



SAP  
Innovation  
Awards 2019



# SAP Innovation Awards 2019 Entry Pitch Deck

CHINT Industrial & Energy Internet of Things (IIoT & EIIoT) Platform  
CHINT Group.

THE BEST RUN





[https://www.youtube.com/watch?v=rHE-xg\\_P9Vs&t](https://www.youtube.com/watch?v=rHE-xg_P9Vs&t)

# CHINT Industrial & Energy Internet of Things Platform (IIoT & EIIoT)

## CHINT Group.



### “Quote”

#### Background:

Founded in 1984, CHINT has developed the business network in over 140 countries and regions with more than 30,000 employees worldwide, annual sales exceeded 60 billion yuan. And CHINT ranks among the top 100 private enterprises in China.

To comply with the trend of integrated development of modern energy, intelligent manufacturing and digital technology, CHINT has adopted One Cloud Two Nets as the development strategy. As the carrier of intelligent technology and data application, CHINT Cloud fulfills corporate internal and external digital application and services; relying on the Industrial Internet of Things (IIoT), CHINT builds its intelligent manufacturing system and practices intelligentized application of the electrical industry; relying on the Energy Internet of Things (EIIoT), CHINT builds its smart energy system and explores the regional EIIoT mode.

### Challenge

China's energy industry are changing fast. Customers of the energy require better services and real time data about the energy consuming. CHINT is extending its business into distributed photovoltaic power generation system which required next level IT support.

### Solution

SAP Cloud Platform、SAP Asset Intelligence Network、SAP Predictive Maintenance & Services Cloud、C/4 HANA Service Cloud

### Outcome

To achieve remote monitoring and maintenance services of electrical equipment through the IIoT technology. Building a platform with edge technologies for further business model and provide the customers centric services.

#### Reduce Maintenance Costs:

Reduce the personnel on operating and maintenance of Electrical Equipment, to reduce overall maintenance Cost.

#### Improving Maintenance

**Efficiency:** Through the remote monitoring, professionals can identify the problems ASAP, and can quickly arrive at the site to solve the problems.

#### New Business Model Innovation:

By helping CHINT's customers to manage electrical equipment remotely, realize intelligent operation and maintenance services and spare parts sales, and achieve new business growth.



## Partner Information

### Yarlungsoft



Under the efficient and professional support from SAP team, Yarlungsoft not only understand SAP's IoT platform capabilities, while learning the philosophy design concept of SAP technology, understand SAP's unique corporate culture. Which further strengthened the confidence and determination of Yarlungsoft and SAP IoT platform cooperation, and I believe we can create a win-win, industry-leading IoT ecosystem together with SAP in China.





## Business Challenge & Objectives

1. China's energy industry are changing fast. Customers of the energy require better services and real time data about the energy consuming.
2. Smart devices are invading into the electric industry, the business model are changing from metric centric to customer centric. CHINT needs to redesign their original business model and products.
3. The distributed photovoltaic power generation system are difficult to monitor and maintenance.
4. Third-party costs through outsourcing and maintenance solutions are unstable. Its hard to find better services providers for CHINT's solar energy customers.

1. Connected Things: We are helping CHINT to build a **open platform** based on the **intelligent technologies**, providing a foundation for new innovative business ideas.
2. Providing the industry-relevant **analytical capabilities** helping CHINT's customers better understand and effectively use huge amounts of collected energy data.
3. Predictive maintenance: Optimize maintenance planning with **real asset health condition and visibility** across organizational silos . **Reduce cost of maintenance** by reducing unplanned activities and moving towards pro-active maintenance
4. Work Order management: **Easily integrate** it into CHINT's business processes and establish a end to end maintenance work order cycle.



## Project / Use Case Details

We help customer build EloT & IloT Platform with 3 modules: **Equipment Distributed Maintenance & Service**, **Collaborated Equipment Management**, **Power Grid Operation Monitor**, to realize full life cycle service for its electric products with an integrated E2E solution.

**Equipment Distributed Maintenance & Service** : Collect sensor data from CHINT products through SAP IoT Edge Services, and trigger Service Calls through SAP Field Service Management automatically for CHINT's customers distributed all over the nation, based on pre-defined thresholds & data analysis of sensor parameters.

**Collaborated Equipment Management**: IoT data is also ingested by SAP IoT Foundation on Cloud and forwarded to SAP Intelligence Asset Management Suites. Together with data from all parties (including Equipment Manual, Maintenance History, Historical Sensor Data, Maintenance Strategy, etc..), predictive maintenance is scheduled and recorded in an unified asset data management platform with all other structured / unstructured data throughout the life cycle of the equipment.

**Power Grid Operation Monitor**: All of the data above is filtered and displayed on one Unified Power Grid Operation Dashboard, developed on SAP Cloud Platform. The solution enables CHINT to have full life cycle visibility of its products and to provide real-time services for distributed customers all over the nation. Therefore, CHINT has transferred from a equipment OEM into a comprehensive equipment service provider.



# Benefits and Outcomes

## Business / Social

### **Reduce Maintenance Costs:**

Reduce the personnel on operating and maintenance of Electrical Equipment, to reduce overall maintenance Cost;

### **Improving Maintenance**

**Efficiency:** Through the remote monitoring, professionals can identify the problems ASAP, and can quickly arrive at the site to solve the problems;

### **New Business Model Innovation:**

By helping CHINT's customers to manage electrical equipment remotely, realize intelligent operation and maintenance services and spare parts sales, and achieve new business growth.

## IT

### **Adopting cloud architecture:**

There is no need to invest in local servers and software, so that to reduce the cost of early investment and follow-up operation costs of private cloud platforms;

**Agile IT Innovation:** Help IT departments implement business scenarios flexibly and quickly, get online and gain benefits quickly.

