

佈建工業物聯網完整價值鏈

- 以研華WISE-PaaS加速從端到雲串接與運維

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BDM, WISE-PaaS/IIoT

第一波

1985 ► 1999

建構網際網路，
為線上世界打下基礎。

驅動因素：

人。

產品。

平臺。

夥伴關係。

政策。

堅持不懈。



第二波

2000 ► 2015

App 經濟與行動革命

搜尋引擎、社群媒體與
電子商務的新創公司
在網際網路上成長茁壯。

- ❖ 人聯網
- ❖ 大數據
- ❖ 機器學習
- ❖ 人工智慧
- ❖ Open Source
- ❖ 大型雲平台
- ❖ 高速創新與快速市場實證



第三波

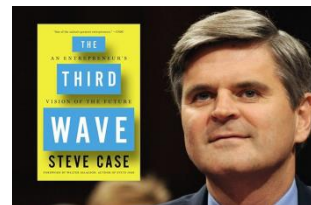
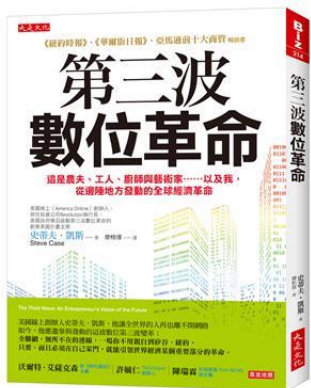
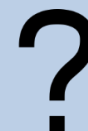
2016年之後

