

## IloT & Digital Twin – IoTlab integration services for manufacturing

*Dịch vụ tích hợp, triển khai cho nhà máy*

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At IoTlab office

IloT platforms use sensors, AI/ML to collect and analyze data from industrial equipment. There are various sensors to collect the data: machine IoT sensors, PLC, DCS, SCADA,...

A Digital twin is a virtual replicas of physical manufacturing facilities and process.

Together, IloT and Digital Twin can help optimize operations through advanced simulation, analysis, and 3D visualizations.

However, there are so many Digital Twin platforms available in the market. It is difficult to determine one with clear advantages over others. Our job is to test and validate the platform in customer's context and advise the most suitable solution.

### **Supported Platforms**

Leveraging on support from our strategic partners, our service offering is for proven industry platforms:

- Microsoft Azure IoT Hub
- AWS IoT
- PTC ThingWorx IloT

Integrating AI/ML to IoT platforms offers a powerful way to improve machine performance, inventory, or factory-wide efficiency.

## **Scope-of-work**

We follow ITIL service delivery approach, deliver by Industry certified project team.

### **1. Planning, design**

- Business requirement discovery, identify use-cases
- Identify edge & cloud computing architecture
- IIoT architecture
- Identify device and connectivity for the IIoT
- Select relevant IIoT platform
- IIoT Security
- Identify Data structure for Digital Twin
- Select relevant Digital Twin platform
- Identify data analytics to provide insights into Industrial processes
- Define Acceptance test procedures, training requirements

### **2. Setup and migration**

- Services is managed by industry experienced Project manager
- Support migration from on-premise to cloud, from one cloud to others

### **3. Training**

- Defined in the planning phase
- Based on user experience, best practice approach
- E-learning or instructor-led

### **4. Acceptance test**

- User test
- End-to-end test
- Optional Performance test

### **5. Security test**

- System and Device protection
- Platform and end-to-end security assessment

### **6. Support**

- SLA Customization (8x5xNBD, 24x7x4, ... )
- Call/email/ or online service request
- Geography coverage definition
- Hosting / cloud subscription

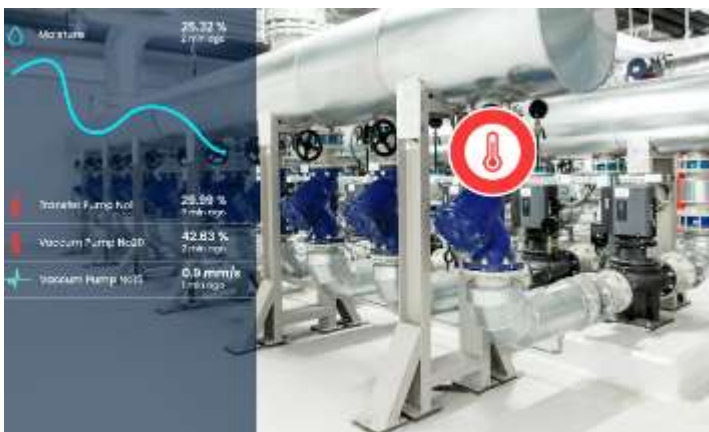
### **Challenges & considerations**

Transitioning from on-premise systems to the cloud like Azure or AWS involves a range of technical, operational, and cultural shifts.

Challenges and considerations that businesses should address to ensure a smooth transformation:

- Data Security and Compliance
- System Compatibility and Integration
- Cost Management and Budget
- Cultural Readiness
- Performance and Latency
- Policy Enforcement
- Disaster Recovery and Business Continuity
- Migration Strategy
- Post-Migration Evaluation

To drive operational excellence in manufacturing, businesses must proactively adapt to market demand changes, effectively integrate cutting-edge technologies, and utilize data for intelligent decision-making.



More information, refer: [www.IoTlab.space](http://www.IoTlab.space)