMaker, AWS IoT Analytics, and AWS IoT Events, targeting efficient data management, analysis, event detection, and the creation of virtual systems that replicate actual ones.

These offerings enable users to collectively optimize industrial processes, develop consumer applications, create applications for smart cities and buildings, work on home automation and security solutions, and develop connected car solutions. AWS's products provide substantial customization that is tailored to specific use cases.

Recent updates include:

- **Generative AI Integration**
  In December 2024, AWS introduced AWS IoT SiteWise, a generative AI tool for natural language interaction with industrial data, integrated with Amazon Nova Pro, which can be used for multimodal, no training visual defect detection and Amazon SageMaker Unified Studio, a single data and AI development environment for unified data prep, SQL analytics, and AI/ML development.

- **Enhanced Data Connectivity**
  In December 2024, AWS expanded data integration with S3 Tables and zero ETL connectivity between Amazon SageMaker Lakehouse, Amazon Redshift, and enterprise applications.

- **Edge Computing Advancements**
  In February 2025, AWS released AWS IoT Greengrass Nucleus Lite, a sub 5 MB runtime for resource constrained devices, adding dual stack IPv6 support, Hardware Security Module (HSM) integration via PKCS#11, and MQTT enabled SiteWise Edge gateways for secure messaging.

- **Industrial Protocol Expansion**
  In November 2024, AWS made AWS IoT SiteWise Edge on Siemens Industrial Edge generally available, enabling native Siemens app support. It also added Litmus Edge integration for 280+ industrial protocols, Belden CloudRail for 12,000+ IO Link/Modbus sensors, and real-time video streaming in AWS IoT TwinMaker via Amazon Kinesis Video Streams.

Cumulocity IoT offers extensive out-of-the-box connectivity supporting 170+ device types and 300+ protocols natively.

Cumulocity

Cumulocity is a leader in this year's Industrial IoT Data Platform Technology Value Matrix, recognized for its Cumulocity IoT Platform. Previously recognized as part of Software AG's Industrial IoT portfolio through 2024, Cumulocity is now positioned as a distinct vendor in 2025 following backing from experienced long-term strategic investors. Consisting of Cumulocity IoT Cloud and Cumulocity IoT Edge, the Cumulocity IoT platform provides immediate connectivity to various devices and protocols. The platform offers extensive out-of-the-box connectivity supporting 170+ device types and 300+ protocols natively. The platform enables connection through a developer's SDK if a device isn't certified. Comprehensive device management is enabled by the platform, encompassing planning, onboarding, monitoring, maintenance, and retirement. It allows companies to accelerate their market launch, modernize legacy equipment, and expand their existing infrastructure.

Cumulocity completed a management buyout from Software AG in January 2025, making it an independent IIoT platform.

Cumulocity's integration expertise makes incorporating IoT data into various services and systems straightforward. The platform accelerates application development through partner solutions, mobile applications, and Digital Twin capabilities integrated with Digital Twin

Manager and Streaming Analytics for flexible KPI definition and reporting.

Cumulocity now provides integration with leading AI/ML platforms through an open framework.

Cumulocity IoT supports flexible deployment with on-premises, in any cloud, or at the edge, designed specifically for edge devices with limited resources. The platform minimizes hardware and software fragmentation and promotes local data processing. The edge solution is designed for simple installation and upgrades, requiring minimal technical expertise.

Self-service tools with a configuration-driven approach, consistent across components from device connectivity to analytics, represent a fundamental design principle of Cumulocity IoT. The provider advocates a "develop once, deploy everywhere" strategy that simplifies development by utilizing consistent data, analytic models, and APIs across various deployment options. Time-series, streaming, process mining, and other specialized, self-service, context-aware industrial analytics strengthen this approach.

The platform facilitates the creation of IoT streaming analytics scenarios, enables reuse of machine learning models, and supports LPWAN device integration. Cumulocity provides a range of fast-track and Professional services to help businesses achieve faster results. Recent platform updates include enhanced time-series support affecting certain Measurements API endpoints, deprecation of the SMS TFA feature, Web SDK updates to Angular 14, and replacement of Cumulocity IoT Device SDKs with thin-edge.io. Additionally, the vendor plans to deprecate the Machine Learning Engine and Machine Learning Workbench while refocusing efforts on machine learning operations within Cumulocity IoT. The vendor's machine learning strategy reflects a shift toward a comprehensive AIoT ecosystem approach for the emerging AIoT market. Rather than maintaining proprietary ML tools, Cumulocity now provides integration with leading AI/ML platforms through an open framework, giving customers greater flexibility while focusing efforts on AI-ready data transformation and Edge AI orchestration. Future releases will include modifications to the offloading mechanism, affecting mixed data type support and potentially adopting the Apache Iceberg table format.

Recent updates include:

- **Independent Platform Transition**
  Completed a management buyout from Software AG in January 2025, making Cumulocity an independent IIoT platform. This

move is backed by major European investors, reinforcing agility and growth in the global IIoT market.

Hitachi

Hitachi provides no-code capabilities to enhance data pipeline quality and accelerate data delivery.

Hitachi is a leader due to the success of its Pentaho Intelligent DataOps Platform and the IoT Solutions applications it provides. It delivers solutions for managing substantial amounts of data, including collection, integration, and analysis, with an emphasis on self-service automation and orchestration. It also provides no-code capabilities to enhance data pipeline quality and accelerate data delivery, enabling users to design data pipelines using a drag-and-drop interface, both on-premises and in the cloud.

Another characteristic of the Pentaho platform is its capability to manage and integrate data from various sources, including time series, documents, transactions, and events, in a scalable and enterprise-grade manner. It also delivers business analytics capabilities, data flow coordination, and accelerated data integration. The platform can implement machine learning models written in R, Python, Scala, and Weka. It is also engineered to integrate with various cloud providers, including Azure, AWS, and GCP.

The platform's ability to incorporate metadata enables the reuse of transforms across projects, accelerating complex onboarding processes. Pentaho Data Catalog is a Pentaho platform component that provides automated data insight and discovery for structured and unstructured data, enhancing data quality and reducing the time required to discover information. Additionally, the platform includes a Data Storage Optimizer, which efficiently manages resource usage by automatically categorizing data into different tiers based on various factors, such as age, to reduce storage costs.

