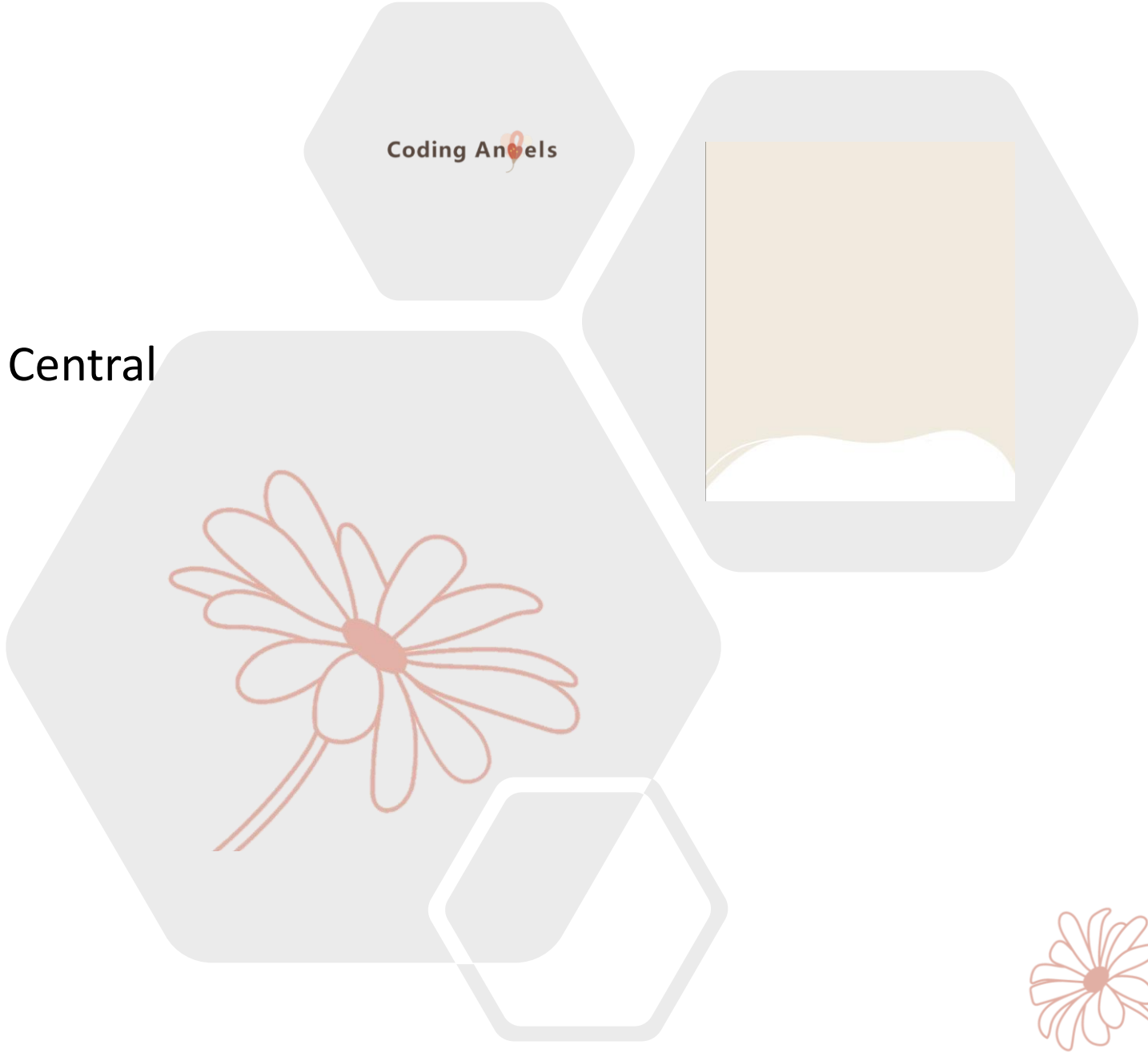
IoT Hands-on Introduction

Coding Angels

Microsoft

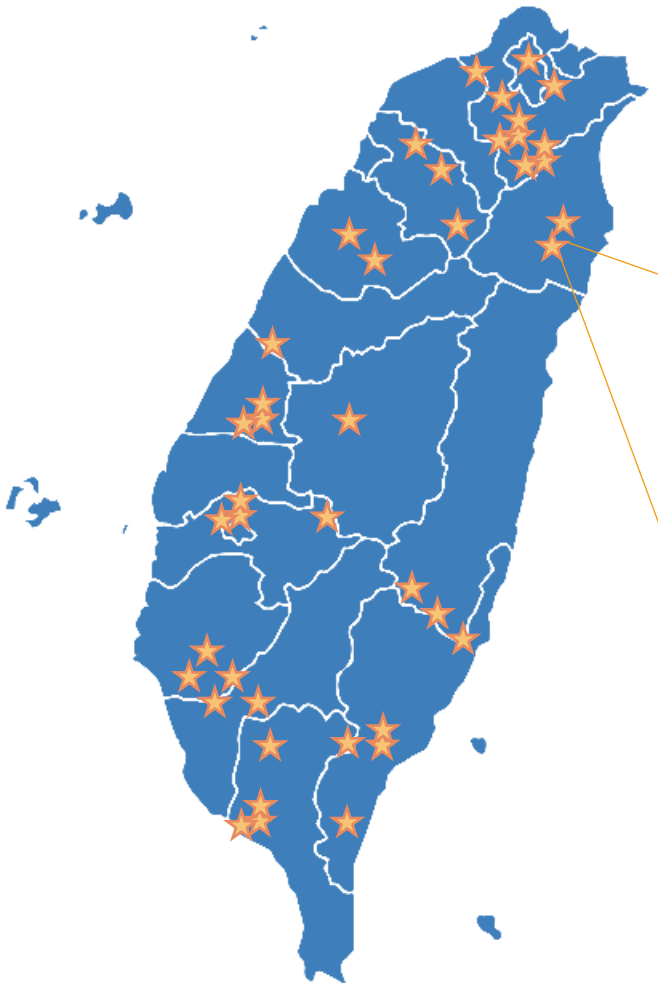
Agenda

- Introduction to MXChip & Azure IoT Central
  - Recent case: 春一枝冰櫃
- MXChip & Azure IoT Central Demo
- Hands-on End-to-end Flow