全聯網

無所不在的連線，
實體 產業展開轉型。

驅動因素：

- ❖ 物聯網－邊緣智慧
- ❖ 大數據
- ❖ 機器學習
- ❖ 人工智慧
- ❖ Open Source
- ❖ 大型雲平台
- ❖ 高速創新與快速市場實證

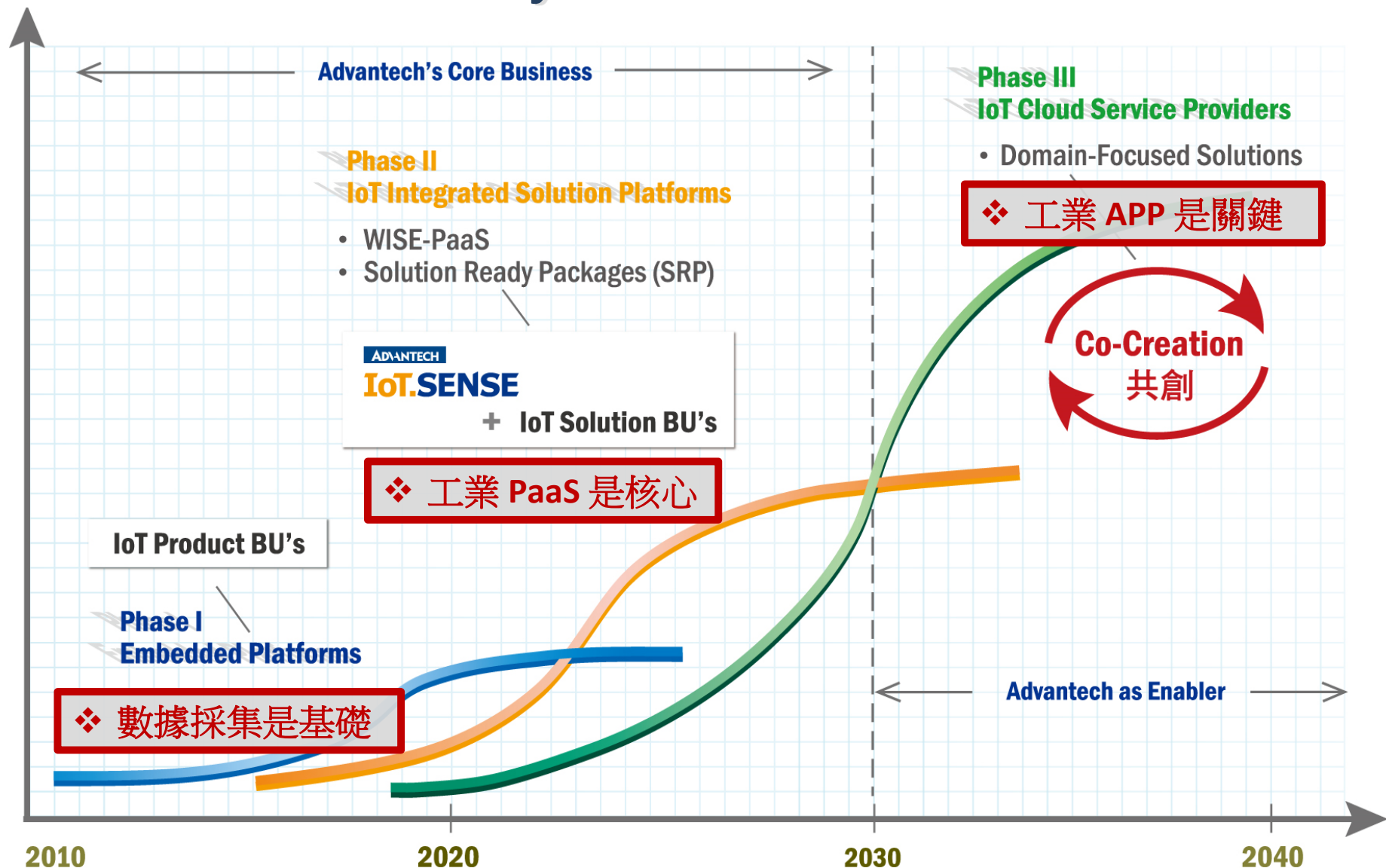


第三波：物聯網+平台服務模式為主流



单位：十亿美元；数据来源：CapitallQ
时间：2017年8月18日

Advantech's Key Initiatives at each IoT Phase

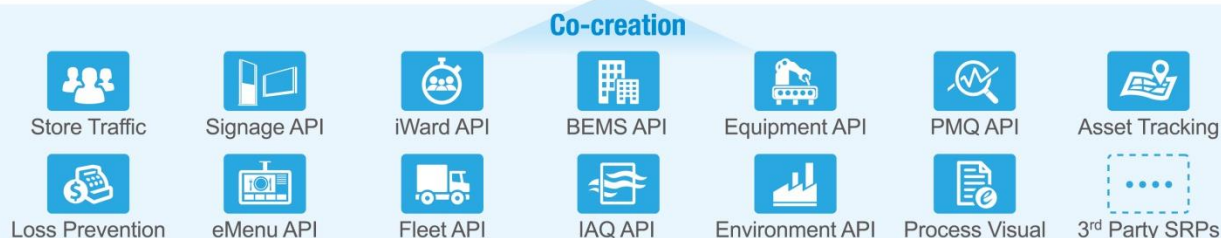


Advantech IoT Solution Architecture

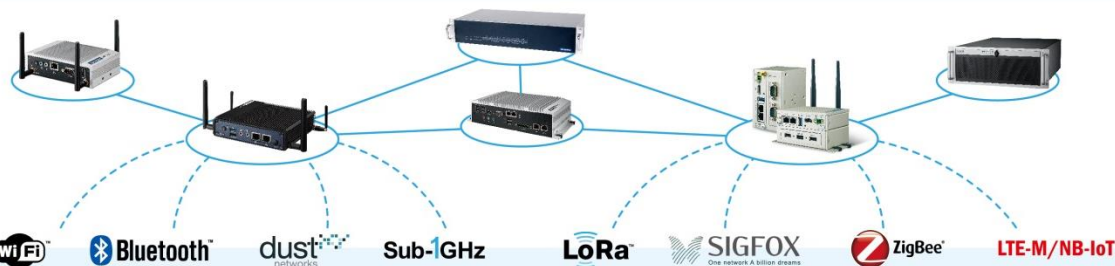
Domain Specific Cloud Services (SaaS)



Solution Ready Platforms (SRP)



Embedded Platforms & Edge Intelligence Servers (EIS)



IoT Sensing Devices



WISE-PaaS/ EnSaaS

Data Analytics
Sensor Fusion
Multi-tenancy
Elastic Scaling
High Availability
Metering & Billing

CLOUD FOUNDRY

Microsoft Azure

WebAccess

WebAccess/SCADA
WebAccess/Dashboard
WebAccess/CNC
WebAccess/MCM
WebAccess/TagLink
WebAccess/HMI
WebAccess/NMS