Pentaho's Hitachi Content Intelligence aims to optimize data transformation and simplify data discovery. It provides users with a systematic approach to locating and analyzing company data, whether stored on-site or in the cloud, structured or unstructured. The objective is to eliminate dark data and enhance data quality to provide valuable information for business decisions.

In addition to its flagship Pentaho Intelligent DataOps platform, Hitachi provides several Internet of Things (IoT) solutions. These solutions include Manufacturing Insights, Inspection Insights, Asset Performance Management, Field Services Management, and Enterprise Asset Management. Manufacturing Insights uses data-

driven operations to accelerate industrial digitalization. It aims to achieve accurate predictions in industrial processes while providing complete visibility across the supply chain. The solutions cover various areas, including production, maintenance, supply chain, quality, and health and safety.

Pentaho Data Catalog provides automated data insight and discovery for structured and unstructured data.

Inspection Insights uses visual intelligence to automate asset and infrastructure inspection processes. AI enables the analysis of images from various sources, including satellites, video, Lidar, and thermal images. The primary objectives are to reduce risks, enhance public safety, and extend the life of assets. Asset performance management improves asset performance and reduces expenses by providing prognostic, prescriptive, and predictive information. The software includes features for prioritizing maintenance, identifying issues, and monitoring asset conditions.

Field services management provides a scalable platform for inspection, maintenance, and repair services. This includes features for ensuring regulatory compliance, conducting comprehensive asset assessments using multiple criteria, deploying technicians via mobile devices, and managing the mobile workforce. Enterprise asset management achieves a balance between part availability and operational needs. This improves physical asset utilization and cost management and facilitates immediate access to business data for better decision-making. This approach aims to maximize resource efficiency by strategically assigning individuals with the necessary skills and talents to the most appropriate positions and time periods.

Hitachi continues to advance its IIoT strategy by delivering highly customizable and modular IIoT applications tailored to specific industry use cases and operational needs. The Pentaho Intelligent DataOps platform remains the cornerstone of this strategy, providing a robust foundation for enterprise-scale data management and analytics that supports complex IIoT initiatives across diverse sectors.

Hitachi maintains a strong emphasis on integrated services and consulting alongside its software solutions to maximize usability and streamline deployment. The vednor prioritizes helping clients accelerate cloud adoption across private, public, and hybrid environments. Its expertise covers application migration, modernization, and cost optimization while addressing the challenges of managing multi-cloud architectures. Security, privacy, and resilience remain central to Hitachi's approach, ensuring reliable operation across distributed and increasingly complex infrastructures.

Recent updates include:

- **Smart Building Solutions**
  Developed a new model of the BuilMirai IoT solution for small and medium buildings, launched in November 2024 as part of Lumada.

- **Autonomous Manufacturing**
  Updates in IoT for autonomous rail factories, leveraging machine learning, computer vision, and robotics for quality inspection and efficiency; deployed industry cloud accelerators for manufacturing and energy.

PTC's ThingWorx delivers modular building blocks, such as connectivity, analytics, domain models, and customizable interfaces.

PTC

PTC is a leader in this year's Industrial IoT Data Platform Value Matrix, recognized for its ThingWorx Platform. Designed for rapid industrial digital transformation, ThingWorx delivers modular building blocks, such as connectivity, analytics, domain models, and customizable interfaces, that accelerate solution development and deployment. The recent release of ThingWorx 10.0 brought major performance and intelligence improvements, including faster access to time-series industrial data streams, enhanced caching, and upgraded security frameworks designed to comply with stringent MedTech and aerospace and defense requirements.

The platform integrates data from diverse devices and applications to create comprehensive IIoT systems and augmented reality solutions. Its advanced analytics process complex time-series IoT data to deliver real-time insights, predictions, and prescriptive recommendations. Enhanced by the capabilities introduced in ThingWorx, users can interact directly with connected assets and control equipment performance, supporting PTC's ongoing Digital Thread strategy that ensures end-to-end traceability throughout the product lifecycle.

ThingWorx integrates closely with PTC's Service Lifecycle Management (SLM) tools such as ServiceMax and Product Lifecycle Management (PLM) offerings including Windchill Navigate. This integration ensures unified, secure access to both product and operational data, fostering enterprise-wide adoption of industrial insights to drive more informed decision-making across engineering, manufacturing, and service teams.

Supporting flexible deployment across on-premises, cloud, and hybrid environments, ThingWorx scales from edge devices to large enterprise

installations managing millions of assets. Its secure, embeddable connection services adapt to varied network topologies and communication contexts, while visual modeling and drag-and-drop tools allow rapid creation of industrial applications.

ThingWorx fuels AI-driven innovations such as contextualized IoT data integration in Generative Design via Creo and advanced computer vision within Vuforia

The ThingWorx platform offers a suite of applications, building blocks, and accelerators to streamline digital transformation and deliver value quickly. Applications like Navigate provide access to Windchill engineering data for different stakeholders, while Digital Performance Management (DPM) drives continuous improvement on the shop floor. Connected Work Cell (CWC) enhances frontline execution and worker productivity, and Real-Time Production Performance Monitoring (RTPPM) tracks OEE and availability. The Asset Monitoring and Utilization (AMU) app optimizes asset performance. For service improvements, PTC provides Software Content Management (SCM) and Remote Access and Control (RAC) solutions to remotely manage and secure connected products, boost uptime, reduce service costs, and unlock new revenue opportunities. With a partner ecosystem of over 100 partners, PTC supports comprehensive digital thread and transformation use cases.

Integrated with Kepware, ThingWorx captures and contextualizes data from the plant floor to edge and field operations, democratizing real-time access and delivering actionable insights that improve operational intelligence. Leveraging scalable descriptive, predictive, and prescriptive analytics powered by machine learning, ThingWorx helps manufacturers diagnose trends, detect anomalies, and recommend optimal interventions to boost efficiency, anticipate failures, and reduce downtime. By connecting IIoT data with PTC's broader portfolio, ThingWorx fuels AI-driven innovations such as contextualized IoT data integration in Generative Design via Creo and advanced computer vision within Vuforia, creating a high-performance digital thread for comprehensive product lifecycle intelligence.