Introduction to MXChip & Azure IoT Central

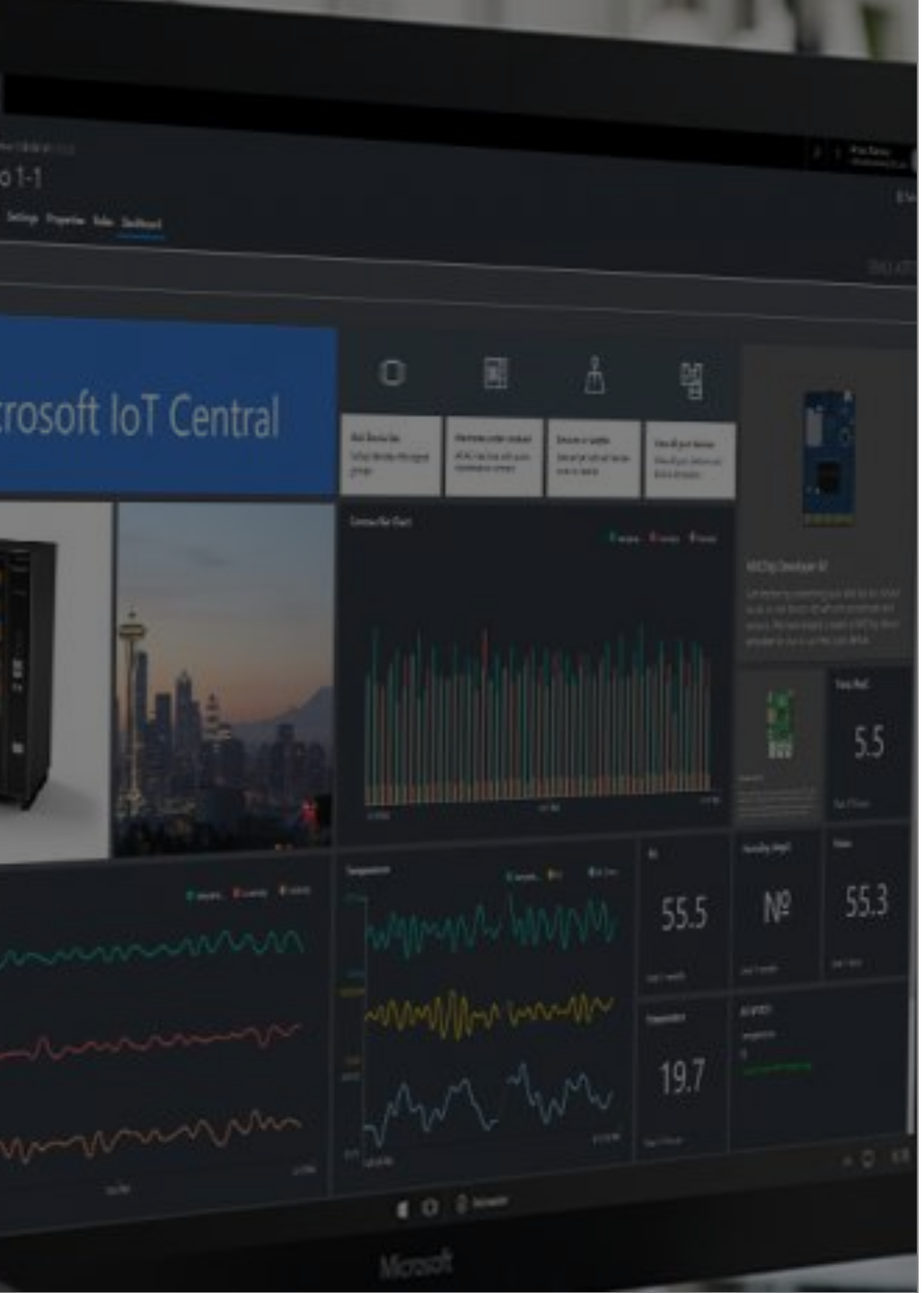
Recent Case: 春一枝冰櫃



來自台灣的沁涼新鮮水果手作冰棒
100%台灣水果 100%新鮮天然 100%健康
售完
請注意冰棒內有再來一枝!
來自台灣的沁涼
新鮮水果手作冰棒
IceSpring
春一枝

How long does enterprise companies *often* insist on building ***IoT solutions*** *on average?*

9 months



Azure IoT Central

IoT Central is an IoT application platform that reduces the burden and cost of developing, managing, and maintaining enterprise-grade IoT solutions.

Solution Prototyping

1

Send telemetry data

- Temperature
- Humidity
- Pressure

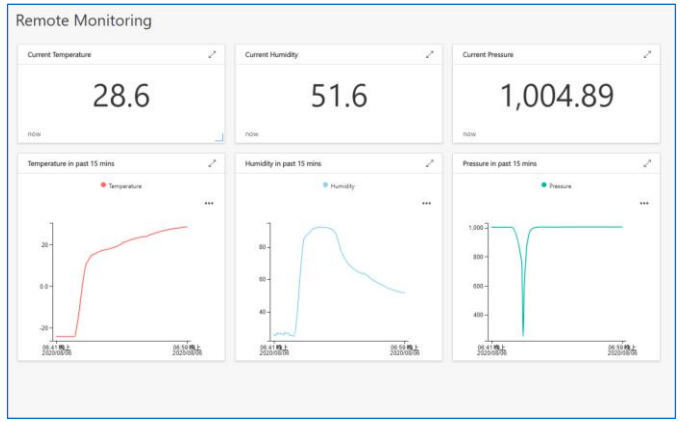
+

Azure MXChip

Wi-Fi

Azure IoT Central

2 Dashboard



Custom Rules

For example: when the temperature is over -10 °C.

3 If triggered

Email

OR

Azure functions

Microsoft Flows

Azure Logic Apps

Your-app

Alert users

Azure MXChip

Azure IoT Central

遠端冰櫃監測 | Custom DevKit

custom-devkit.azureiotcentral.com/dashboards/urn:homepageView:47gnfrz7

Custom DevKit

Search

New Edit Delete

Dashboard
Devices
Device groups
Rules
Analytics
Jobs

App settings

Device templates
Data export
Administration

Azure IoT Central

遠端冰櫃監測

Current Temperature

-26.8

now

Current Humic

now

Temperature in past 15 mins

Temperature

-26
-26.5

Humidity in pa

35
30
25

MXChip & Azure IoT Central

Demo

