



# SAP Innovation Awards 2019 Entry Pitch Deck

Smart Motor Monitoring System

Information Technology Total Services Co., Ltd

# ITTS SMMS Intro Video



<https://youtu.be/Kw9sZoTFSTU>

# Smart Motor Monitoring System

## Information Technology Total Services Co., Ltd



### “Quote”

“This solution smartly changes the maintenance strategy(Passive to Proactive), could easily adopt to any kind of manufacturing units

-- Arthur Liu, VP of ITTS ”

### Challenge

Unexpected motor failures caused **maintenance delay**, **unscheduled** human resource, **hard to identity** motor's issue & need to **wait for** spare part's **availability**... etc., which make factory **production shutdown** and can't **deliver** products **on time**. Therefore, need to **convert** physical reality to digital realms of motors health & maintenance.

### Solution

Smart Motor Monitoring System offers a integrated platform to launch various SAP Cloud Platform (PaaS) IIOT, Predictive Maintenance, Digital Twin, Smart Glass(AR), ERP, Human Resource data, Equipment, Quality & Supply Chain.

### Outcome

Which can promise to enhance delivery on time, OEE productivity, quality, and schedule human resources

50% faster IIoT deployment with SAP Cloud Connectors and SAP Style Web Application Development with SAP WEB-IDE

The cost and time of motor/relative equipment maintenance could reduce up to 50%

- Delivery on time up to 20%
- Productivity up to 95%
- Failure cost reduce to 20%



## Partner Information

### Information Technology Total Services Co., Ltd

### Consultant & Deliver Force in the Project



Leading consultant service company in Greater China, ITTS is also the SAP Gold partner in Taiwan, mainly focuses on ITO, BPO and IoT smart services.

ITTS sales territory covered from Great China to APAC, business area ranges from public sector, finance, manufacture, hi-tech, telecom, logistics to retail.

ITTS Sales Amount: US\$ 40 million (2017).



## Business Challenge & Objectives

For those who located in multi-nations & multi-factories, need to cooperate each other from time to time, therefore the accurate & real time information is critical for them, that's why they need a solid solution to face their business challenge.

Business challenges more like Unexpected motor failures caused Maintenance delay ,Unscheduled human resource, Hard to Identity motor's issue & Need to wait for Spare part's availability which make factory production shutdown and can't deliver product on time.

One of our major important customers -TECO, who had the IIOT requirement globally, and the other customers had the similar requirements also, we just think why not use ONE cloud platform to service versatile customers' needs, so we develop this Smart Motor Monitoring System at the SAP Cloud Platform (PaaS); On the other hand, ITTS would like to build up the relative **domain service force** in IIOT era.



## Project / Use Case Details

	<b>As Is</b>	<b>To Be</b>
<b>Management</b>	Information isolated island for each factory, hard to management	Connected and integrated information for all factories, easier for real time management
<b>Business Process</b>	Each factory had its own business process	Every factory had the same business process
<b>Operation Improvement</b>	Maintenance is unpredictable, service level is hard to keep the same	Maintenance is predictable, can keep the high standard service level
<b>Efficiency</b>	Traditional solution make people work hard	Smart solution (IIoT + ML) make people work smart
<b>User experience</b>	Passive service make general user experience	Proactive service make better user experience



# Benefits and Outcomes

## Business / Social

- ONE cloud platform solution realize the global view management
- Delivery on time up to 20%
- Productivity up to 95%
- Failure cost reduce to 20%
- The cost and time of motor/relative equipment maintenance could reduce up to 50%

## IT

- 50% faster IIoT Deployment with SAP Cloud Connectors
- SAP Style Web Application Development with SAP WEB-IDE
- Integrate multiple ERP system
- Custom Predictive maintainers algorithm in SAP HANA