## Human Empowerment

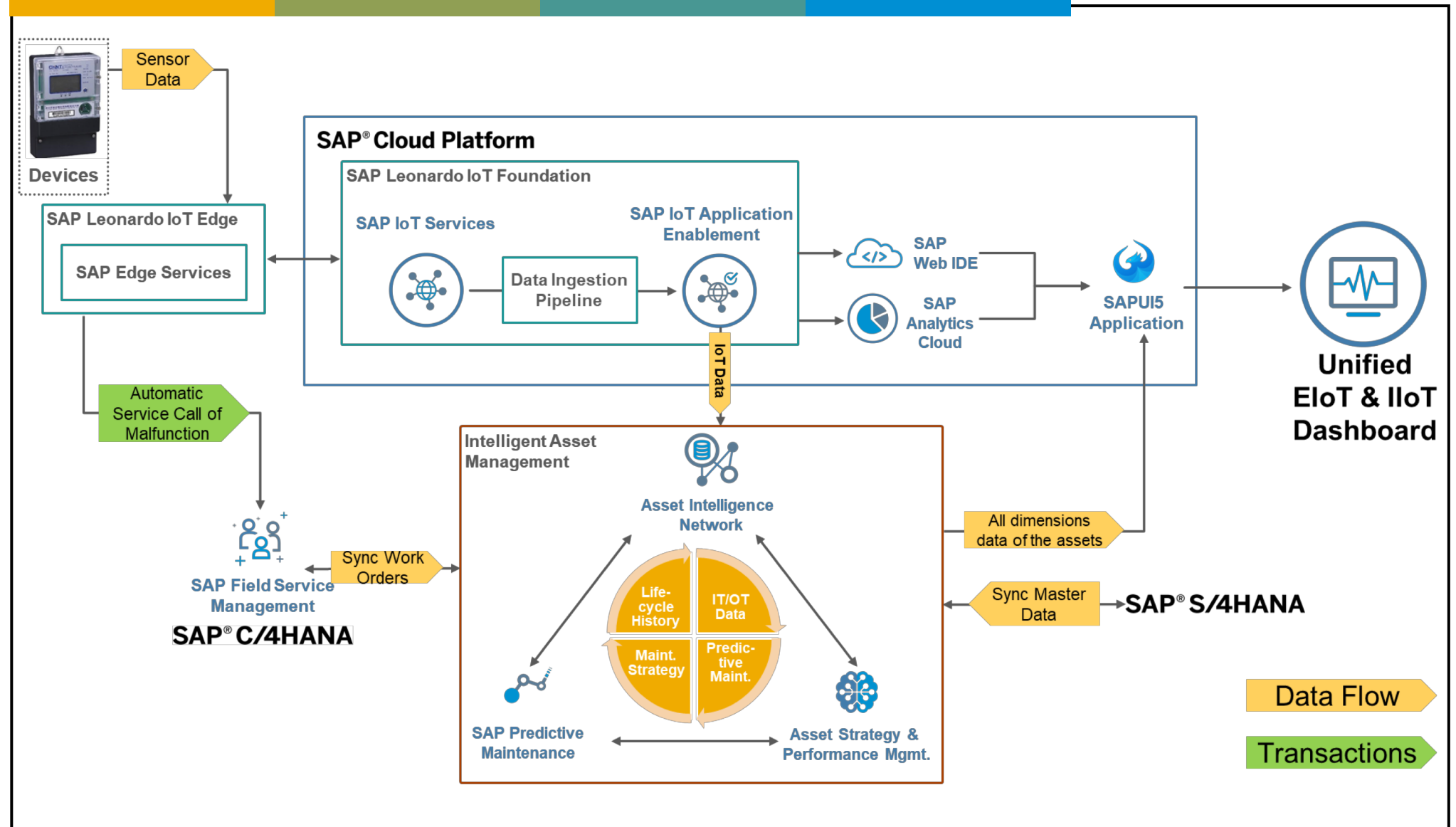
**Unattended operation:** Help CHINT's customers to realize unattended operations for electric equipment, significantly reducing the cost of operation and maintenance;

**Fast Response:** Help CHINT Maintenance Personnel to identify and solve problems of electric equipment as soon as possible;

**Continuous improvement:** Help CHINT continuously collect and analyze real-time operation data of electric products to improve product quality.



# Architecture





## Deployment

Date of Deployment or POC: 2019.01.20

Number of live users:

### SAP Technologies Used:

SAP Product	Status
SAP Analytic Cloud	PoC
Asset Intelligent Network	Purchased
C4/HANA	PoC
SAP Leonardo IoT Service	PoC
SAP Edge Services	PoC

Server Processor:

Linux Distribution:



## Emerging Technologies and Use Cases

The following Emerging Technologies and use-cases are part of the project and describe the contribution

	Technology or Use Case	Yes/No	Contribution to Project
1.	Machine Learning / Artificial Intelligence	Yes	Data analysis and energy data prediction
2.	IoT	Yes	Data generation and devices management
3.	3D printing	No	
4.	Blockchain	No	
5.	API Economy / Integrate the Intelligent Enterprise	Yes	Help CHINT build a services provider open platform
6.	Cloud Native / Event Based Architectures	Yes	Seamless data flow and build the data ingestion pipeline
7.	Extending the digital core with SAP CP / ABAP in SAP CP	Yes	Combine the assets OT data with IT system management
8.	SAP Leonardo Application ( extending SAP application, using Industry Innovation Kits or result of Design Thinking workshop)	Yes	Next generation business from metric centric business to customer centric business.