Hands-on Scenario

Scenario: Mask Factory

口罩打片機故障偵測

- 溫度過高
- 輸送帶打片狀態

口罩點焊機故障偵測

- 溫度過高
- 氣源壓力不夠

Hands-on End-to-end Flow

Hands-on End-to-end Flow

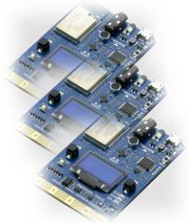
IoT Devices

Telemetry

temperature

humidity

shock



IoT Central Application

Device template
(ex: Azure Sphere)

(Define)
- Telemetry
- Properties
- Commands

Device template

- Telemetry
- Properties
- Commands

(Actual)

Device
- Telemetry
- Properties
- Commands

Device

Device
- Telemetry
- Properties
- Commands

Dashboard

End-to-end Flow (Mask Factory)

1. Build IoT Central Application (IoT Central 應用程式)
2. Create **Device Template** (裝置範本)
3. Add Simulated **Device** (虛擬裝置)
4. Add Custom **Dashboard** (客製化儀表板)

IoT Central Application

Azure Sphere Template

Azure MXChip Template

azure-sphere-simu-001
(監控口罩打片機)

azure-mxhip-simu-001
(監控口罩點焊機)

Mask Factory Dashboard

儀表板
裝置
裝置群組
規則
分析
作業

應用程式設定

裝置範本
資料匯出
資料匯出 (舊版)
管理

1. 選取類型
2. 檢閱

精選裝置範本

Azure IoT Central

Azure Sphere Sample Device

Start prototyping and building high-level and real-time capable apps on the Azure Sphere platform. Learn more http://aka.ms/AzureSphere-IoTCentral-Sample

Azure IoT Central

Flic Button

The Rigado Flic button is a BLE-enabled multi-purpose device that is pre-integrated with the Rigado Cascade-500 gateway.