Recent updates include:

- **Platform Performance Enhancement**
  Released ThingWorx 10.0 in June 2025, focused on performance, security, and intelligence; highlights include faster access to time-series industrial data streams, caching and performance improvements, and upgraded security frameworks to meet MedTech and A&D compliance.

- **Strategic Acquisition**
  In mid-2025, PTC acquired IncQuery Group to expand model based systems engineering and strengthen ALM capabilities, enabling tighter hardware software lifecycle integration and improved cross disciplinary collaboration.

Siemens

Siemens is a leader in the 2025 Industrial IoT Data Platform Value Matrix. The solution incorporates networking technologies that seamlessly connect multiple systems and assets to the cloud. Its cloud-based architecture allows it to scale according to business requirements. To deliver comprehensive analytics understanding, the system can consolidate data from numerous enterprise systems, including PLM, CRM, ERP, SCM, SLM, and MES.

Siemens launched Insights Hub Production Copilot, using generative and agentic AI to answer operational queries, recommend solutions, and enable root cause analysis.

Custom low-code applications are supported by Mendix, Insights Hub and Siemens Industrial Edge, enabling businesses to customize solutions to their specific requirements. The platform claims to enable the convergence of IT and OT technologi es to enhance productivity and reduce costs. The system offers a unified point of contact for assets across physical, web-based, and organizational environments, allowing data to be tailored to specific processes and systems. It supports various protocols for system integration and data modeling.

Siemens Industrial Edge provides a scalable, secure platform for running industrial applications directly on the shop floor. It offers centralized management for edge devices and software updates across locations, along with a broad ecosystem of Siemens and third-party apps. Built to industrial security standards, it seamlessly integrates with cloud and on-premises environments.

The platform also incorporates asset performance data, which can be compared to digital twins for optimization. Advanced analytics can be deployed anywhere from the edge to the cloud, including ready-to-use applications. Machine learning and artificial intelligence (AI) can be utilized to create insights for further optimization. Its integrated remote services, featuring a secure communication architecture, enable remote maintenance and asset health monitoring.

The system can execute predictive models using machine learning to optimize quality while minimizing potential failures. Customizable data dashboards are available for complex analytics, and the platform can be configured to meet specific security requirements, data services, and deployment options.

Recent updates include:

- **AI-Powered Operational Intelligence**
  In December 2024, Siemens launched Insights Hub Production Copilot, using generative and agentic AI to answer operational queries, recommend solutions, and speed root cause analysis, alongside Copilot Studio for building custom AI agents and skills.

- **Energy Optimization Solutions**
  In January 2025, Siemens released Insights Hub Energy Optimizer, extending Energy Manager with predictive and optimization functions for energy planning, peak shaving, and load balancing.

- **Manufacturing System Integration**
  Throughout 2025, Siemens enhanced integration of Insights Hub with manufacturing execution and planning systems through Opcenter Intelligence, enabling contextualized asset and process health analytics.

- **Quality Management Advancement**
  In early 2025, Siemens introduced a traceability and containment application to identify quality issue origins and isolate affected production batches.

- **Edge Computing Expansion**
  In April 2025, Siemens expanded its Industrial Edge ecosystem with the SIMATIC S7 1500V virtual controller with safety, introduced devices such as the IPC BX 59A with Nvidia GPU and ARM based IoT2050, and integrated connectivity with AWS SiteWise and Snowflake.

- **Platform Scaling Improvements**
  In April 2025, Siemens also released new Industrial Edge scaling capabilities, including unified connector configuration and seamless Mendix app integration.

- **Operational Analytics Enhancement**
  Between April and June 2025, Siemens added features across its portfolio, including microstop/downtime/reject analysis in OEE, expanded preventive maintenance and vibration monitoring in Asset Health & Maintenance, and process analysis enhancements in Quality Prediction.

Siemens can consolidate data from numerous enterprise systems, including PLM, CRM, ERP, SCM, SLM, and MES, to deliver comprehensive analytics understanding.

Experts

The 2025 industrial IoT Data Platform Technology Value Matrix experts include AVEVA, Bosch, Inductive Automation, and Microsoft.

AVEVA's comprehensive marketplace provides an extensive collection of pre-built applications and connectors.

AVEVA

This year's Industrial IoT Data Platform Technology Value Matrix designates AVEVA as an expert through its comprehensive IIoT data platform solutions. The AVEVA platform is designed to optimize industrial operations via an open and integrated architecture, facilitating data connectivity across varied systems and devices. Through AVEVA's extensive portfolio, including AVEVA Edge and AVEVA Insight, the platform enables organizations to leverage real-time data for operational efficiency and strategic decision-making.

AVEVA's platform consolidates disparate data sources, from legacy systems to high-performance IoT devices. This integration is accomplished through the AVEVA Data Hub, which functions as a centralized repository for collecting, contextualizing, and standardizing industrial data. The platform's emphasis on interoperability includes comprehensive support for industry protocols and standards, ensuring compatibility across various industrial environments.

A distinguishing characteristic of the AVEVA platform is its sophisticated analytics and AI capabilities, which facilitate predictive maintenance, asset performance management, and energy optimization. By incorporating these capabilities directly into the platform, AVEVA enables users to deploy machine learning models and analytics at the edge, ensuring timely insights and responsive actions. Furthermore, the platform's cloud-native architecture supports scalable deployment, making it appropriate for enterprises across all sizes.

The platform's adaptability is enhanced through AVEVA's comprehensive marketplace, which provides an extensive collection of pre-built applications and connectors. These resources enable rapid deployment of IoT solutions customized to specific industrial requirements, minimizing time to value. Additionally, AVEVA Connect delivers intuitive dashboards and real-time monitoring capabilities. This enables users to make well-informed decisions based on a comprehensive operational view, supported by high-performance data visualization tools.

Recent updates include:

- **Security Enhancement Program**
  Released multiple security updates for industrial IoT platforms including PI Data Archive, SuiteLink Server, and PI Web API throughout June–August 2025.

- **Digital Transformation Acceleration**
  Continued updates to AVEVA Edge Management, Data Hub, and industrial information management solutions, driving hybrid cloud migration, AI integration, and digital twin enablement for manufacturing and energy customers.