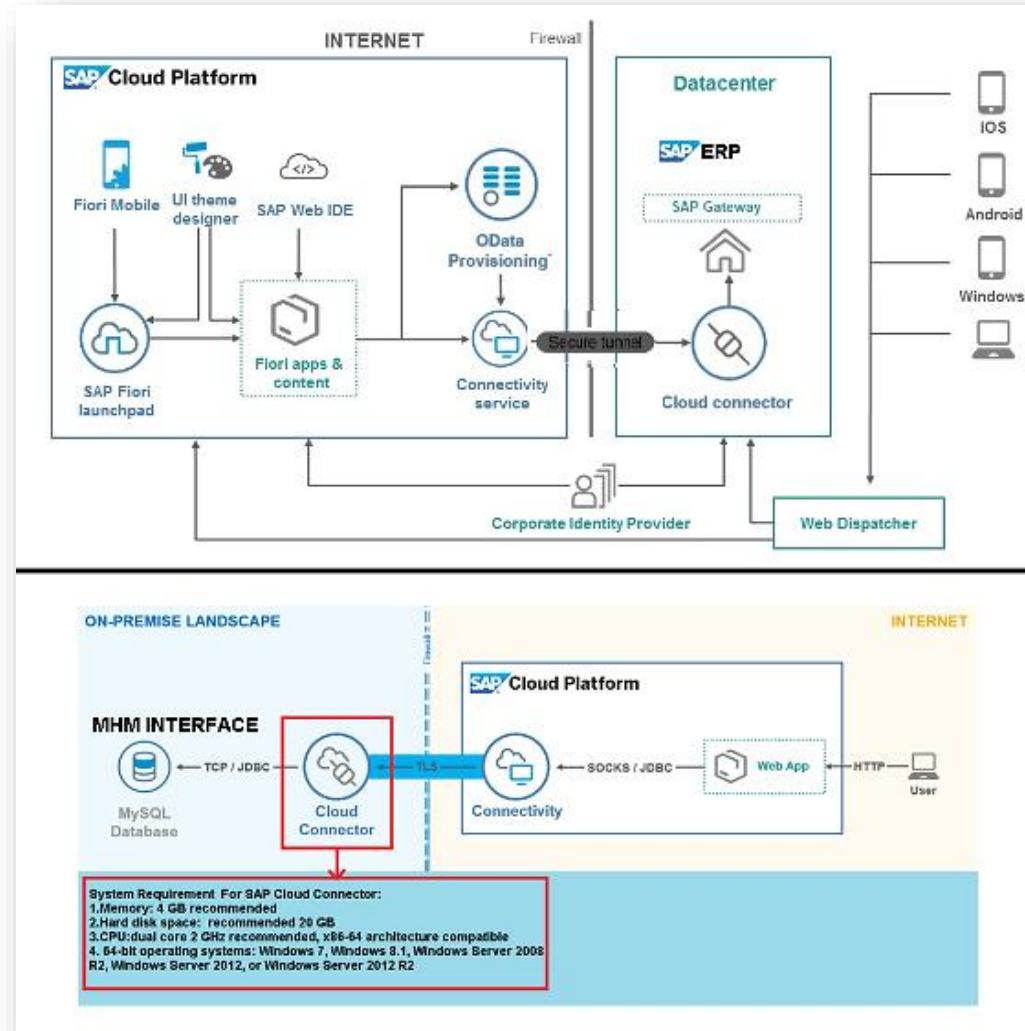
## Human Empowerment

- Visibility in production lines allows employees to set accurate performance targets
- Big data collected from production lines make knowledge base smart maintainers service realized
- Solution also provides smart glass(AR), as well as digital twin there by enabling the field staff to act directly from the field
- Providing alerts and notifications to the users which support them to response right away





# Architecture







## Deployment

Date of Deployment or POC: 2018 September

Number of live users: 100

### SAP Technologies Used:

SAP Cloud Platform	SAP HANA
SAP Cloud Connectors	SAP Analytics
SAP Machine Learning	SAP Dev-Ops
SAP WEB-IDE	SAP FIORI-Launch Pad

Server Processor: From SAP Cloud

Linux Distribution: From SAP Cloud