Azure IoT Central

Hobo MX-100

The HOBO MX100 by Onset is a low-cost, splash-proof data logger that measures and transmits temperature data wirelessly to mobile devices via Bluetooth Low...

Azure IoT Central

Rigado Cascade 500 Gateway

The Rigado Cascade-500 IoT gateway balances flexible connectivity with edge computing power in a secure and cost-

Azure IoT Central

RS40 Occupancy Sensor

The Rigado RS40 Occupancy Sensor is an optional sensor component of the Rigado Cascade Edge-as-a-Service solution. The

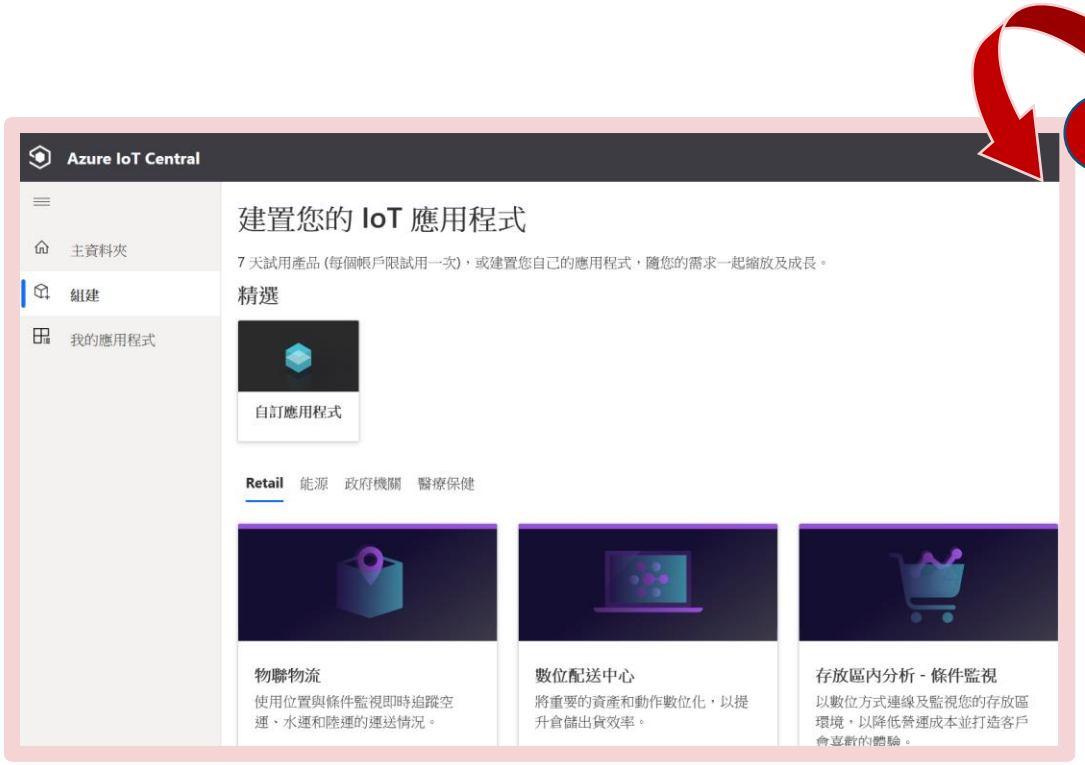
Azure IoT Central

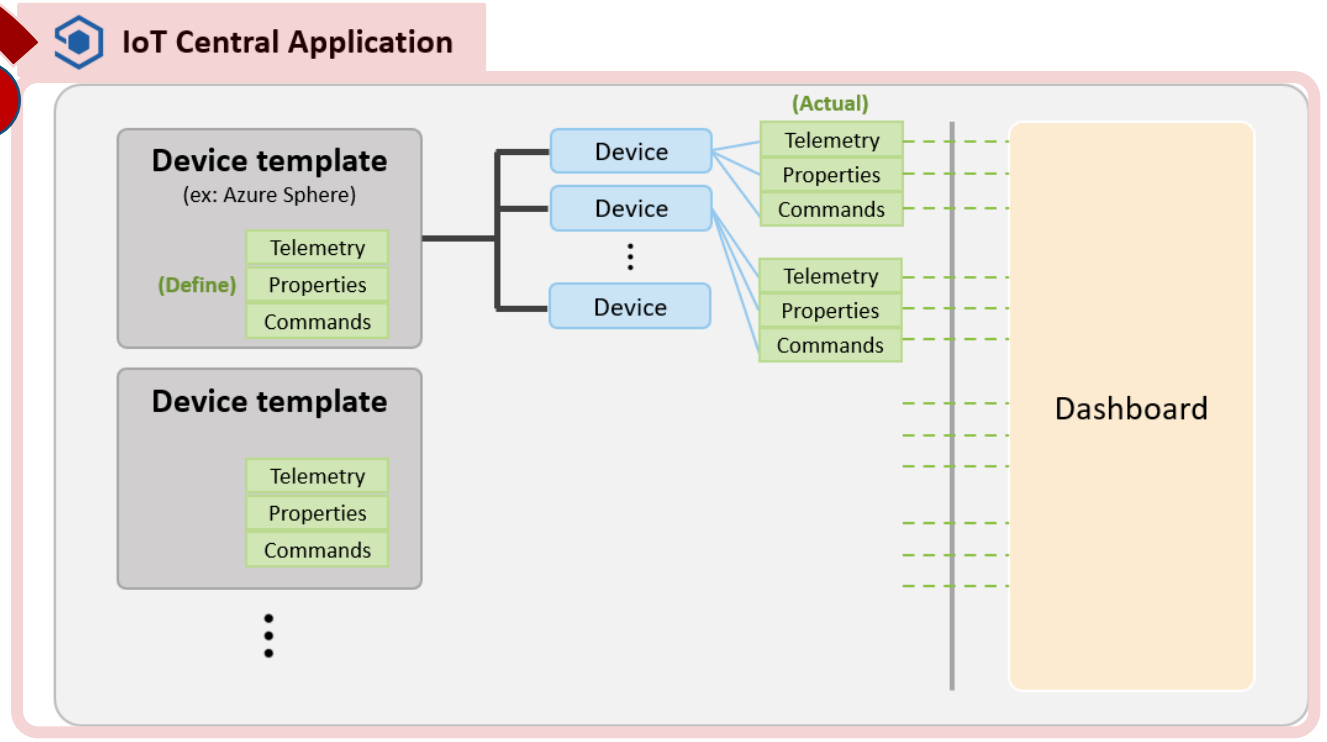
Rigado Cascade 500W Gateway

The Rigado Cascade-500W IoT gateway balances flexible connectivity with edge computing power in a secure and cost-

End-to-end Flow (1)

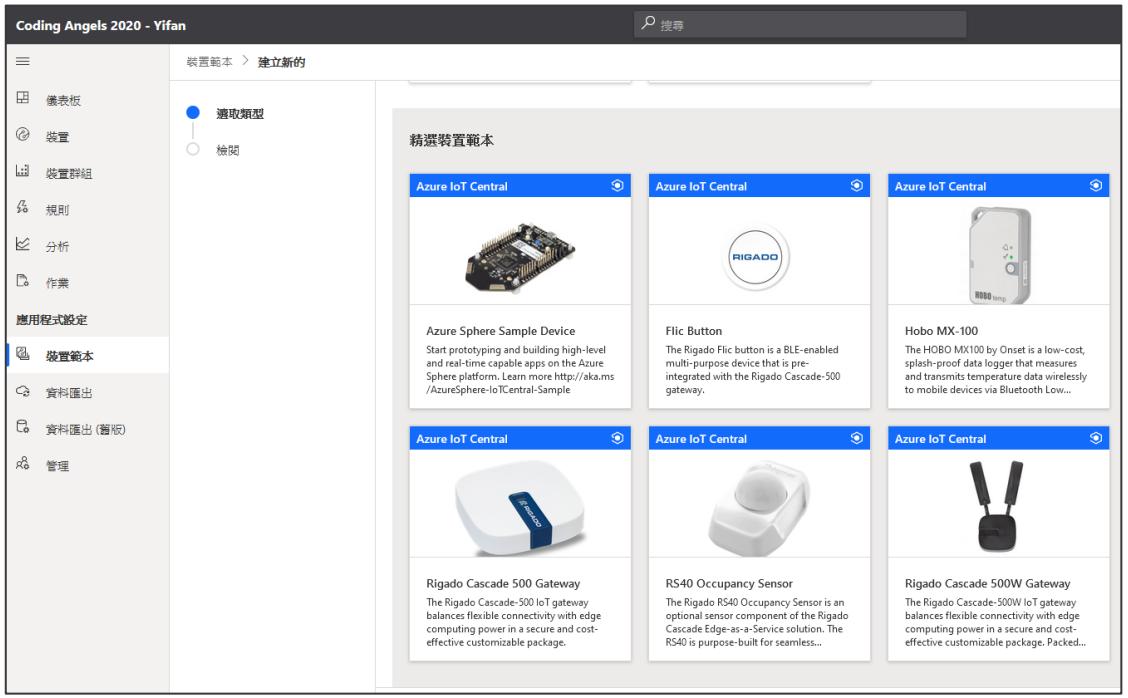
1. Build IoT Central Application (IoT Central 應用程式)
2. Create Device Template (裝置範本)
3. Add Simulated Device (虛擬裝置)
4. Custom Dashboard (客製化儀表板)