WISE-PaaS/ VideoSense

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

WISE-PaaS/ EdgeSense

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

WISE-PaaS/EnSaaS Cloud Platform



**Data
Platform**

WISE-PaaS/ EnSaaS
Platform for Enabling Cloud Service Providers

**Cloud
Services**



**Analytics &
Visualization**



**Sensor
Fusion**



Multi-tenancy



**Elastic
Scaling**



**High
Availability**



**Metering
& Billing**



Security



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WISE-PaaS 2.0 Architecture

Cloud Services Providers



Co-creation

End To End Security: SSL/TLS

Industrial APPs
(SRPs)

OEE

EMS

Digital Signage

Global Asset
Management

Predictive
Maintenance

3rd Party App...

WISE-PaaS
Marketplace

RESTful API

Node-RED

PaaS

WISE-PaaS/EnSaaS

Visualization - Dashboards

Machine Learning Data Analytics - AI

Data Infrastructure
(SQL/NOSQL/NoSQL)

WISE-PaaS Data Infrastructure - Data Services

Microservice

Container

VM

Multi-tenant

Compute Resource
Management

Customer Management

GPU

IaaS



On-premises



MQTT/AMQP

Edge
Intelligence

WebAccess

Industrial Data Acquisition
and Visualization

WebAccess/SCADA

WebAccess/CNC

WebAccess/TagLink

WebAccess/HMI

WebAccess/MCM

WebAccess/NMS

WISE-PaaS/EdgeSense

Edge Intelligence
and Sensing Integration

WISE-PaaS/RMM

WISE-PaaS/OTA

WISE-PaaS/Security

WISE-PaaS/VideoSense

Intelligent Video and
Multimedia Management

WISE-PaaS/VideoCMS

WISE-PaaS/SignageCMS

WISE-PaaS/HumanDetectAI



WISE-Agent



Node-RED



Device
Management



Protocol
Conversion

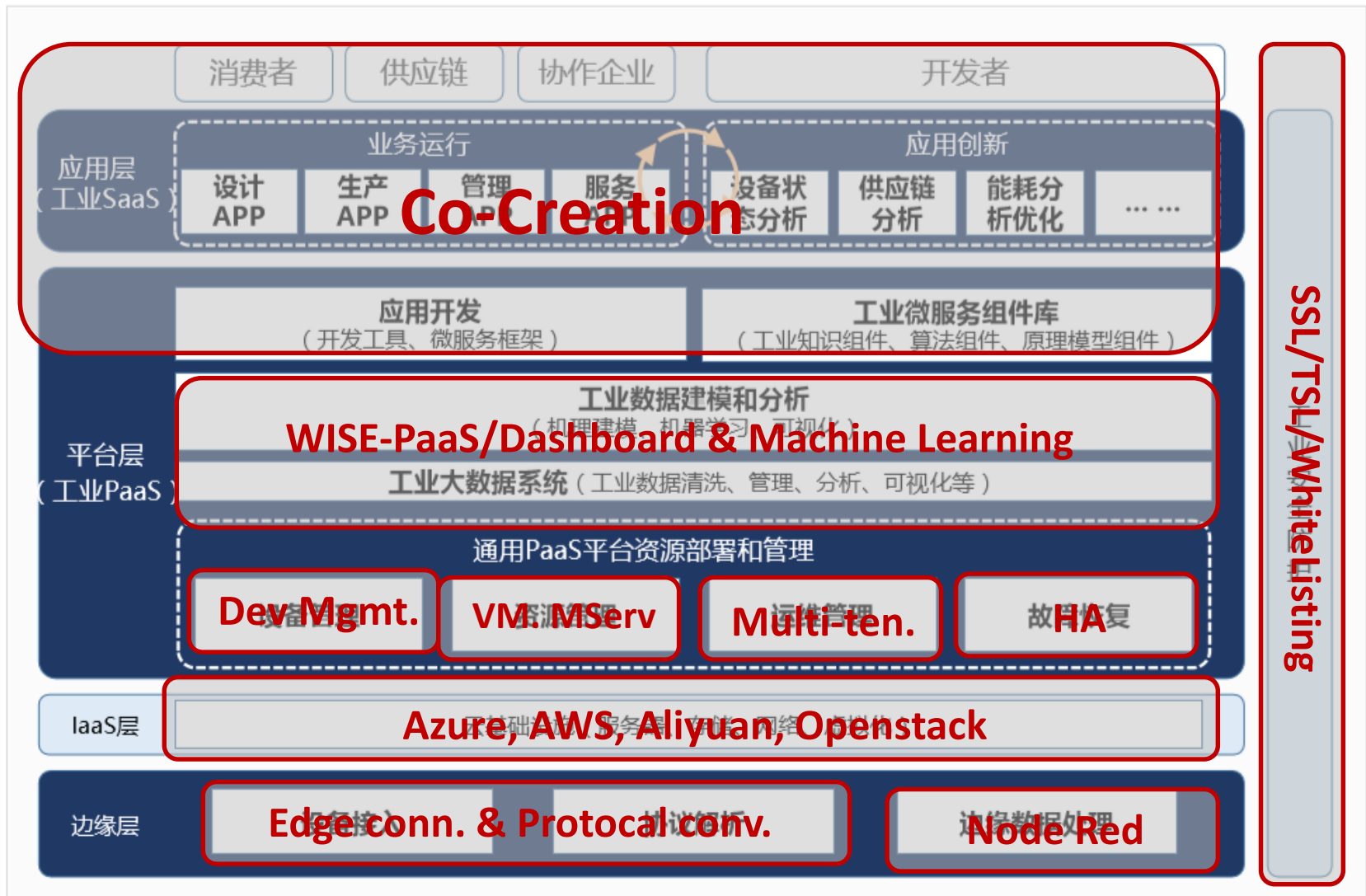
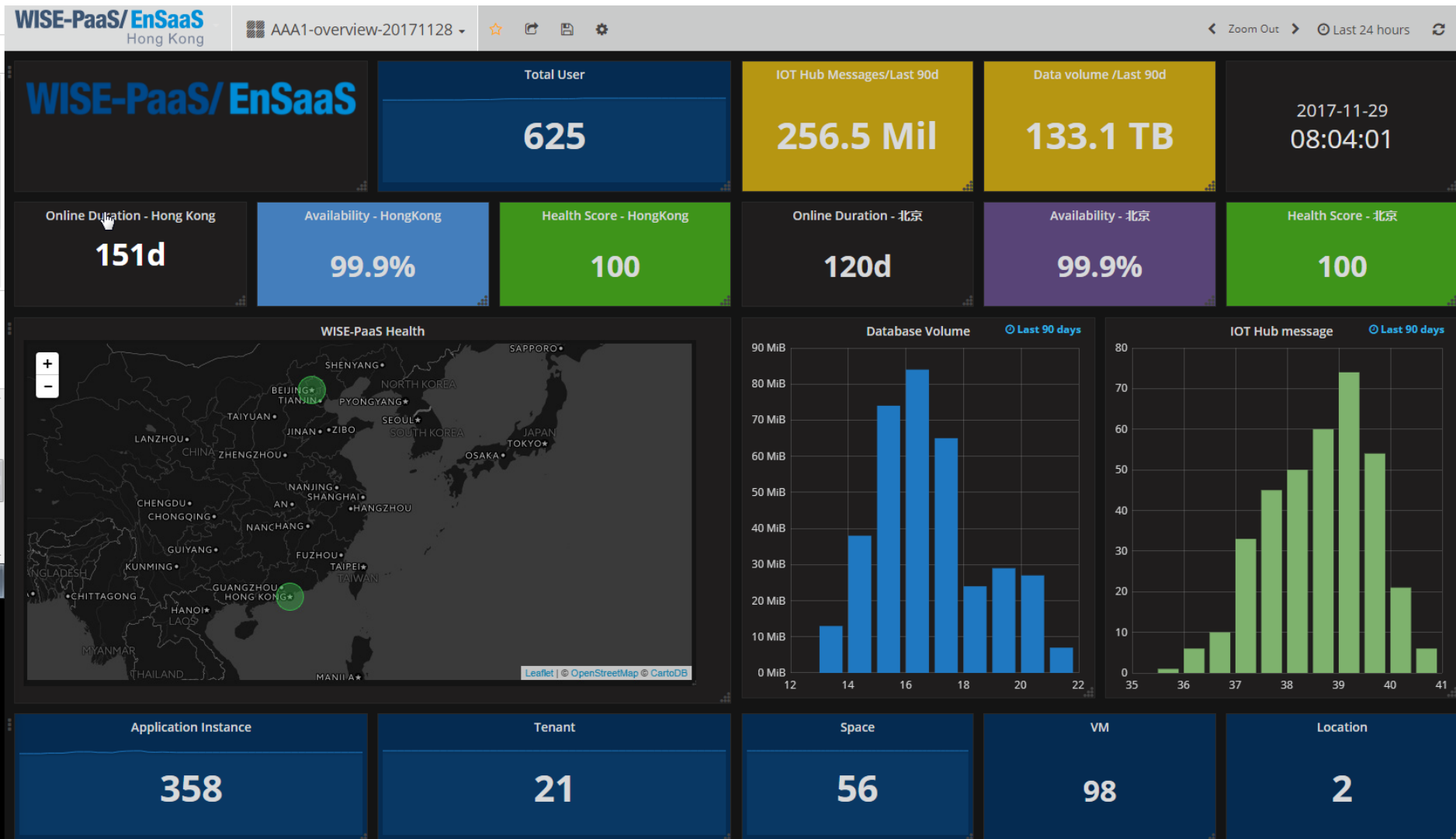