Bosch

Bosch, recognized for its Bosch IoT Suite, is an expert in this year's Industrial IoT Data Platform Value Matrix. This suite delivers a comprehensive solution for edge analytics, data management, and IoT device management. It addresses all aspects of IoT device lifecycle management, including updating, regulating, and servicing.

Bosch's analytics and IoT edge capabilities enable edge devices to deliver AIoT.

Bosch's analytics and IoT edge capabilities enable edge devices to deliver AIoT (Artificial Intelligence of Things). The IoT Suite from Bosch is engineered to be adaptable enough to work with a diverse range of devices, including building gateways, urban infrastructure sensors, and connected vehicles. Due to its versatility, it can be utilized for a broad spectrum of corporate use cases that require specialized IoT solutions.

Bosch has been actively engaged in the open-source community for more than eight years, contributing approximately 1.5 million lines of code to various projects. This demonstrates their significant commitment to the community. The corporation has initiated six open-source IoT projects and actively participates in the community. Bosch's collaborative approach and dedication to the transparent development and distribution of IoT technologies are evidenced by this open-source engagement.

Recent updates include:

- **Hybrid Cloud Robotics**
  In October 2024, Bosch partnered with SUSE to deliver hybrid-cloud control and monitoring architecture for industrial robots, featuring real-time monitoring, secure automation, and scalable edge/cloud integration.

- **Enhanced Visualization**
  In August 2024, the vendor deployed a new version of HERE Maps API in Bosch IoT Insights for upgraded satellite/terrain visualization.

- **Platform Security and AI**
  Bosch IoT Suite underwent updates, emphasizing secure over-the-air software rollout, enhanced remote device management, and continuous AI feature integration for connected systems.

Ignition Edge is a compact version of the platform specifically engineered for edge computing in industrial environments.

Inductive Automation

Inductive Automation is positioned as an expert in the 2025 Industrial IoT Data Platform Technology Value Matrix, acknowledged for its Ignition IIoT offerings. Ignition IIoT by Inductive Automation is a platform that connects industrial devices and systems, allowing organizations to collect, process, and leverage data effectively throughout their operations. At its foundation, Ignition IIoT incorporates the Message Queuing Telemetry Transport (MQTT) protocol, recognized for its efficiency and lightweight characteristics, to enable real-time data communication between devices, edge gateways, and business applications.

Ignition IIoT functions as a connector between operational technology (OT) and information technology (IT). It starts at the edge, gathering data from programmable logic controllers (PLCs), sensors, and other industrial devices. This data is transmitted to an MQTT server through edge gateways, establishing a streamlined data pipeline. The MQTT server then distributes the data, making it available to various subscribers, including SCADA systems, business applications, or any other connected systems within the enterprise.

The platform supports flexible and scalable architecture, enabling organizations to deploy it across multiple locations, whether on-premises, in the cloud, or in a hybrid configuration. This adaptability allows businesses to monitor and control their industrial processes remotely, visualize real-time data through dashboards, and integrate it with enterprise systems such as ERP and CRM platforms.

Organizations utilize Ignition IIoT for enhanced visibility and control over their industrial processes. The platform enables centralized monitoring, real-time data collection, and automated decision-making processes by connecting disparate devices and systems. This connectivity helps companies enhance operational efficiency, minimize downtime, and make data-driven decisions to optimize production.

For instance, in a manufacturing environment, Ignition IIoT can gather data from various machines on the plant floor, analyze it to identify inefficiencies or potential issues, and then initiate automated responses or alerts. Additionally, the platform's scalability means that as a business expands or as more devices are added, Ignition IIoT can grow without requiring substantial reconfiguration.

Ignition Edge is a compact version of the platform specifically engineered for edge computing in industrial environments. It enables data collection, processing, and visualization directly at the network's edge. This version is optimal for remote sites or situations where data needs to be processed locally before being transmitted to a central server. Ignition Edge supports unlimited tags and device connections, making it suitable for collecting data from industrial devices like PLCs and sensors. It can execute scripts, run REST APIs for third-party applications, and even function as an OPC UA server. With its capability to transmit data to MQTT brokers using the Sparkplug specification, Ignition Edge is essential in ensuring that data is not isolated at the edge but synchronized with central systems for broader analysis and control.

Ignition Cloud Edition is a cloud-optimized version of the Ignition platform designed to utilize the scalability and flexibility of cloud computing. This version integrates seamlessly with major cloud providers like AWS and Microsoft Azure, enabling organizations to extend their operations into the cloud without significant on-premises infrastructure. The Cloud Edition maintains many of the core features of the standard Ignition platform while focusing on cloud-specific capabilities such as elastic scaling, pay-as-you-go pricing, and easy integration with cloud-native services like machine learning and business intelligence tools. It allows organizations to dynamically scale their computing power and data storage based on demand without investing in and maintaining physical server hardware.

Recent updates include:

- **Enterprise Platform Expansion**
  Expanded role as an enterprise enablement platform, bridging IT and OT for scalable digital transformation. New infrastructure features support native container orchestration, JSON-based source control, and full-stack integration.

Microsoft Fabric has matured to support a broad range of industrial workloads, including complex data transformation, real-time analytics, and advanced AI-driven insights, all within a lake-centric architecture powered by OneLake.

- **Enhanced Communication Security**
  In July 2025, Inductive Automation announced updates to security, MQTT integration, and data modeling to support remote communication and enterprise data strategy.

Ignition IIoT incorporates the Message Queuing Telemetry Transport (MQTT) protocol with lightweight characteristics to enable real-time data communication.

Microsoft

Microsoft is an expert in this year's Industrial IoT Data Platform Value Matrix, recognized for its Azure IoT Platform. Azure IoT is a collection of Microsoft-managed cloud services engineered to manage, supervise, and connect large-scale IoT ecosystems, with the capacity to scale to millions of devices.

While Azure IoT Hub provides enterprises the flexibility to manage and expand IoT devices from edge to cloud, this unified platform reduces the operational burden and associated costs of maintaining and developing IoT systems. Azure Digital Twins, Azure IoT Edge, Azure Percept, Azure Sphere, Windows for IoT, and Azure RTOS are additional solutions that fall under the Azure IoT umbrella. These technologies provide customers with access to features including device administration, IoT development, edge and device support, analytics, and expanded operating system support.