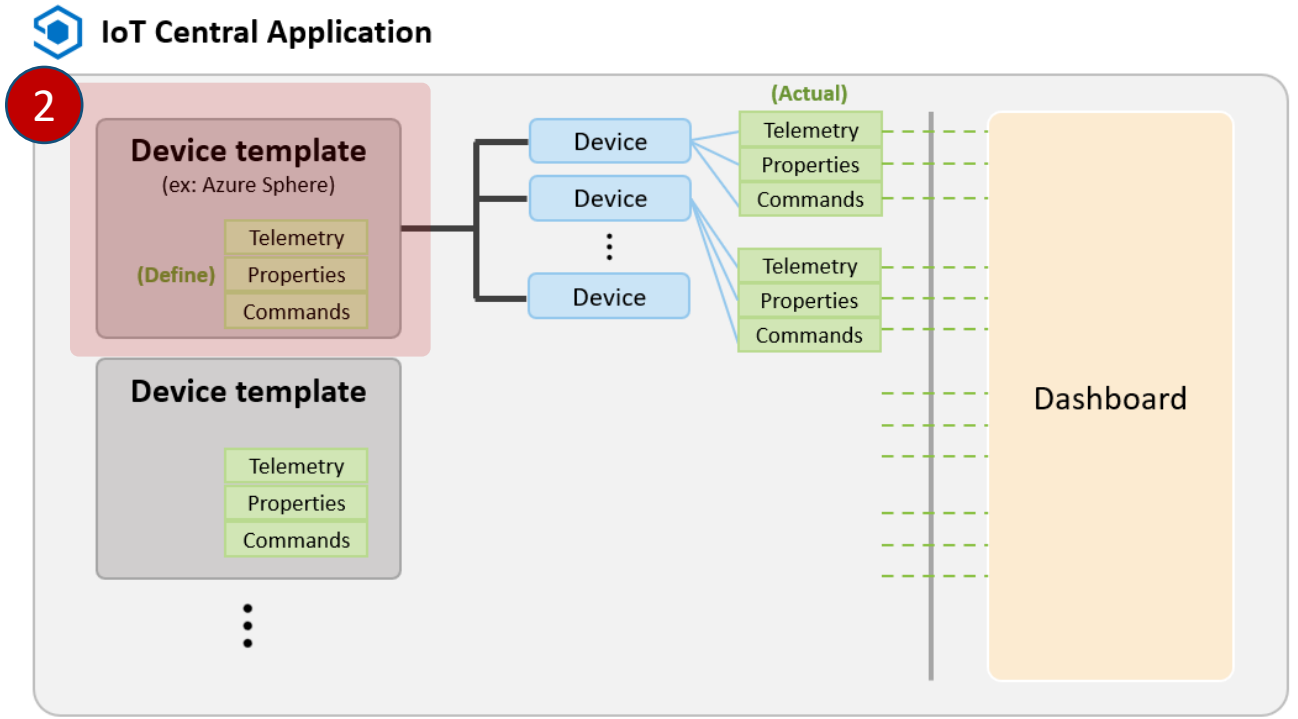




End-to-end Flow (2)

1. Build IoT Central Application (IoT Central 應用程式)
2. Create Device Template (裝置範本)
3. Add Simulated Device (虛擬裝置)
4. Custom Dashboard (客製化儀表板)





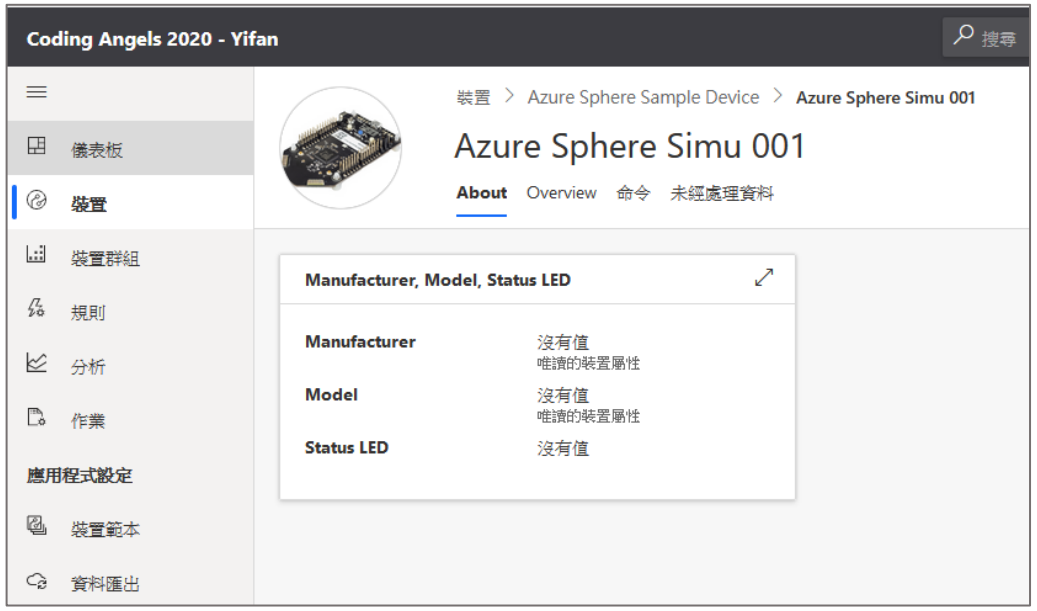
End-to-end Flow (3)

