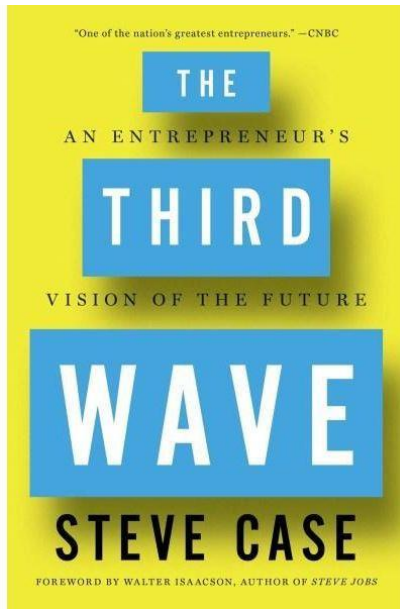


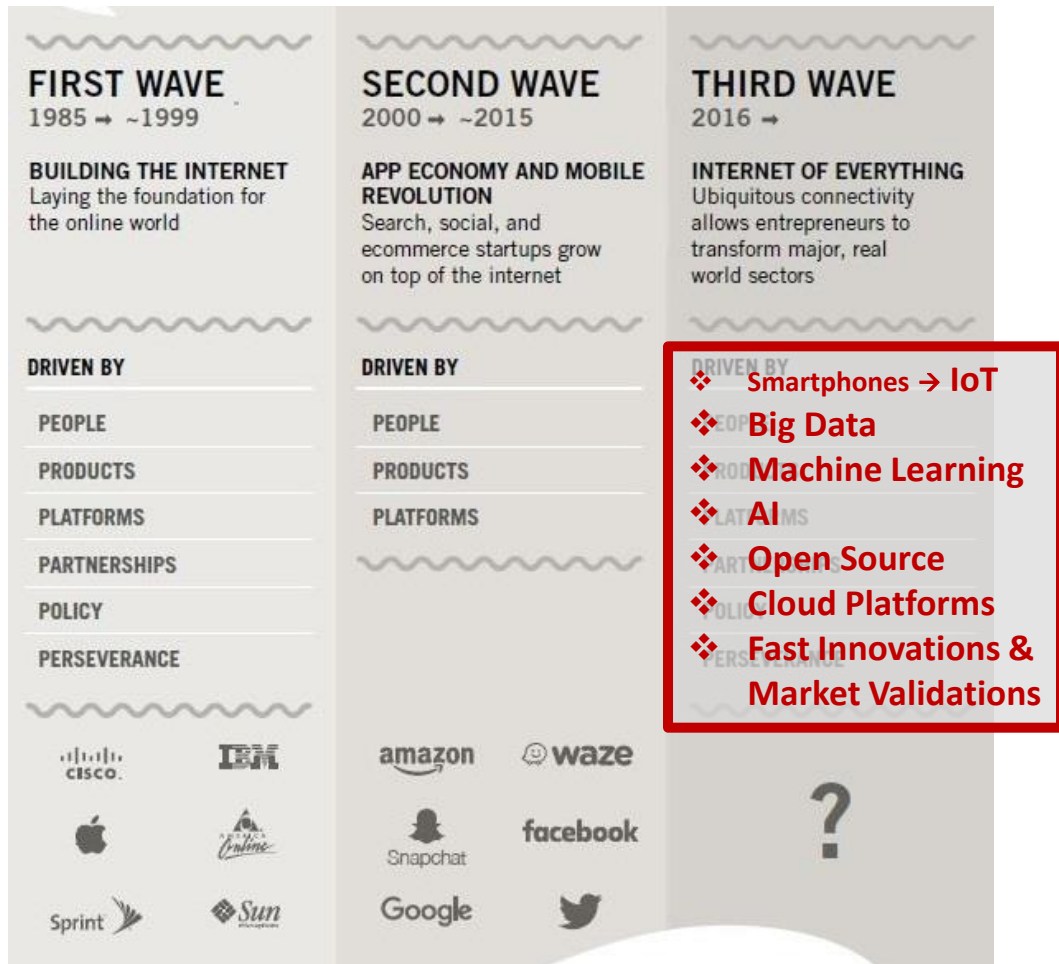
物聯網應用發展趨勢 及共創模式

Dec. 06, 2018



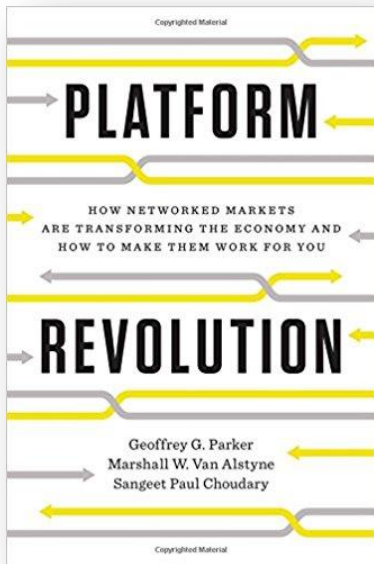


Published: April, 2016



The 2nd & 3rd Waves: driven by Cloud Platforms

Largest Global companies in 2018 vs 2008

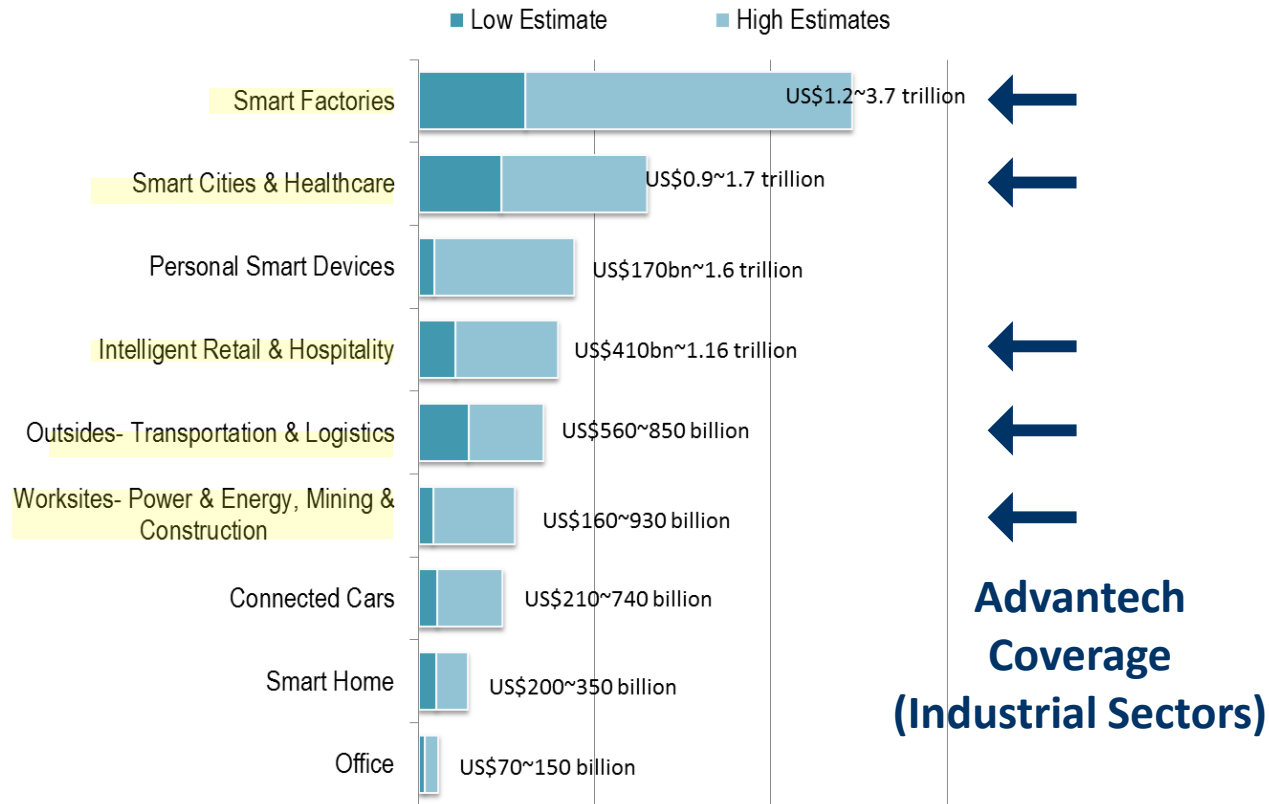


Published: Feb., 2016

2018				2008			
Rank	Company	Founded	USbn	Rank	Company	Founded	USbn
1.	Apple	1976	890	1.	PetroChina	1999	728
2.	Google	1998	768	2.	Exxon	1870	492
3.	Microsoft	1975	680	3.	General Electric	1892	358
4.	Amazon	1994	592	4.	China Mobile	1997	344
5.	Facebook	2004	545	5.	ICBC (China)	1984	336
6.	Tencent (China)	1998	526	6.	Gazprom(Russia)	1989	332
7.	Berkshire	1955	496	7.	Microsoft	1975	313
8.	Alibaba (China)	1999	488	8.	Royal Dutch Shell	1907	266
9.	J&J	1886	380	9.	Sinopec (China)	2000	257
10.	JP Morgan	1871	375	10.	AT&T	1885	238