Azure IoT delivers specific capabilities to industries that include energy, manufacturing, retail, healthcare, logistics, and transportation. Microsoft's open IIoT ecosystem is one of its distinctive features; it encourages partnerships with other IIoT platform providers to serve users who require specialized features that aren't immediately available with Azure or don't have the IT resources to develop them independently.

Microsoft has continuously enhanced its analytics capabilities with Microsoft Fabric, an integrated platform that unifies Azure Data Factory, Azure Synapse Analytics, and Power BI into a cohesive solution. Fabric has matured to support a broad range of industrial workloads, including complex data transformation, real-time analytics, and advanced AI-driven insights, all within a lake-centric architecture powered by OneLake. This unified data lake integrates seamlessly with multiple cloud storage providers and leverages open data formats like Delta Lake on Parquet files, enabling scalable and interoperable industrial data management.

Microsoft Fabric incorporates AI capabilities via the Azure OpenAI Service, featuring a conversational interface called Copilot for streamlined data operations. Additionally, the platform integrates with

Microsoft 365 applications, enabling data access directly within these tools, and offers a unified computing pool to power all workloads efficiently.

Recent updates include:

- **Windows IoT Enterprise Evolution**
  In October 2024, released Windows 11 IoT Enterprise LTSC 2024. Features include extended hardware flexibility, advanced wireless display, enhanced security, and AI-powered management for fixed-function IoT devices.

- **Manufacturing Industry Insights**
  Published the 2024 IoT Signals report outlining manufacturers' adoption of Azure IoT for scalable, secure, AI-driven automation and adaptive cloud transformation in factories.

- **Industrial Transformation Platform**
  In April 2024, Microsoft launched industrial transformation accelerators with Azure IoT Operations, providing flexible integration across edge and cloud environments.

Braincube's analytics capabilities are built around CrossRank AI, a proprietary engine that performs multivariate analysis across thousands of variables.

Accelerators

The 2025 industrial IoT Data Platform Technology Value Matrix accelerators include Braincube, Exosite, Litmus, Rockwell Automation, and Zoho.

Braincube

Braincube is recognized in this year's Industrial IoT Data Platform Value Matrix for its focus on driving productivity in process manufacturing. The Braincube productivity management system provides deployment flexibility across cloud, edge, hybrid, and on-premises environments. Its design is built for process manufacturers to achieve productivity gains aligned with the WEMEQ framework: Waste reduction, Energy efficiency, Material optimization, Efficiency, and Quality.

Braincube's analytics capabilities are built around CrossRank AI, a proprietary engine that performs multivariate analysis across thousands of variables. This technology identifies the most influential performance drivers and provides actionable recommendations to optimize efficiency, quality, and cost.

The vendor's digital twin capabilities center on its patented Product Clones, digital replicas that integrate real-time and historical data from industrial sources like PLCs and sensors. By contextualizing information around specific products, assets, or production events, Product Clones provide a complete lifecycle view from raw materials to finished goods. The Product Clone Builder allows users to tag data points by process relevance and location, and when combined with CrossRank AI, enables teams to test variable adjustments virtually and predict outcomes before implementing changes on the production line.

Exosite's Murano IoT Platform, designed for machinery, equipment, and product insights, digitizes analog gauges enables predictive maintenance.

With more than 250 customer sites across 35 countries, and offices in EMEA, North America, and Latin America, Braincube combines global reach with local expertise. The system is multilingual and scalable, enabling manufacturers to collaborate across sites and transfer knowledge.

The platform's unified architecture collects, integrates, and organizes data from both IT and OT systems. It supports over 250 connectors and integrates with more than 25 business intelligence tools. Its suite includes solutions for condition monitoring, process and quality control, advanced analytics, modeling, predictive maintenance, and autonomous factory operations.

Braincube's platform can be used standalone or integrated into existing systems. It offers open APIs, a Studio app, and managed services for custom app development. Python integration accelerates add-on creation and deployment. Additionally, Braincube’s low-code and no-code tools enable frontline teams, process engineers, and decision-makers to visualize, analyze, and act on data directly.

Exosite

Exosite is an accelerator in this year’s Industrial IoT Data Platform Value Matrix, recognized for its Murano IoT Platform and accompanying solutions. Murano is primarily offered as a managed service deployable in public clouds, with on-premises versions available to address strict data locality requirements. Its ExoSense condition monitoring application enables fast, domain-specific deployment, while the ExoEdge tool performs industrial protocol conversion to integrate OT data streams. Designed for machinery, equipment, and product insights, the platform digitizes analog gauges, reduces on-site visits, and enables predictive maintenance. It also offers custom hardware integrations, analytics to improve operations and reduce downtime, and rule-based real-time notifications. Murano allows users to manage multiple organizations

and rapidly deploy white-label and segmented instances, ensuring security and scalability. The platform supports on-premises deployment for government and regulatory use cases. ExoSense includes Maintenance Work Order features, enabling users to track and manage work requests directly within the application, reducing administrative overhead and unplanned downtime. Additionally, Asset Management capabilities allow metadata, subsystems, and asset types to be categorized and tracked with greater granularity, improving operational organization.

Litmus's Applications Marketplace includes more than 50 pre-loaded public apps and supports containerized custom applications.

Litmus

Litmus Edge Platform is an accelerator in this year's Industrial IoT Platform Technology Value Matrix for its hardware-agnostic solution delivered via a centralized, easy-to-use management interface. It simplifies industrial data infrastructure through DeviceHub, offering over 275 pre-built industrial drivers that enable connections to PLCs, DCS, SCADAs, historians, and more, ensuring consistent and reliable data through collection and normalization.

The platform supports real-time edge analytics, featuring statistical tools and predefined KPIs to process data locally before forwarding it to the cloud. Its Applications Marketplace includes more than 50 pre-loaded public apps and supports containerized custom applications so users can build, deploy, and manage IIoT solutions on a single platform. Litmus also delivers edge-based machine learning inference with built-in integrations for cloud services like GCP, AWS, and Microsoft Azure.

