# MindSphere
# Digitalize and Transform

**Solution brief**

## Build powerful, targeted IoT applications with a packaged solution

Many manufacturers are seeking to build powerful Internet of Things (IoT) applications that will enable them to improve machine performance and offer new services to their customers. However, they're often hindered by inefficient data exchange between assets in the field and automation/design systems, long prototyping and development cycles and the complexity of building IoT applications from scratch. Closing these gaps is key to fully realizing the value of digitalization and automation.

### The solution: MindSphere

MindSphere®, the industrial IoT as a service solution from Siemens, enables you to connect machines, products, plants and systems. With MindSphere, you can complete the closed-loop digital twin, permanently connecting the physical assets in your factories to

their digital copies. This connection facilitates an open exchange of information that gives you advantages throughout the lifecycle – from product design, production planning and engineering to commissioning, operation, servicing and the modernization of systems and plants. Using MindSphere also makes it easy to develop, test and operate sophisticated, targeted IoT applications – both for internal use and selling to customers.

To help manufacturers streamline the adoption of MindSphere, Siemens has built a collection of packaged solutions for customers in different phases of their digitalization journey. The Digitalize and Transform packaged solution is primarily designed to help manufacturers that are already realizing many of the benefits of IoT to take the next step in their digital transformation journey by building powerful, targeted applications. These applications are key to developing new business models and products, such as asset as a service offerings.

### Challenges

- Improve machine performance
- Offer new services to customers
- Reduce complexity of building IoT applications from scratch

### Solutions

- Use MindSphere to connect machines, products, plants and systems
- Permanently connect physical assets to their digital copies
- Develop, test and operate sophisticated IoT apps

### Results

- Strengthen your digitalization strategy
- Build, operate and sell industrial IoT
- Fully leverage your organization's intellectual property

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## Digitalize and Transform

### Key solutions and capabilities

**DevOps plan**
Includes all the elements needed to develop and operate MindSphere applications to strengthen your digitalization strategy. Features include a broad and deep set of cloud services, an unlimited number of routes, test assets and user management scenarios, developer resources (including documentation and access to the MindSphere developer community) and managed backing services.

### Additional solutions include:
- MindAccess™ IoT Value Plan
- MindSphere application Predictive Learning
- MindSphere application Visual Flow Creator
- MindSphere application Visual Explorer
- MindConnect® Integration

### Key services

**Application development**
Based on your requirements, Siemens will support you in developing your application using MindSphere application programming interfaces (APIs).

### Additional services included:
- Implementation
- Basic enablement
- Success management
- Configuration
- Analytics consulting
- Data science consulting

### Use cases

**Integrated field failure analysis**
Enable collaboration between machine manufacturers and end users to more rapidly find the root cause of machine failure. This enables you to minimize unplanned downtime and reduce the cost of maintenance.

**Digital twin production**
Complete the digital twin and feed rich production and operational data to virtual models of your machines in production. With the comprehensive digital twin in place, you can optimize machine design, commission machines more quickly, reduce changeover times and operate more smoothly.

**Asset as a service**
Better meet customer needs and drive new revenue by offering connected assets and IoT applications as a service to your customers. This approach enables you to get more value out of your organization's intellectual property.

**Closed-loop digital thread**
Eliminate silos across your manufacturing processes by incorporating a communication system that spans the entire product lifecycle, delivering critical information to stakeholders when they need it.

### Begin your journey
With MindSphere, you can take the next step in your IoT journey and fully capitalize on the opportunities that digitalization presents. With rich tools that make it easy to build, operate and sell industrial Internet of Things applications and the complete digital twin, your organization is empowered to develop new business models and products.

**Siemens Digital Industries Software**
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