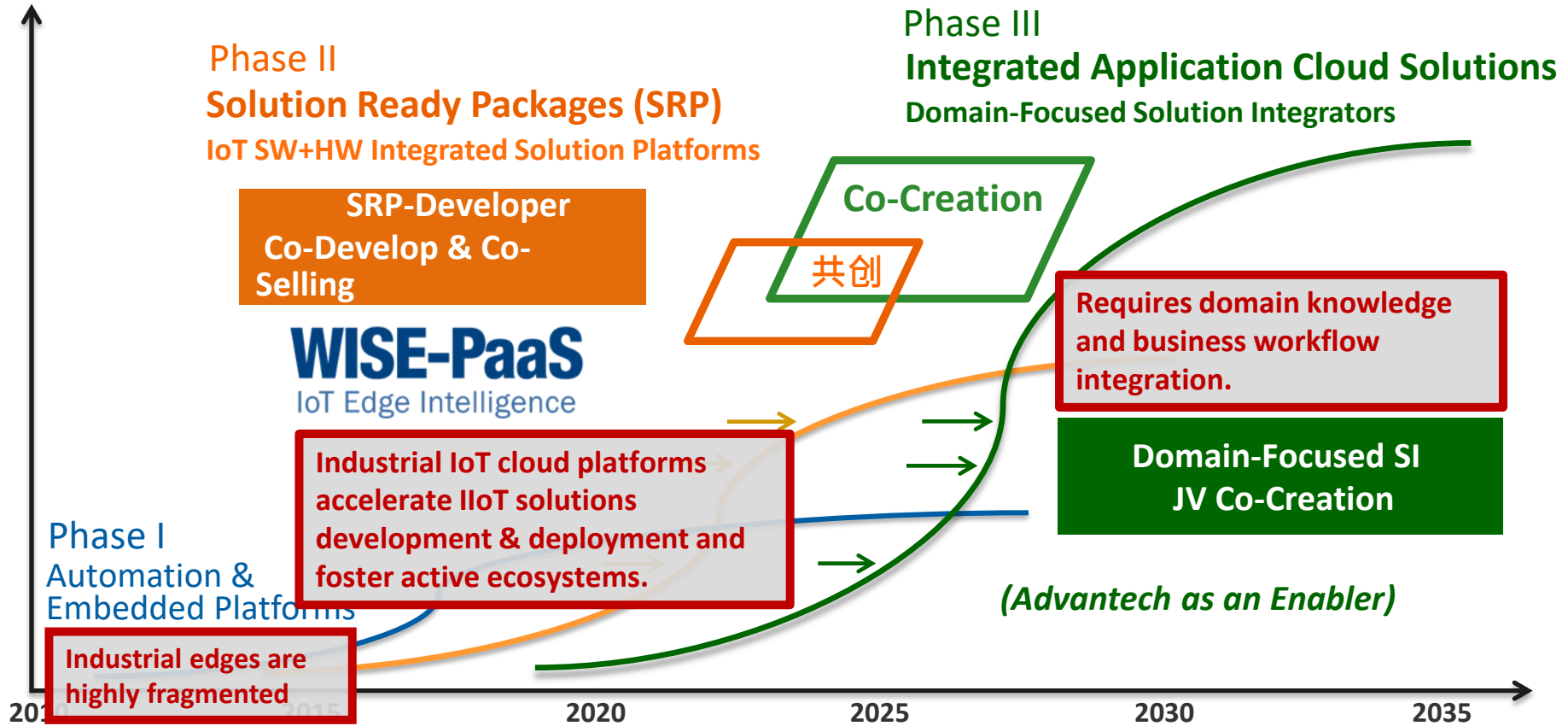
Source: Bloomberg, Google

Worldwide IoT Vertical Domain Opportunities

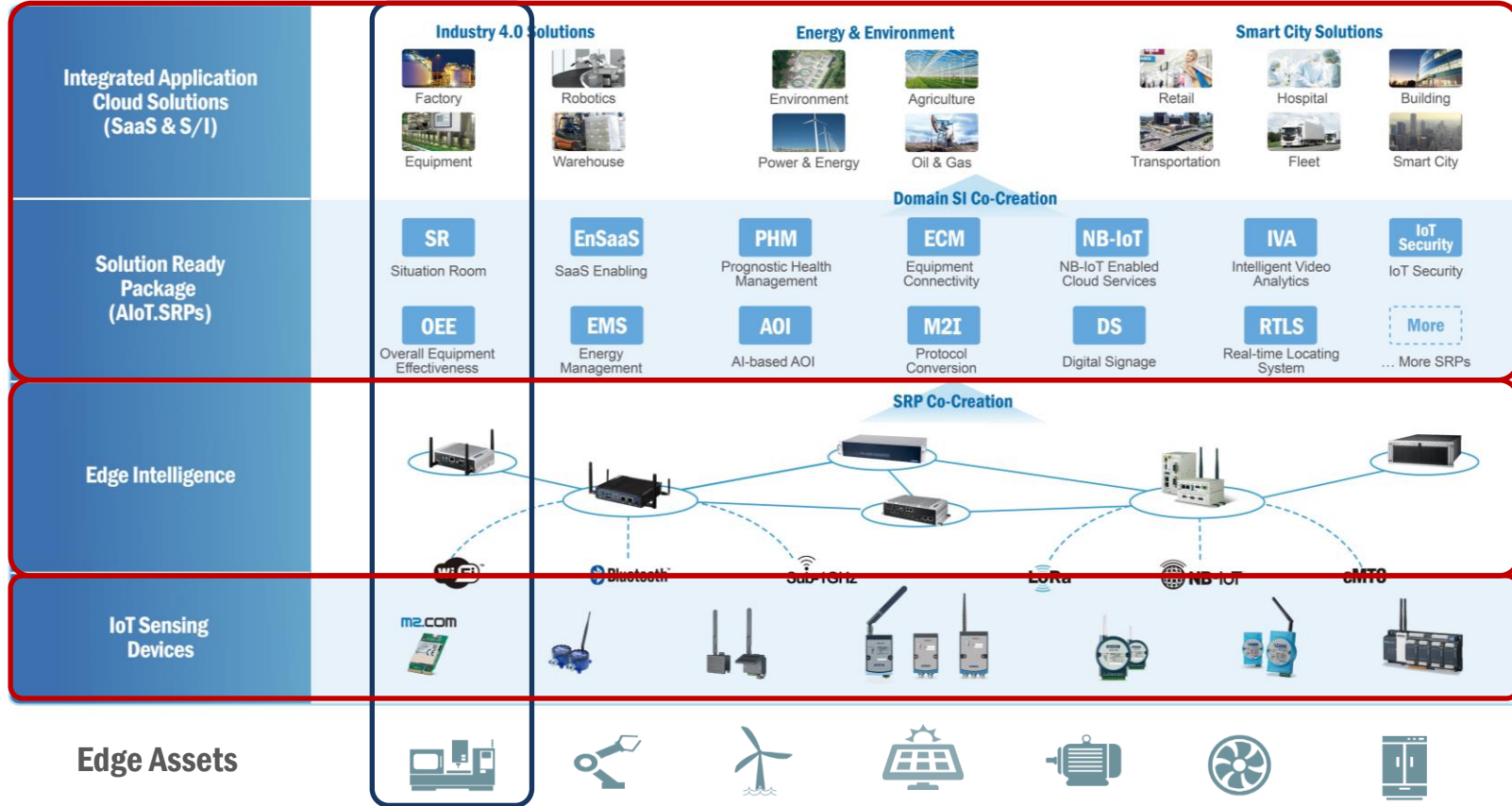


Source: McKinsey & Company, June 2015

Advantech AIoT Long Term Co-Creation Business Model



Advantech IoT Solution Architecture



WISE-PaaS/EnSaaS

AI & Visualization
Data Infrastructure
Multi-tenancy
Elastic Scaling
IoT Hub
CLOUD F@UNDARY



WebAccess

WebAccess/SCADA
WebAccess/CNC
WebAccess/HMI
WebAccess/NIMS

WISE-PaaS/VideoSense

WISE-PaaS/VideoCMS
WISE-PaaS/SignageCMS
WISE-PaaS/HumanDetectAI

WISE-PaaS/EdgeSense

WISE-Agent
WISE-PaaS/RMM
WISE-PaaS/OTA
WISE-PaaS/Security

WISE-PaaS/EdgeLink

Protocol Conversion
Sensor Management
Digital Twin

WISE-PaaS 3.0 AIoT Edge-to-Cloud Architecture

Integrated Application Cloud Solutions
(SaaS Partners & DFSI)



Co-Creation

End To End Security: SSL/TLS

AIoT.SRPs

SR Situation Room

PHM Prognostic Health Management

AOI AI-based AOI

IVA Video Analytics

OEE Overall Equipment Effectiveness

EQM Environmental Monitoring

EMS Energy Management

More SRP co-created

RESTful API

Node-RED

WISE-PaaS/ EnSaaS

Visualization - Dashboard

WISE-PaaS/SaaS Composer

WISE-PaaS/Dashboard



HTML5 Canvas
Streaming Data
3D Visualization

Asset Performance Management

WISE-PaaS/APM

Asset Models
Asset Statistics & Analytics
Workflow Integration

AI Framework Service

WISE-PaaS/AFS



Caffe ONNX

Online Code IDE
Online Flow IDE
Model Training & Deploy

Compute Resource Management



CLOUD FOUNDRY

Micro-services
Elastic Scaling
High Availability

Database & Storage Services



IoT Hub



Customer Management



Multi-tenancy
Billing & Metering
Single Sign-on

Public Cloud



...