图 1: 工业互联网平台功能架构图

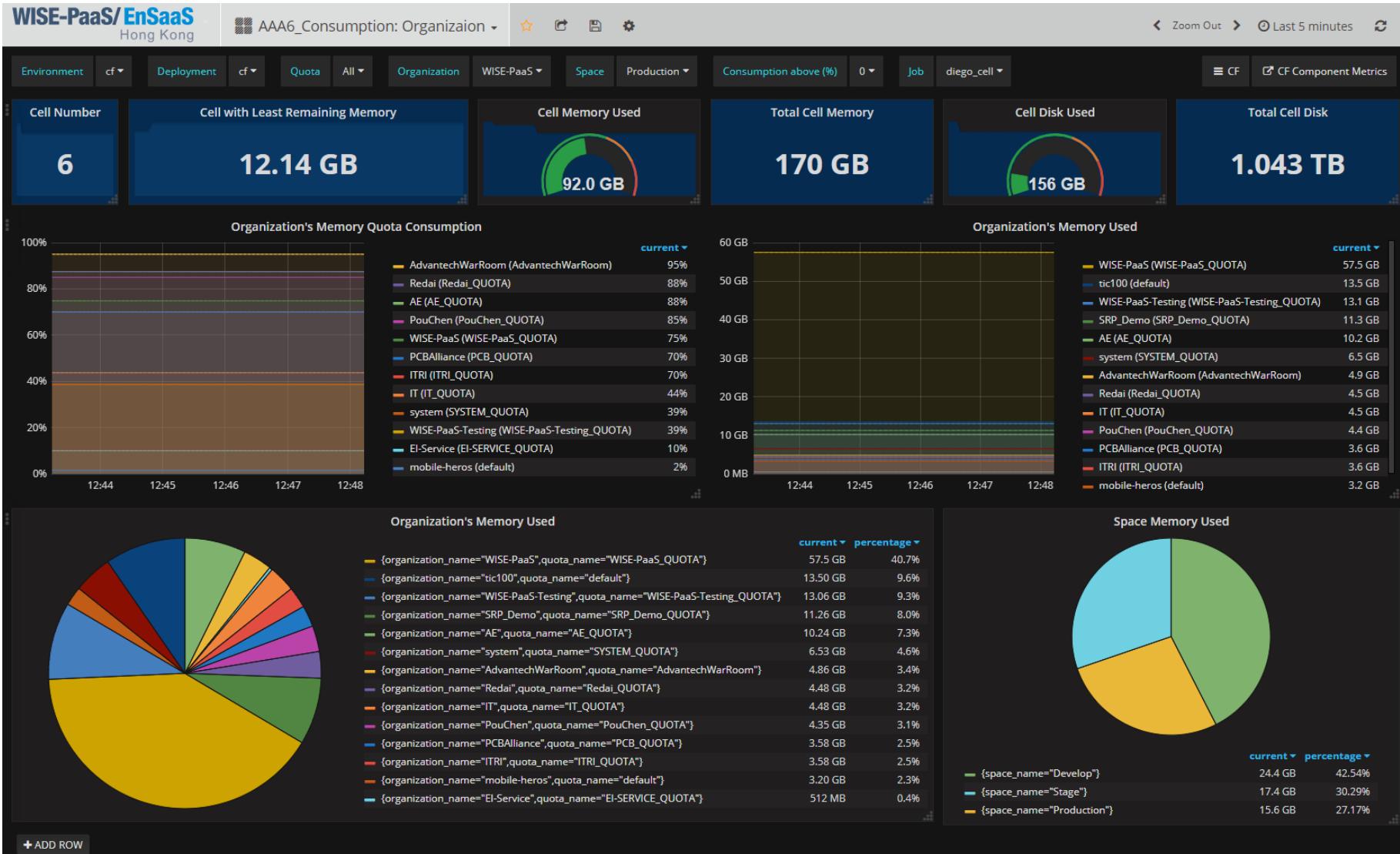
WISE-PaaS 2.0 Instances on Public Cloud



WISE-PaaS/EnSaaS Operation Monitoring Dashboard



WISE-PaaS/EnSaaS Operation Monitoring Dashboard



Strong Emerging Opportunities on Cloud based Remote Asset Management

	Asset Management
汇川	變壓器遠程管理
泛亞	試車場設備遠程管理(2地風電廠、場內30種設備、多種資料採集))
中鋼	產線設備健康與預防診斷(至少300點設備採集) 瑕疵檢測
安捷	變電設備遠程管理 (1000站，50萬點資料採集)
壹傳科技	停車場設備遠程管理
中車風電	風車機組故障診斷與預警 (30地風電廠、每地約20台風車)
埃夫特	Robot Arm設備遠程管理
Smartbow	牛隻健康狀況遠程管理
永進	CNC機台監控與預防診斷/場內EMS管理
Honeywell	社區安防控制與管理平台 (遠程管理)

Industrial Cloud Services Ecosystem

Domain Applications (SaaS)

Go-to-market: BDM/ Sales/ Consultants



JV Co-creation
Partners

SRP PD's

iFactory

M2I

E&E

EMS

E2I

VideoSense

SRP Co-creation
Partners

IoT.SENSE



Visualization - Dashboard

Data Analytics - AI

Data Infrastructure – Data Service

Compute Resource Management

Customer Management

3rd party
SW Partners
/Open Source

WISE-PaaS TSU

IoT Gateway
PD's



WISE & Wireless
PD's



Edge Assets



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Industrial Cloud Services Ecosystem

Domain Applications (SaaS)

Go-to-market: BDM/ Sales/ Consultants



Industrial Cloud Services Ecosystem

Domain Applications (SaaS)

Go-to-market: BDM/ Sales/ Consultants



JV Co-creation
Partners

SRP PD

iFactory

M2I

E&E

Cloud-Based SRP