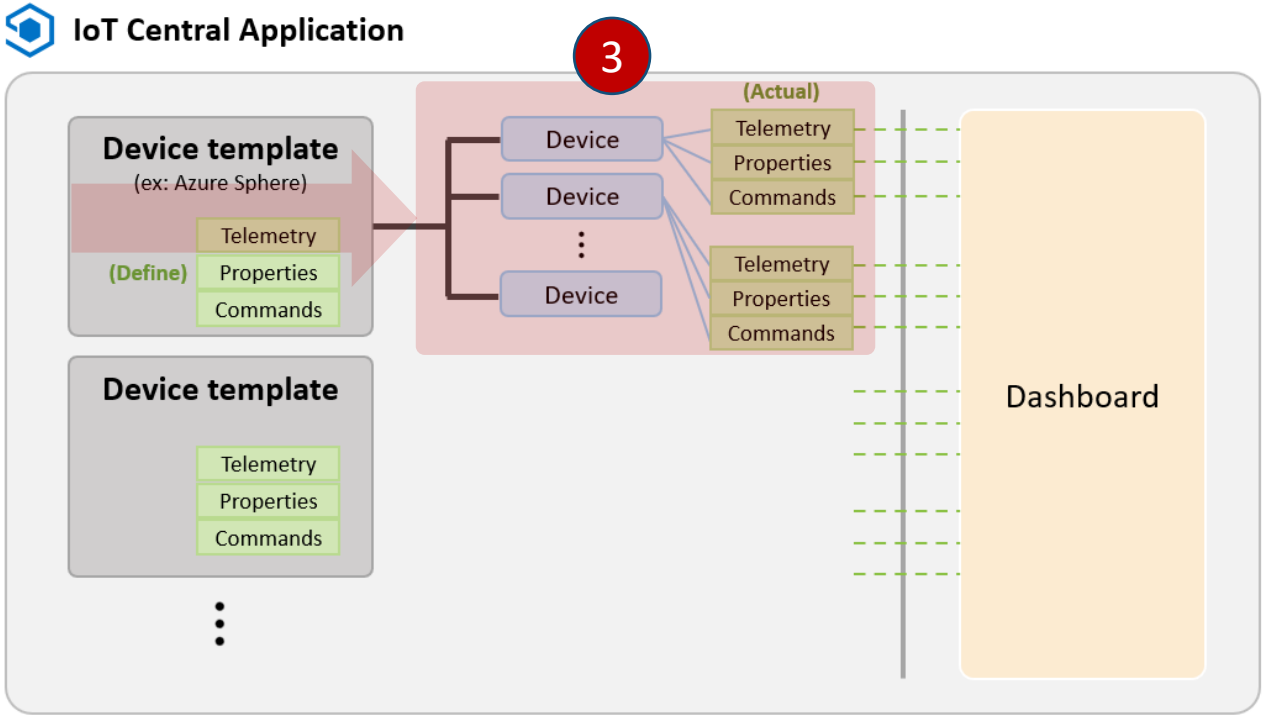
1 Build IoT Central Application (IoT Central 應用程式)