Private Cloud



MQTT/AMQP

Edge Intelligence

Industrial SCADA

WebAccess/SCADA

WebAccess/CNC

WebAccess/HMI

WebAccess/NMS

Machine to Intelligence

WISE-PaaS/EdgeLink

Protocol Conversion

Sensor Management

Device Model

Remote Device Management

WISE-PaaS/DeviceOn WISE-PaaS/EdgeSense

WISE-PaaS/RMM

WISE-PaaS/OTA

WISE-PaaS/Security

Intelligent Video Management

WISE-PaaS/VideoSense

WISE-PaaS/VideoCMS

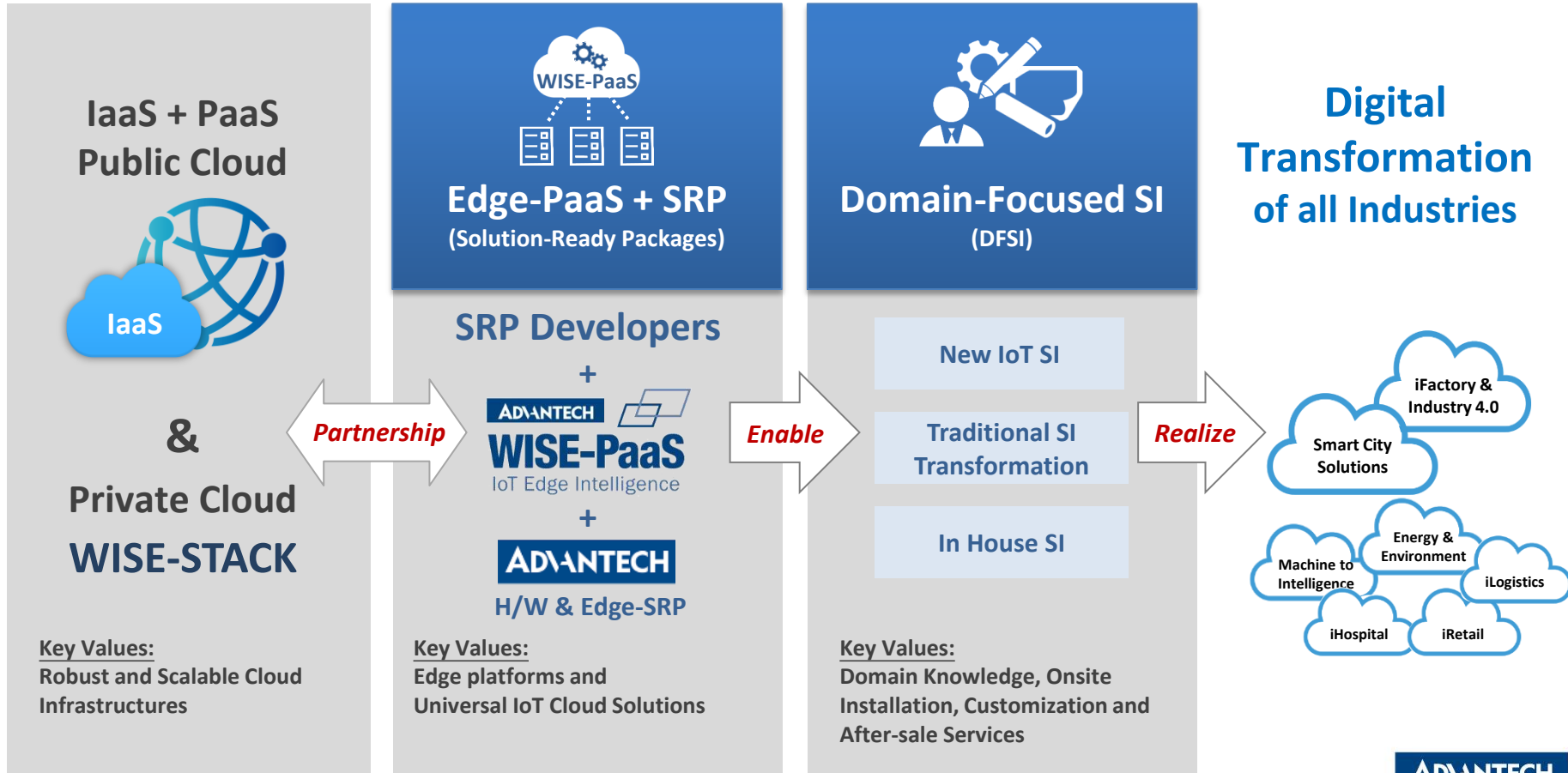
WISE-PaaS/SignageCMS

WISE-PaaS/HumanDetectAI

EDGE X FOUNDRY

Microservices
System Management
Edge Analytics

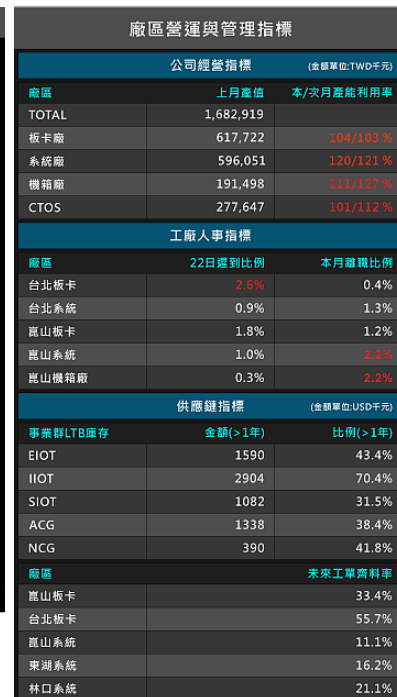
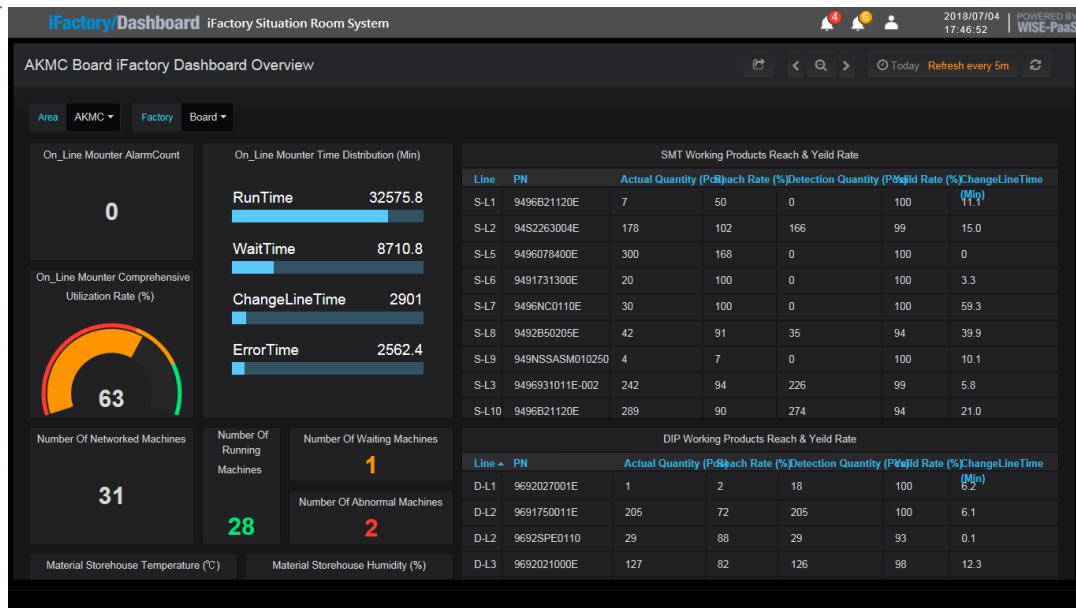
Ecosystem & Value Chain of Industrial IoT