SRP Co-creation
Partners

IoT.SENSE

Domain SaaS

WISE-PaaS TSU

ADVANTECH
WISE-PaaS
Edge Intelligence Platform

Visualization - Dashboard

Data Infrastructure - Data Service

Compute Resource Management

Customer Management

WISE-PaaS

3rd party
SW Partners
/Open Source

IoT Gateway
PD

IDP-Compliant Gateway

Quad Core Gateway

Rugged System

Mini-ITX System

Digital Signage Player

IoT Gateways

Intelligent Remote Terminal Unit

WISE PD

m2.com

iSensing

Edge Assets



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Advantech IoT Co-Creation Summit

Nov. 1-3, 2018, Suzhou, China



Co-Creating the Future of IoT World

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- FREE entrance
- 1on1 meeting arrangement
- Exhibition space
- Co-PR/ co-creation business



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Partnering for Smart City & IoT Solutions

驅動智慧城市創新 共建物聯產業典範

Industrial Cloud
& Cloud Networks

Private Cloud

iConnectivity

Transportation

IoT Devices

Computer On Modules

Video and RFID

Power & Energy

Environmental & Facility Monitoring

Embedded Software

iBuilding/BEMS

Industrial HMI

Embedded Design-in Services

Intelligent Display

Intelligent Systems

iRetail & Hospitality

iHospital

Image & Video Processing

Machine Automation

WebAccess+

Digital Healthcare

Digital Logistics

Industrial PCs