Litmus Edge Manager enhances the ecosystem by offering centralized orchestration and management, enabling hardware-agnostic over-the-air updates, mass provisioning templates, remote device configuration, digital twin administration, and ML orchestration. The platform's standout features are its data contextualization through a unified namespace for real-time machine learning and decision workflows, combined with rapid scalability thanks to DeviceHub's integration of capabilities typically found across multiple systems.

Recent updates include:

- **Platform Enhancement and Security**
  Litmus Edge and Litmus MCP Server updates in May 2025. Added DigiCert integration, new AI/ML model management dashboard, streamlined license management, and modular edge device deployment using open protocols.

- **AWS Cloud Integration**
  In November 2024, Litmus announced AWS IoT SiteWise integration, enabling scalable hybrid edge-cloud architectures for data aggregation and analytics.

- **Edge Management Improvements**
  In September 2024, Edge Manager suite was upgraded to offer mass over-the-air updates, advanced error handling, and expanded security certificates management for large IoT operations.

Litmus Edge Platform simplifies industrial data infrastructure through DeviceHub, offering over 275 pre-built industrial drivers that enable connections to PLCs, DCS, SCADAs, historians, and more.

Rockwell Automation

Rockwell Automation is an accelerator in the 2025 Industrial IoT Data Platform Technology Value Matrix, acknowledged for its ThingWorx IIoT platform and FactoryTalk DataMosaix DataOps solution. The platform is engineered to assist organizations in connecting and managing industrial devices, applications, and data throughout their operations. It delivers a unified interface for managing various automation devices and software applications, enabling users to monitor and control these assets in real-time.

ThingWorx IIoT provides tools to connect disparate devices and data sources across an enterprise. This connectivity allows organizations to collect and consolidate data from different operational areas, establishing a single, secure access point for industrial data. Users can manage, monitor, and control their devices through an intuitive interface, streamlining the integration of legacy systems and ensuring reliable communication across the enterprise.

FactoryTalk DataMosaix represents another Rockwell Automation solution that integrates data from IT, OT, and ET sources to establish a unified industrial data management and analysis environment. Built on the Cognite Data Fus ion (CDF) platform, it enables organizations to access and analyze data from various industrial assets in real-time. The platform's cloud architecture enables remote monitoring and supports the digital transformation of industrial operations by connecting assets to the cloud. The platform also integrates with edge devices through FactoryTalk Optix, supporting industrial protocols such as Modbus, EtherNet/IP, and OPC UA, to ensure seamless data flow from edge to cloud.

FactoryTalk DataMosaix also provides tools for data contextualization and application development, establishing it as a versatile solution for

enhancing operational efficiency and enabling predictive maintenance capabilities.

Rockwell Automation expanded to AWS Marketplace, enhancing SaaS offerings for industrial data operations.

Recent updates:

- **AWS Marketplace Expansion**
  In April 2025, Rockwell Automation expanded cloud-based FactoryTalk® DataMosaix™ solution and Fiix® CMMS to AWS Marketplace, enhancing SaaS offerings for industrial data operations and predictive maintenance.

Zoho

Zoho is an accelerator in the 2025 Industrial IoT Data Platform Technology Value Matrix, recognized for its Zoho IoT platform. Zoho IoT is a user-friendly, scalable low-code platform that enables businesses to build and deploy custom IoT solutions without extensive technical expertise. The platform provides intelligent insights and streamlined operational analysis through seamless collection and management of IoT device data in real-time, empowering organizations to automate processes and make data-driven decisions effortlessly.

The Zoho IoT platform features a cloud-based architecture designed to connect, manage, and analyze data from diverse IoT devices across various industries. The platform supports tech-agnostic connectivity with seamless integration capabilities for sensors and gateways using standard protocols including HTTPS, MQTT, CoAP, BACnet, Modbus, LoRaWAN, Bluetooth, and ZigBee. With its low-code development environment, businesses can build simple dashboard-only applications or complex enterprise-grade solutions using drag-and-drop modeling, visualization, and automation tools. The platform is designed to scale from small deployments to supporting thousands of devices and billions of data points.

The platform's technical architecture emphasizes security, scalability, and ease of deployment. Zoho IoT incorporates high-performance security features including end-to-end encryption, multi-factor authentication, access controls, and device authentication to ensure data privacy and compliance with global standards. The platform supports both cloud-based and edge processing capabilities, enabling lower latency and faster computation through edge intelligence. Development tools include visual modeling capabilities, customizable dashboards, automated workflow creation, and comprehensive APIs

for integration. The platform also features AI-powered capabilities for predictive maintenance, anomaly detection, and system optimization.

Zoho IoT integrates seamlessly with other Zoho business applications including CRM, Analytics, and Creator, providing a comprehensive solution for IoT-powered business strategies. The platform offers APIs and documentation to facilitate integration with third-party systems and applications, enabling businesses to connect their IoT solutions with existing enterprise systems. Multi-tenancy support allows service providers to manage multiple independent clients with role-based access controls and data segregation. The platform's compatibility with third-party hardware ensures seamless integration into existing systems, allowing businesses to scale rapidly without infrastructure constraints.

Zoho IoT supports tech-agnostic connectivity with integration capabilities for sensors and gateways using standard protocols including HTTPS, MQTT, CoAP, BACnet, Modbus, LoRaWAN, Bluetooth, and ZigBee.

The platform serves diverse industries with specific applications tailored to manufacturing, energy management, smart buildings, healthcare, logistics, and agriculture sectors. In manufacturing environments, Zoho IoT enables predictive maintenance, equipment monitoring, and production optimization. For smart buildings, the platform provides unified facility management, energy monitoring, and tenant services. Energy management applications include consumption tracking, efficiency optimization, and renewable energy monitoring. The platform also supports use cases in vehicle tracking, environmental monitoring, and asset management across various industrial sectors.

Recent updates include:

- **AI-Powered Anomaly Detection**
  In September 2024, Zoho introduced AI-based anomaly detection for early deviation alerts, enabled cloud-based OPC UA data capture without middleware, and launched a white-labeled client portal for OEMs and plant teams to track managed assets and products.