Industry 4.0 Situation Room



Real-time Dashboards of Intelligent Factory



Real-time Dashboards on Production Line Status



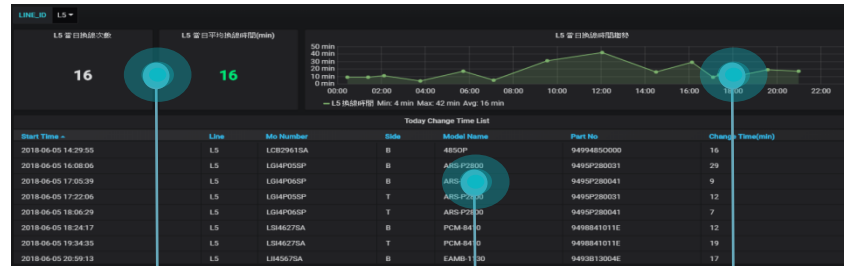
Line balance level

Bottlenecks



Work orders and OEE

Real-time Equipment status



Number of line changes

Production line

Line change elapsed time

Real-time Dashboards on Key Management Scores

Objective– Line balance

Part No	Side	M1 CT(s)	M2 CT(s)	M3 CT(s)	M4 CT(s)	Max Machine	Max Time	Balance_Rate
9498087000E	B	34	5	65	31	M3	65	51%
9498087000E	T	30	340	223	122	M2	340	52%
9499122180E	T	24	43	26	27	M2	43	69%
9493840002E	B	23	29	43	29	M3	43	72%
9498871560E	B	16	35	40	30	M3	40	75%
9493820110E	T	27	61	48	50	M2	61	76%
9498871920E	T	15	17	20	25	M4	25	77%
9498871908E	T	16	30	32	22	M3	32	78%
9493820003E	B	19	42	39	33	M2	42	79%
9498851301E	T	30	25	25	18	M1	30	81%
9499152100E	B	18	23	18	16	M2	23	81%
9493840002E	T	22	29	34	29	M3	34	83%

Balance per sku

Objective – OEE

Part No	Top/Bot	OperationTime	WaitTime	ErrorTime	TotalTime	UtilizationRate
9493840002E	T	1478620	343326	871747	2.69 Mil	54%
9498851301E	T	830436	188108	465478	1.48 Mil	55%
9498871908E	T	765363	177475	444650	1.39 Mil	55%
9498871908E	B	791469	181674	451129	1.42 Mil	55%
9498851301E	B	855524	191385	471925	1.52 Mil	56%
9499122180E	B	1008669	211804	519145	1.74 Mil	57%
9499122180E	T	993600	208687	513675	1.72 Mil	57%
9499152100E	B	998737	209327	515040	1.72 Mil	57%
9493TS0101E	B	892470	192678	476962	1.56 Mil	57%
9493TS0101E	T	937657	198743	499253	1.64 Mil	57%
9493820110E	B	974795	203357	507955	1.69 Mil	57%
9493820110E	T	955282	200799	501976	1.66 Mil	57%

OEE per sku

Objective – Line change elapsed time

Model No	Part No	Side	AVG Change Time(min)
PCM-8715	9498871540E	B	59
EAMB-TS01	9493TS0101E	B	55
EAMB-2200	9493820003E	T	31
USB-4630	9493463000E	B	27
EKO-1521	9499152100E	T	26
PCM-8719	9498871908E	T	25
PCM-8719	9498871920E	T	24
PCM-8513	9498851301E	B	23
PCM-8719	9498871908E	B	23
EAMB-2201	9493820110E	B	22
EAMB-2201	9493820110E	T	21

Time of line change per sku

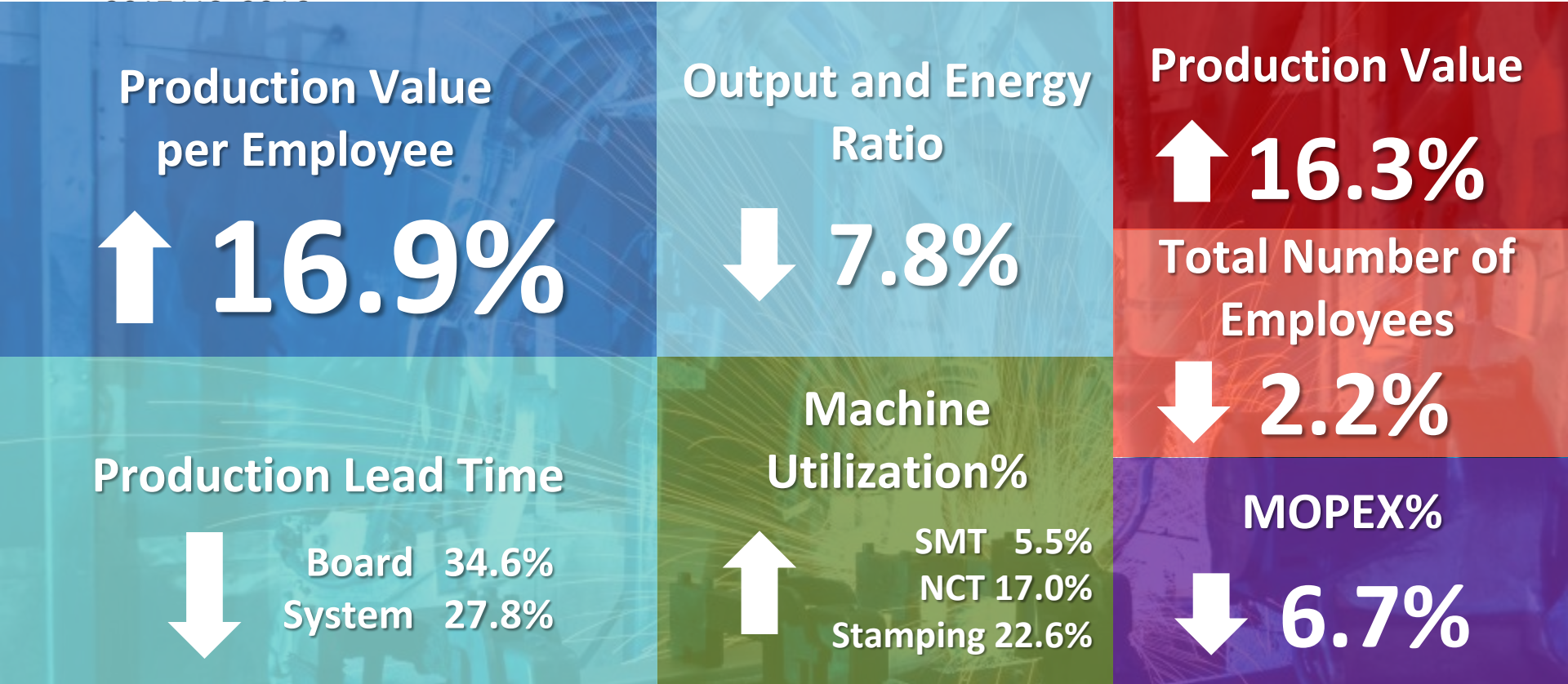
Objective – equipment abnormality status

Error Line By Model			Error Line By Machine		
Line	Part No	Frequency	Line	Machine	Frequency
L5	9498871920E	1	L5	M1	1
L5	9493840002E	1	L5	M2	1
L5	9493820003E	1	L5	M4	1
Machine Error TOP 10					
Line	Machine	Operation Time	Error Time	Error Rate	
L5	M3	6.08 Mil	2.34 Mil	38%	
L5	M4	6.33 Mil	2.12 Mil	33%	
L5	M2	6.05 Mil	1.77 Mil	29%	
L5	M1	6.54 Mil	1.33 Mil	20%	

Equipment outage

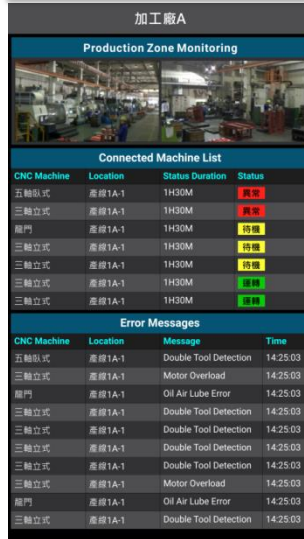
Improvement Accomplished at Advantech Production Center

2017 V.S. 2016



Connected CNC Cloud Service: based on Asset Performance Management (APM)

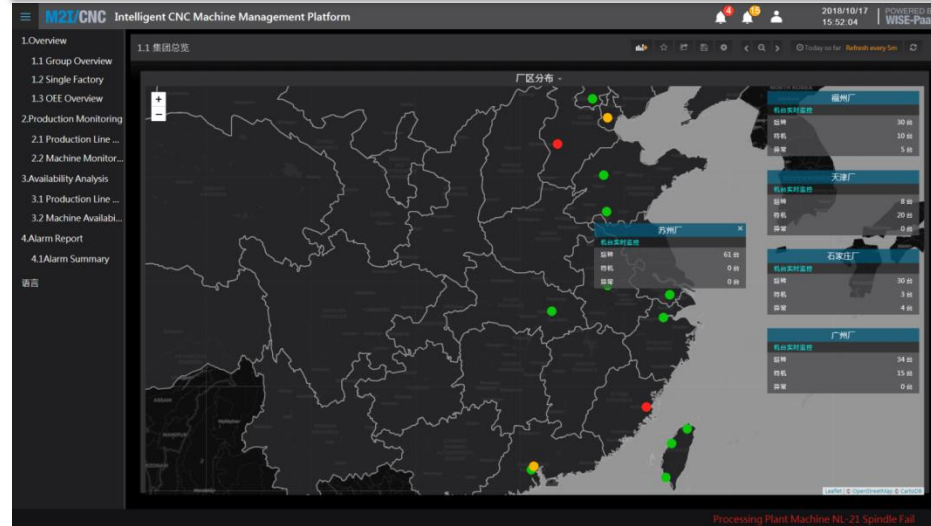
Focal Points



Focal Points

- Real time video
- Asset List (sorted by status)
- Abnormality statistics

Interactive Dashboards



Corporate APM Overview

- Factory sites
- Assets total counts and status
- OEE of all sites

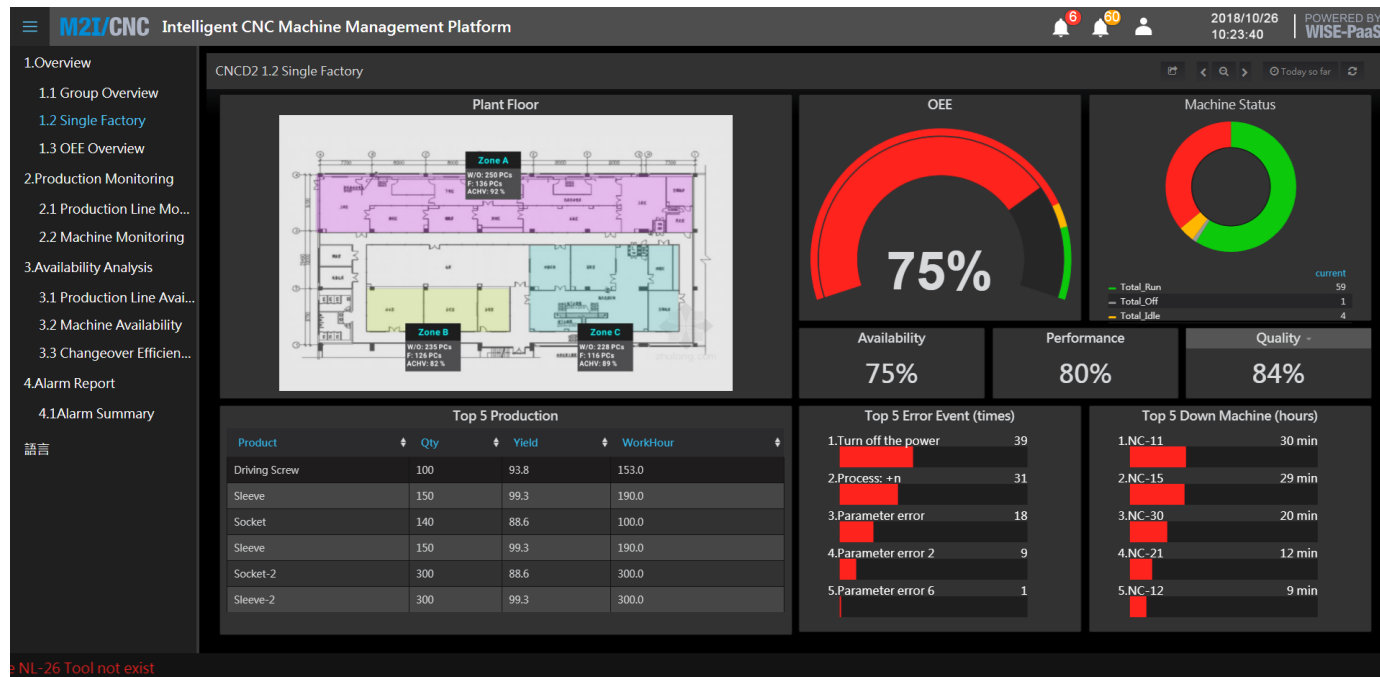
Mgmt Scorecard



Management Scorecard

- KPI hit rates
- OEE ranking by sites: A/P/Q
- Yield rates & Exceptions

Single Factory, Specific Floor Equipment Status



Panel Refresh Setting

Auto Refresh

5 mins

Default Period

Today so far

Longest period option

1 months

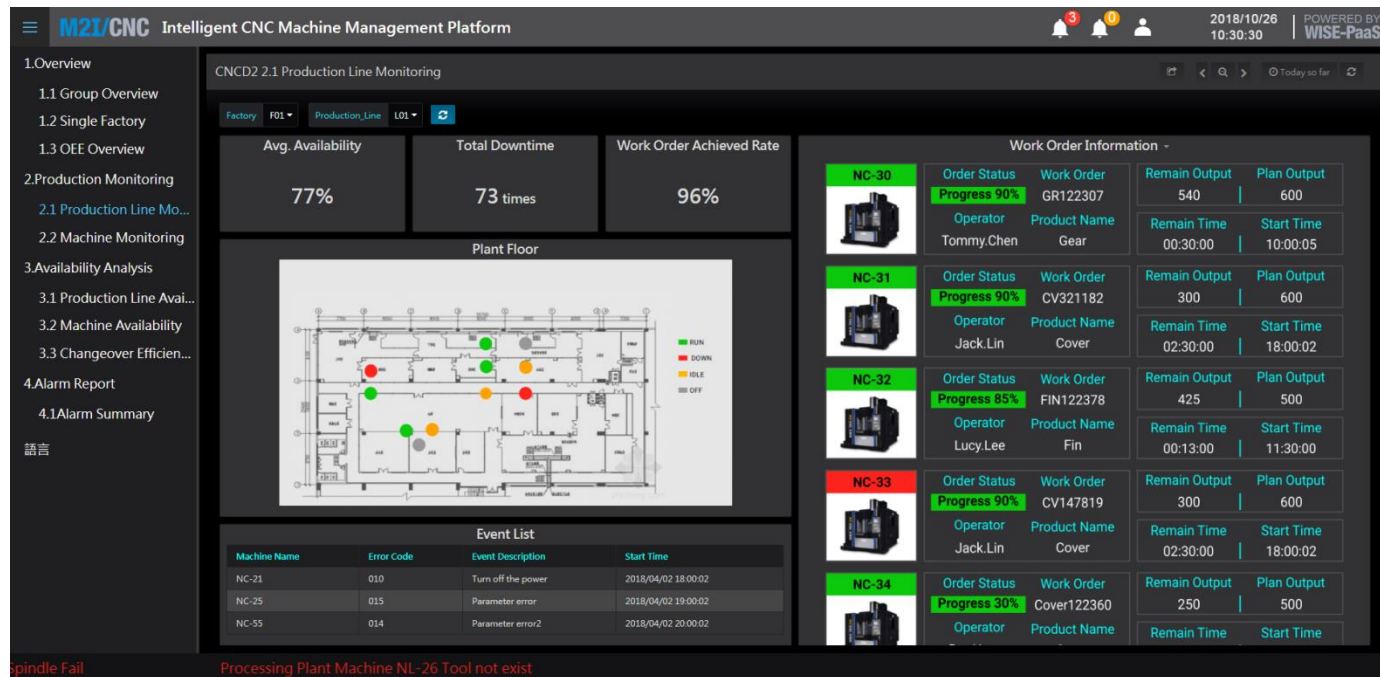
Quick Range

Hide options over 1 months

Calendar

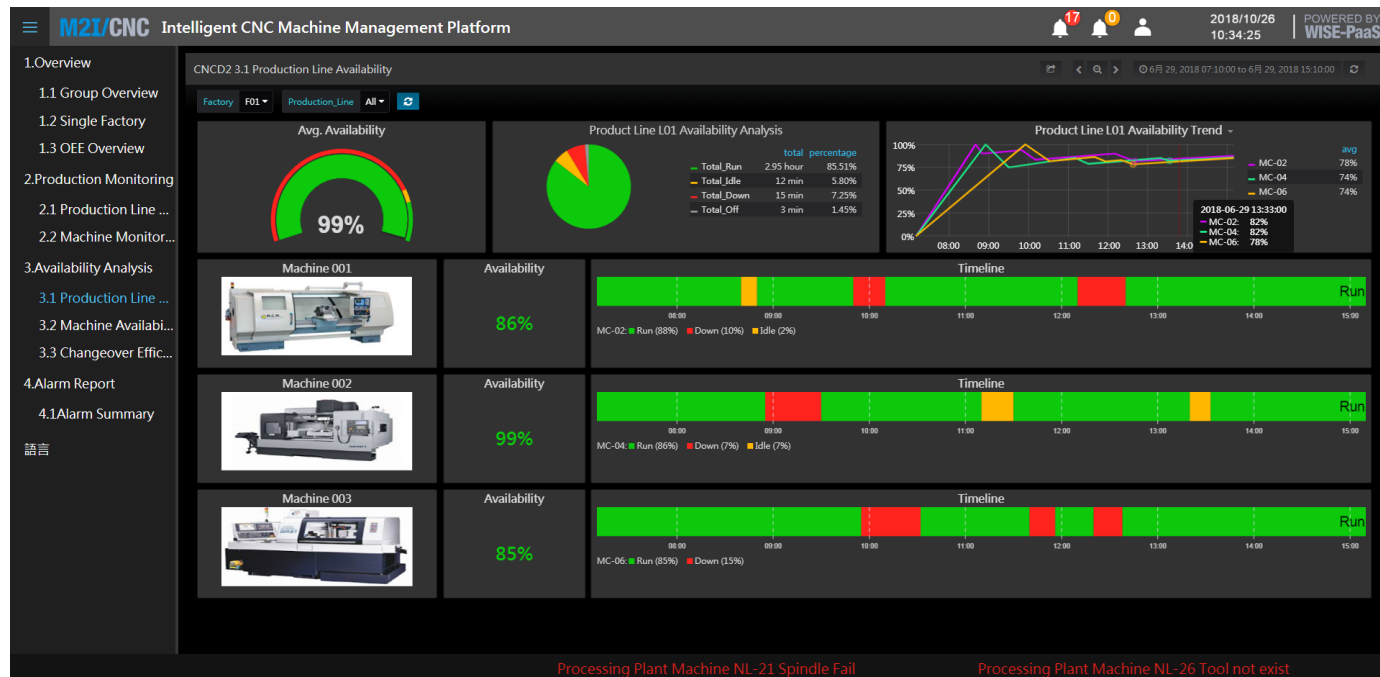
Keep

Production Line Equipment Status



Panel Refresh Setting	
Auto Refresh	5 mins
Default Period	Today So Far
Longest period option	none
Quick Range	none
Calendar	none

Line Equipment Availability: spot and history



Panel Refresh Setting	
Auto Refresh	5 mins
Default Period	Today so far
Longest period option	Within 2 days
Quick Range	Hide options over two-day long (ex: last two days)
Calendar	Keep

Equipment Abnormality Statistics and Analysis



Panel Refresh Setting

Auto Refresh	5 mins
Default Period	Last 7 days
Longest period option	3 months
Quick Range	Hide options over 3 months
Calendar	Keep

iWater: Water Treatment Plants Management Cloud Services

E&E/iWater

iWater智能云平台

2

1

2018/08/06
13:19:43

POWERED BY
WISE-PaaS

iWater管理

集团概况

首页

站点监控

设备监控

数据分析

效率分析

维护分析

报警日志

实时报警

历史报警

报表管理

操作报表

通用报表

系统维护

维护日志

系统日志

系统管理

维护管理

系统管理

用户管理

语言

毛家浜河滨修复工程1#CP泵轴承温度过高警报！

高德污水处理站

监测点

主要工艺

排水标准

污水站