- **Enhanced Automation and Monitoring**
  In February 2025, Zoho expanded low-code workflow automation with alerts, escalations, and maintenance tasks, enhanced machine monitoring with comprehensive OEE tracking and fault detection and deployed a conversational AI assistant for machine insights and visualization.

- **Edge Computing and Analytics**
  In March 2025, Zoho released a proprietary Edge Agent featuring offline buffering and rapid PLC connectivity, implemented downtime analysis tools for categorizing stoppages and actionable insights, and added real-time condition monitoring including vibration, temperature, and energy KPIs.

Core Providers

The 2025 Industrial IoT Data Platform Technology Value Matrix Core Providers include Eurotech, Flutura, Samsung, Uptake, and Wiliot.

Eurotech

Eurotech's Everyware Cloud IoT Platform is a core provider in this year's Industrial IoT Data Platform Value Matrix. Everyware Cloud manages IoT gateways and devices in the field, handling configuration and full application lifecycle. It integrates with downstream apps, business processes, and dashboards to accelerate field data collection. The platform ensures secure and open device communication using standards-based interfaces, employing an ISO certified MQTT protocol with open payload formats. Notably, the same MQTT connection used for telemetry also allows remote device control, facilitating maintenance and on-site troubleshooting without physical visits.

Eurotech's Everyware Cloud IoT Platform ensures secure and open device communication using standards-based interfaces, employing an ISO certified MQTT protocol with open payload formats.

Everyware Cloud supports the collection, storage, and analysis of sensor or device data for actionable business insights, offering decision-making tools, instant analytics, and real time data subscriptions. It delivers reliable, enterprise grade remote device connectivity and scales from pilot to full deployments. RESTful APIs enable seamless integration with existing IT systems. The platform's multi-tenant architecture ensures cost effective deployment with strict tenant isolation. Security is further enhanced through Role-Based Access Control (RBAC), device side certificate management, provisioning workflows, batch updates, an admin dashboard, and an integrated VPN server.

To reduce bandwidth needs, Eurotech offers integrated edge hardware and software solutions. The Everyware Software Framework (ESF), an enterprise grade version of open source Eclipse Kura, provides advanced security, diagnostics, and smooth integration with Everyware Cloud. Built on a Java/OSGi foundation, ESF allows dynamic updates and cross platform portability, avoiding vendor lock

in. Developers can easily connect field equipment, build edge applications, and route data to cloud services.

Flutura

Flutura is an accelerator in the 2025 Industrial IoT Data Platform Value Matrix, recognized for its Industrial IoT and AI Platform. The "Cerebra" OEM Enablement App is offered by Flutura, featuring minimal latency, edge signal detection from IoT sensors, and the capability to create digital twins or construct comprehensive 360-degree asset models, including subsystem maintenance and calibration. Beyond facilitating smart signal transmission, this digital twinning functionality optimizes network monitoring costs. Cerebra also enables real-time streaming edge diagnostics.

Flutura's platform identifies the onset of failure modes and understands the pathways leading to failure development, as evidenced by its asset diagnostic capabilities.

The platform identifies the onset of failure modes and understands the pathways leading to failure development, as evidenced by its asset diagnostic capabilities. It delivers forensics on the warning signs of industrial failure and assists in calculating Internet of Things sensors' Residual Useful Life (RUL). Furthermore, the platform features hundreds of pre-built asset-specific diagnostic tests for fault isolation and detection processes. Flutura integrates physics, statistics, and heuristic models on sensor streams for asset prognostics. Advanced machine learning algorithms identify and profile novel fault mode signatures. The platform's substantial capabilities are demonstrated by its ability to triangulate signals across extensive industrial data pools and correlate latent signals to actual equipment outcomes.

Another component of Flutura's platform, Edge Intelligence, operates with Dell 5000 series gateways that incorporate Intel processors. This collaboration enables edge analytics and PLC control. Cerebra Vision Intelligence was developed through Flutura and Intel's partnership. Using video streams, Cerebra Vision Intelligence can detect irregularities almost instantaneously. It provides continuous monitoring capabilities through computer vision and machine learning, with applications ranging from security and surveillance to health and safety compliance. This solution includes features for leakage, vehicle, and intrusion detection, among other capabilities.

Flutura enables the construction and sharing of analytical processes and supports complex engineering analysis without coding requirements. Since its acquisition by Accenture in 2023, Flutura has been fully integrated and is now supported internally by Accenture's AIP+. This managed-service architecture includes pre-integrated software components designed for rapid development and scalable

deployment of artificial intelligence solutions. AIP+ delivers platform services that seamlessly integrate with cloud and existing infrastructures, offering reusable IP, advanced analytics, AI capabilities, and continuous support. Leveraging over 250 applications and 600 datasets, it prioritizes rapid data operationalization, ensures compatibility with current technologies, and provides GDPR and CCPA-compliant data governance. Additionally, it offers configurable components as a service, along with a pay-per-use financial model, low-code/no-code technology-independent tools, industry-specific AI scalability, automated data science benefits, and a comprehensive range of services from data governance to implementation.

Samsung's Brightics IoT platform prioritizes security, providing multiple authentication approaches, including SEAL, OAuth, and SSL, delivering comprehensive end-to-end protection.

Samsung

Samsung is a Core Provider in this year's Industrial IoT Data Platform Value Matrix, acknowledged for its Brightics IoT platform. The solution enables IoT device connectivity, allowing organizations to gather and process information from multiple legacy systems while supporting data integration into existing infrastructures.

Prioritizing security, Brightics IoT provides multiple authentication approaches, including SEAL, OAuth, and SSL, delivering comprehensive end-to-end protection with additional encryption capabilities. The platform utilizes key management systems for information storage, providing protection against potential security breaches.

Brightics IoT's IoT-enabled remote monitoring capabilities can identify devices and issues in real-time, reducing operational costs through routine maintenance checks and software updates. The solution supports diverse communication protocols and customizable adaptors while effectively incorporating edge computing to handle data processing in local environments, ensuring rapid data analysis and anomaly identification.

The platform's API gateway and management functionality enables registration, publication, and upgrading of various APIs, featuring capabilities such as load balancing for backend APIs and secure API key access. Additionally, it incorporates a comprehensive end-to-end security framework covering all IoT services and employs machine learning algorithms for anomaly detection.