实时水量

实时水质

耗电量

当地天气

天气

风速

湿度

温度

AB

GB18918 Class III

1880t

Class II

882kWh

sunny

3m/s

60%

16℃

毛家浜河滨修复

监测点

主要工艺

排水标准

污水站

实时水量

实时水质

耗电量

当地天气

天气

风速

湿度

温度

AB

GB18918 Class III

1860t

Class II

887kWh

sunny

4m/s

67%

20℃

实时资讯

污水处理加药排程

加药设备

药剂

时间

状态

#1中和池

硫酸

2018/06/23

已处理

#1絮凝池

絮凝剂

2018/07/12

已处理

#2中和池

碱液

2018/08/25

未处理

#2絮凝池

助凝剂

2018/07/22

已处理

Previous

Next

设备维护

设备

项目

时间

状态

毛家浜1号曝流曝气机

季检

2018/09/16

未处理

毛家浜2号曝流曝气机

季检

2018/08/02

已处理

毛家浜3号曝流曝气机

更换黄油

2018/09/13

未处理

毛家浜4号曝流曝气机

季检

2018/10/09

未处理

污水1厂1号曝流曝气机

电机

2018/07/12

已处理

Previous

Next

日处理量

3100t

日均费用

8547RMB

耗电量

5116 kWh

年达成率

52%

异常率

3%

报警站点数

2

ADVANTECH

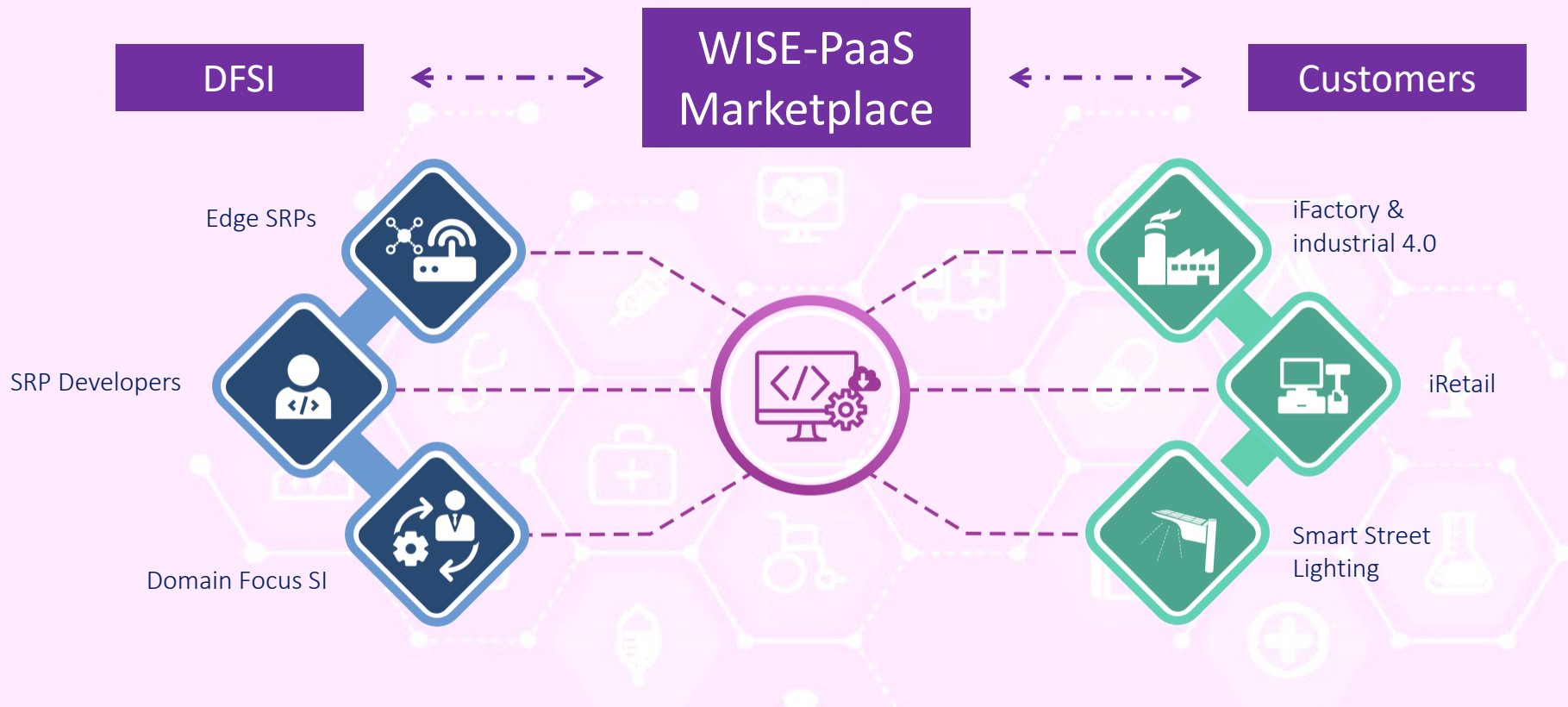
iWater – Process Status and Water Quality Monitoring



iWater – Equipment Status and Performance



Enable Digital Value Network



From Linear Value Chain To Exponential Value Network

ADVANTECH

Accelerate your Speed to Market



Partners/Customers
Value Network



Agile Develop



Digital
Commerce



Expand & Scale

Discover · Collaborate · Develop

Home >

IoT Cloud Services >

IoT Security Services >

IoT PaaS Software Services >

Solution Packages >

Resource



Frequently Asked Questions



Join WISE-PaaS Alliance Member



Become WISE-PaaS Solution Provider



Explore WISE-PaaS Knowledge Portal

IoT Cloud Services

[See More](#)

WISE-PaaS/EnSaaS - edge to cloud services

An Industrial PaaS Solution for the Edge to Cloud Service

WISE-PaaS/EnSaaS

Microsoft Azure Pay-As-You-Go

Cloud services that provide tools, services, and more for building Internet of Things(IoT) solutions.



Azure Cloud Infrastructure

Pre-configure packages for fast moving to the cloud



IoT Security Services

[See More](#)

Acronis Backup and Recovery Solutions

Acronis provides a quick, effective and easy-to-operate backup and recovery solution. Acronis can back up the operating system, applications, settings

Acronis

McAfee - Endpoint Security

Endpoint Security 10 is the newest, best-performing, most effective, collaborative protection for customers.



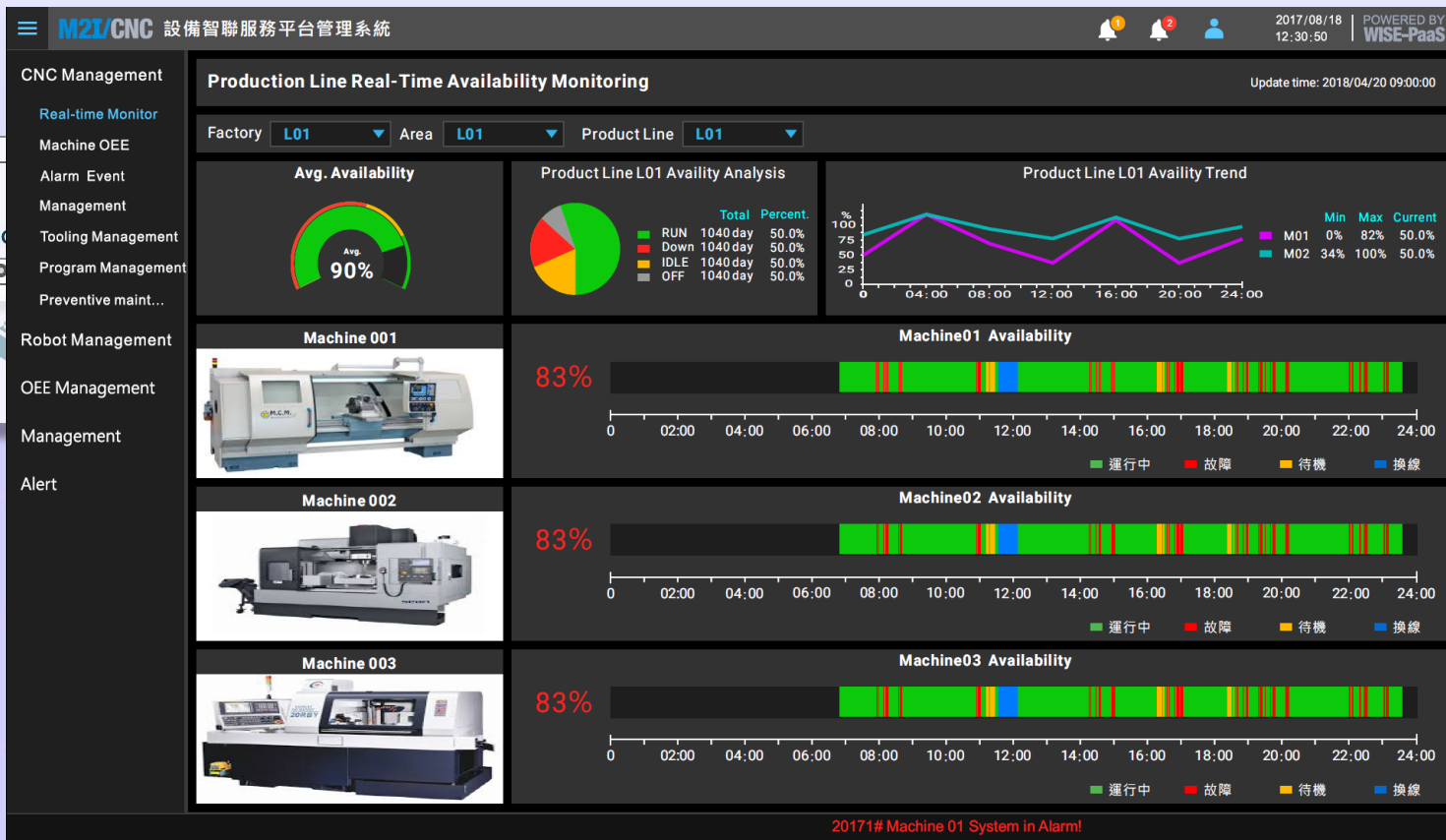
SEARCH - Integrity Control
130+
Solutions



[See More](#)

ADVANTECH

How Customer Interacts with Marketplace



GTM Global and Expand your Business



Partners/Customers
Value Network



Agile Develop



Digital
Commerce

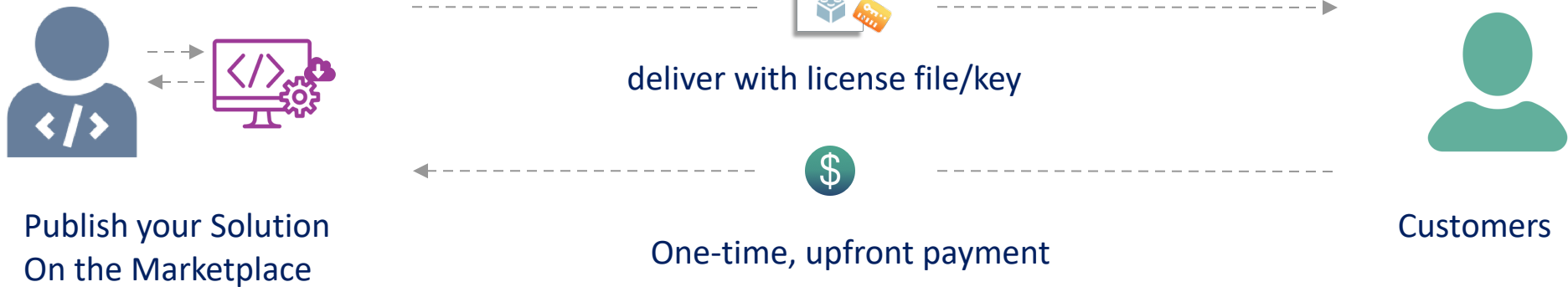


Expand & Scale

Perpetual

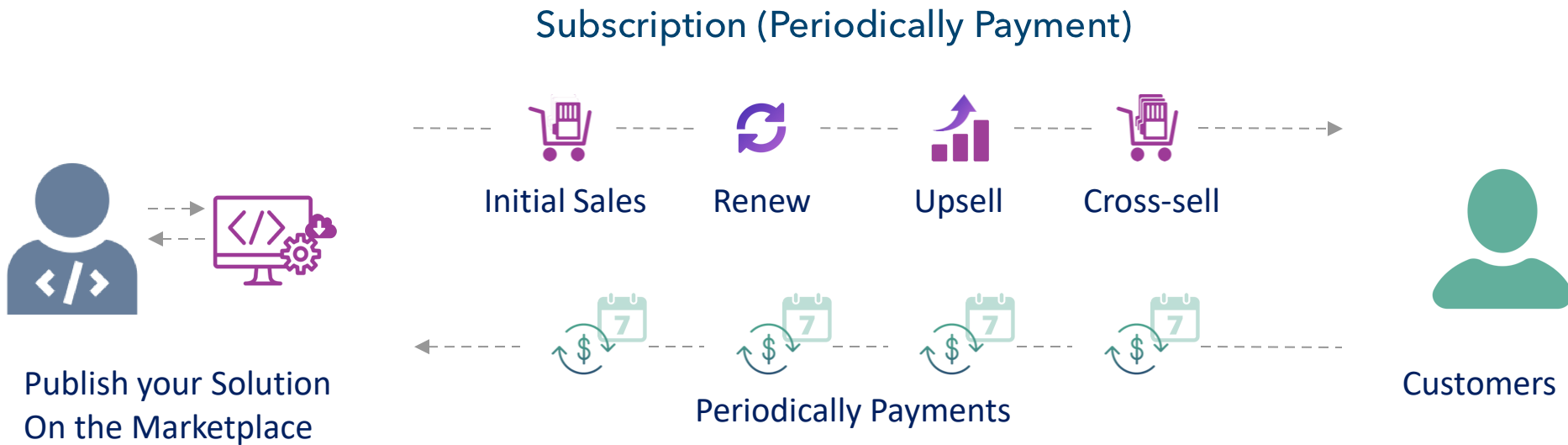
Cloud Business Model

Perpetual (One-Time)