The solution functions as a smart manufacturing platform, providing real-time monitoring capabilities and facilitating seamless data exchange between ERP, SCM, and PLM systems, helping factory

managers with equipment oversight and cost management. Furthermore, Brightics IoT incorporates monitoring capabilities for outdoor equipment and diverse industrial machinery including printers, medical devices, and cooling systems, enabling efficient operations and proactive error identification.

Recent updates:

- **SmartThings Platform Integration**
  Announced major update to SmartThings in May 2025, integrating SmartThings with Samsung Health for optimized sleep, broader Calm Onboarding compatibility, and deeper Matter 1.4 standard support for device interoperability and energy management.

Uptake

Uptake is a Core Provider in this year's Industrial IoT Data Platform Value Matrix. The company emphasizes predictive maintenance initiatives and industry-focused IIoT applications through its Uptake Federal and Uptake Fleet offerings. Additionally, the vendor delivers Uptake Fusion, an industrial data hub that enables organizations to collect and consolidate information into analytical platforms for reporting, monitoring, and intelligence generation.

Uptake Fleet is designed to optimize fleet operations by minimizing fuel consumption, maximizing operational availability, and decreasing maintenance costs. The solution emphasizes predictive maintenance capabilities to support preventive maintenance strategies. Key features encompass work order analytics, sensor data analysis, advanced filtering capabilities, anomaly identification and failure forecasting, plus comprehensive asset information.

Both Uptake Federal and Uptake Fleet represent distinct platforms targeting public sector applications and fleet management operations. These solutions streamline operational processes and maintenance activities, optimize inventory management, and enhance workforce productivity. Uptake Federal concentrates primarily on predictive maintenance to enhance public sector operational readiness. The platform utilizes machine learning algorithms to deliver predictive and prognostic maintenance capabilities, supporting comprehensive decision-making processes across organizations. Uptake Federal includes survival analysis, downtime evaluation, cost analysis, failure prediction with prognostic recommendations, and risk assessment at both asset and subsystem levels.

Uptake Fleet is designed to optimize fleet operations by minimizing fuel consumption, maximizing operational availability, and decreasing maintenance costs.

Uptake Fusion operates as a cloud-native industrial data analytics platform serving process industries including mining, pulp and paper, chemicals, oil and gas, power generation, and petrochemicals. The platform features connectivity with OSI, Ignition, Rockwell Automation, GeoSCADA, SQL, OPC, and additional systems, demonstrating excellence in data transfer and contextualization from historians, IoT devices, and operational technology systems. The platform consolidates this information for analysis by data scientists and operators across the organization. It offers APIs for integration with analytical platforms including Azure Synapse, Microsoft Power BI, and PowerApps. The solution works with Azure-native services such as Azure IoT Hub, Data Explorer, and Digital Twin.

Uptake Fusion aims to remove obstacles that limit industrial data utilization by consolidating information from multiple sources.

Fusion can be deployed as SaaS on selected cloud platforms, utilize existing asset hierarchies, and automate data quality management. By consolidating information from multiple sources and platforms while emphasizing security and scalability, it aims to remove obstacles that limit industrial data utilization. The platform supports diverse industrial analytical applications and enables self-service analytics through direct integration with existing BI, machine learning, and analytics tools. Its core objective involves breaking down data silos that result in underutilized operational data and securely migrating it to cloud environments for enterprise-wide accessibility.

For self-service analytics and reporting capabilities, the platform automatically maintains data streams and their contextual information. The platform also supports pre-configured solutions for monitoring essential business KPIs, including energy expenses, worker safety and retention metrics, operational flexibility, downtime analysis, asset return on investment, and operational expenditures.

Wiliot

Wiliot is a core provider in the 2025 Industrial IoT Data Platform Technology Value Matrix, recognized for its Wiliot Intelligence Platform. Wiliot's platform connects the digital and physical worlds using IoT Pixels, postage stamp-sized, battery-free compute devices that power themselves by harvesting radio frequency energy. The platform transforms supply chains into intelligent networks that predict issues, prevent waste, and deliver measurable results through continuous, real-time sensing without human intervention.

The Wiliot Intelligence Platform operates as a "Sensing as a Service" solution that combines cloud-based machine learning with ambient IoT technology. The platform uses an ecosystem of low-cost Bluetooth

devices to automatically read IoT Pixels and relay movement and condition data of nearby assets. Wiliot's cloud-based algorithms continuously analyze sensory data to translate raw information into physical domains such as temperature changes, location tracking, and movement detection. The platform supports trillions of connected devices and provides real-time visibility into supply chains.

Wiliot's platform connects the digital and physical worlds using IoT Pixels, postage stamp-sized, battery-free compute devices that power themselves by harvesting radio frequency energy.

The Wiliot system consists of three integrated components. IoT Pixels serve as the core sensing technology, ultra-low-power tags that can be embedded into products during manufacturing. These sensors deliver temperature monitoring, tamper detection, humidity sensing, motion tracking, fill rate measurement, and location tracking. The Ambient IoT Network comprises Bluetooth-enabled devices that energize IoT Pixels and funnel data to the cloud platform. The Intelligence Platform provides asset intelligence, network management, and connections to existing inventory and resource planning systems in a single interface.

The platform's technical architecture emphasizes ultra-low power consumption, standardized connectivity, and scalable cloud processing. IoT Pixels operate on micro-watt power budgets through radio frequency energy harvesting, enabling maintenance-free operation. The platform supports Bluetooth Low Energy communication and aligns with 3GPP Release 19 specifications for Ambient IoT. Security features include end-to-end encryption, device authentication, and privacy-compliant data handling. The platform includes WiliBot, a generative AI chatbot that enables natural-language conversations with ambient IoT-connected products.

Wiliot integrates with existing enterprise systems through APIs and standard protocols, enabling connections to inventory management, ERP, and resource planning systems. The platform works with an ecosystem of tag manufacturers, deployment partners, and network device providers through its "Works with Wiliot" program. Strategic partnerships include technology companies like Qualcomm, Intel, Infineon, and deployment partnerships with companies like Royal Mail. The platform connects to smartphone apps, access points, smart speakers, and other Bluetooth devices, leveraging existing infrastructure.