Subscription

Cloud Business Model



- continuous delivery, dynamically adjust services
- predictable and constant revenue stream

Subscription Transaction UI

ADVANTECH WISE-PaaS [Contact Sales](#) [Register](#) [Search](#)

Marketplace Technical Portal Knowledge Center Alliance Network AIoT SRP

Home > your trial period ends on Dec 2, 2018

IoT Cloud Services >

IoT Security Services >

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Solution Packages >

Resource

Frequently Asked Questions

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Toll Free 0800-777-111

Subscribe to this Industrial Cloud Solutions

E2I **E2I SRP Product Name**
Service Provider: Advantech Category: Industrial Cloud Solutions
Last Update: 12/29/2018 12:00AM

powered by WISE-PaaS An Industrial Cloud Solution for Machine Management

ESTIMATE PRICE **AUTHORIZE & CONFIRM** **DEPLOY SERVICES**

1 2 3

Estimate your Price

Estimate your monthly fee by machine connections

Select Number of Device / Machine Connections

E2I SRP Product Name

dashbaord with real-time machine status monitoring, visualized OEE and more...

10 device connections

Minimum PaaS Service System Requirement

this solution requires at least the following WISE-PaaS/EnSaaS resources configuration to operate its features.

WISE-PaaS/EnSaaS

IoT Hub messages: 3M; DB Storage: 50GB; App Space memory: 4GB

**Pay As You Go consumption fees apply for IoT Hub Messages and DB Storage usage exceeding the subscribed plan in a monthly billing cycle.*

VIP membership discount: **9.8 WISE-Point/Month**

Total: **29.8 WISE-Point/Month**

NEXT

01

Price Estimate

(One package price)

02

Deploy & Billing

ADVANTECH WISE-PaaS [Try for Free](#) [Contact Sales](#) [Register](#) [Search](#)

Marketplace Technical Portal Knowledge Center Alliance Network AIoT SRP

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IoT Security Services >

IoT PaaS Software Services >

Solution Packages >

Resource

Frequently Asked Questions

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E2I **E2I SRP Product Name**
Service Provider: Advantech Category: Industrial Cloud Solutions
Last Update: 12/29/2018 12:00AM

powered by WISE-PaaS An Industrial Cloud Solution for Machine Management

ESTIMATE PRICE **AUTHORIZE & CONFIRM** **DEPLOY SERVICES**

✓ ✓ 3

Deploy Services

- E2I SRP Product Name - 10 machine connections

Configure Environment

- WISE-PaaS/EnSaaS 3M IoT Hub messages, 50GB DB storage, 4GB App Space

START DEPLOY

Sell your SRP with the WISE-PaaS



Join and Expand with Rapid Growing Alliance



Partners/Customers
Value Network



Agile Develop

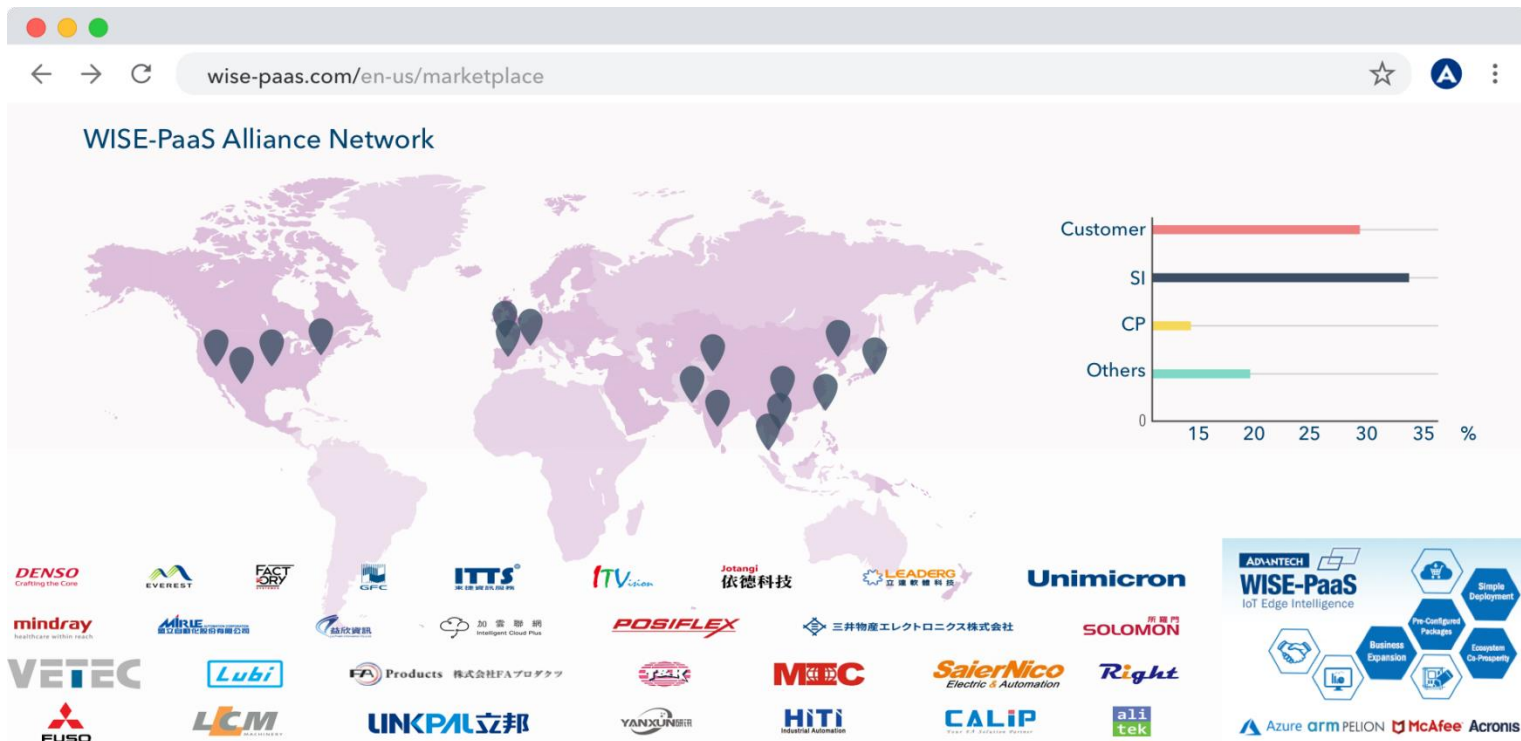


Digital
Commerce



Expand & Scale

WISE-PaaS Alliance



WISE-PaaS Alliance VIP Benefits



Speed to Market

- Get to market faster and more profitably with 130+ IoT Solutions at competitive price on the Marketplace;
- Tech support & trainings;
- 10-hr Consultations.



Alliance Network

- Collaborate and network with 300+ partners in the value network;
- Business match-making;
- Online /offline events co-marketing, i.e. Co-Creation Summit.



Sell / Resell (DFSI)

- Leverage digital commerce platform and tap into global IoT markets;
- Global / Regional publish your solutions;
- Rewards and incentives on resell program.

2-year membership program

Essential Resources at your Fingertips

研华物联网共创峰会
Advantech IoT Co-Creation Summit
November 1-2, 2018 @ Suzhou, China

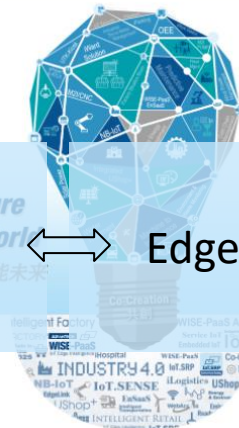
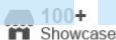
Software commerce



eLearning resources

Partner network

Edge SRPs



Enabling IoT Edge Intelligence with WISE-PaaS

Co-Creating IoT Business Success with Advantech

Advantech's WISE-PaaS industrial IoT cloud platform provides edge-to-cloud software and services to help system integrators and manufacturers, enabling real IoT-powered cloud business models in various vertical markets.

Leveraging Advantech's extensive hardware portfolio, WISE-PaaS integrated diverse software services, including WebAccess, WISE-PaaS/EdgeLink, WISE-PaaS/EdgeSense, and WISE-PaaS/VideoSense. Data collected to the WISE-PaaS/EnSaaS IoT cloud platform enables partners to quickly develop SaaS and domain-specific IoT Solutions.



Go Together, We Go Far...

Co-Creating the Future of the IoT World