2 Create Device Template (裝置範本)

3 Add Simulated Device (虛擬裝置)

4 Custom Dashboard (客製化儀表板)





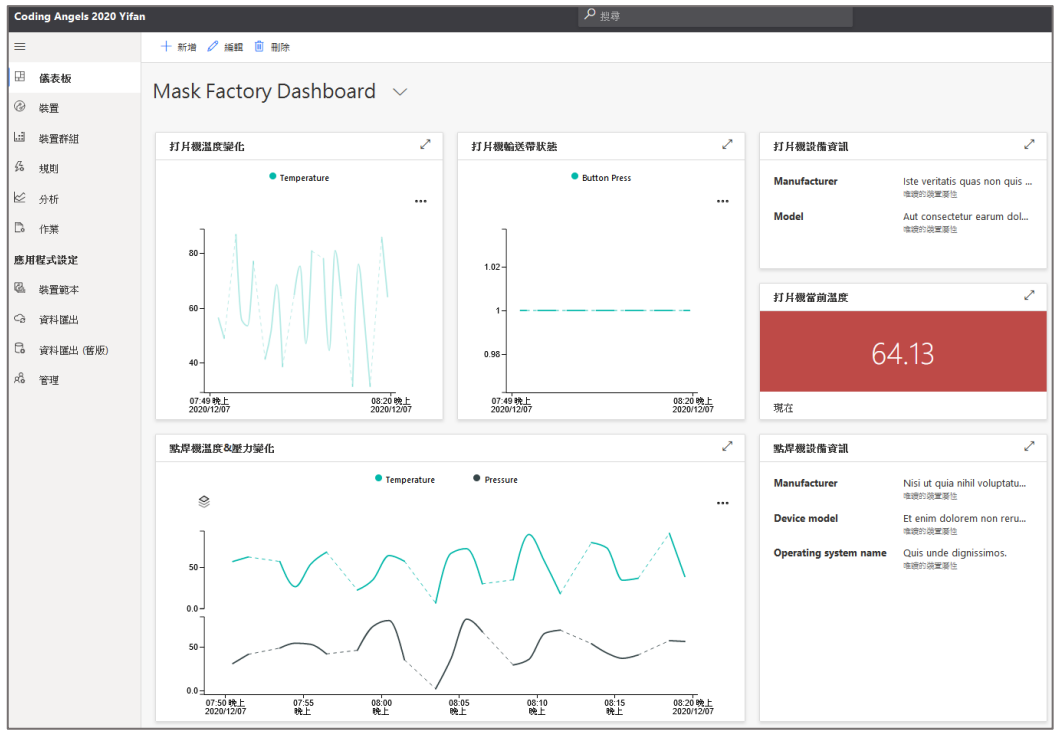
End-to-end Flow (4)

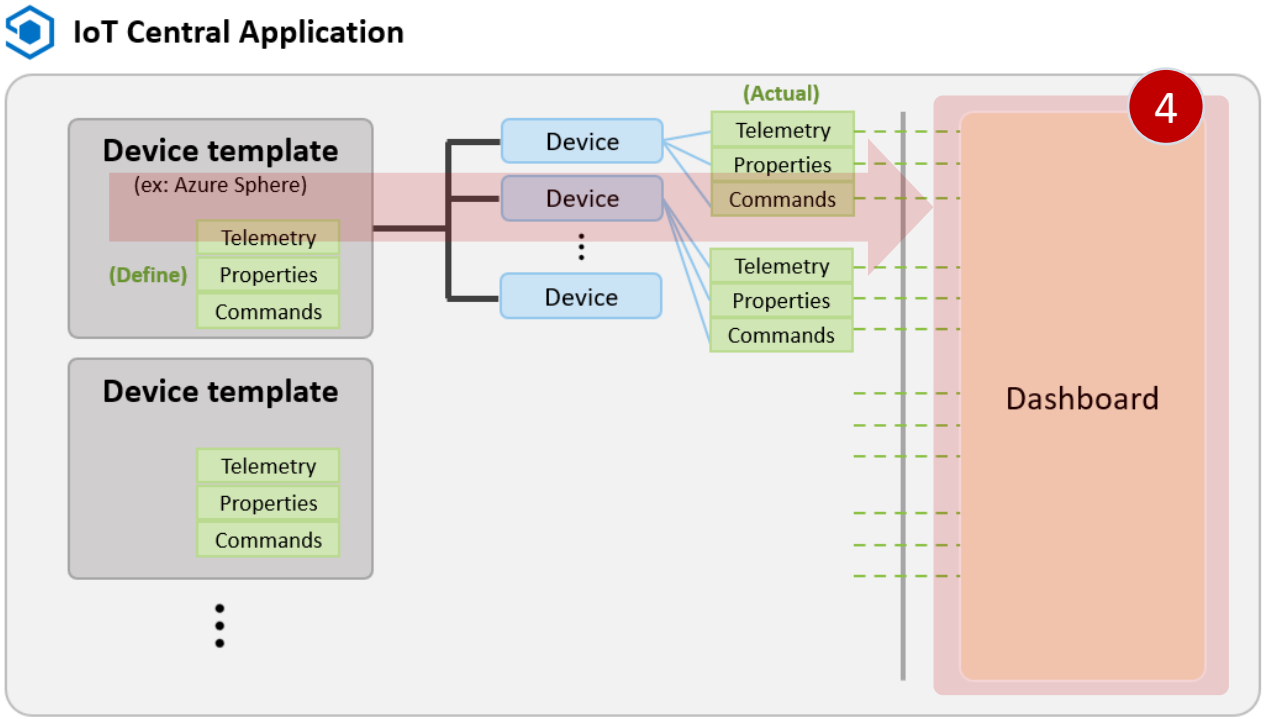
1 Build IoT Central Application (IoT Central 應用程式)

2 Create Device Template (裝置範本)

3 Add Simulated Device (虛擬裝置)

4 Custom Dashboard (客製化儀表板)





End-to-end Flow (Mask Factory)

1 Build IoT Central Application (IoT Central 應用程式)

2 Create **Device Template** (裝置範本)

3 Add Simulated **Device** (虛擬裝置)

4 Add Custom **Dashboard** (客製化儀表板)

IoT Central Application

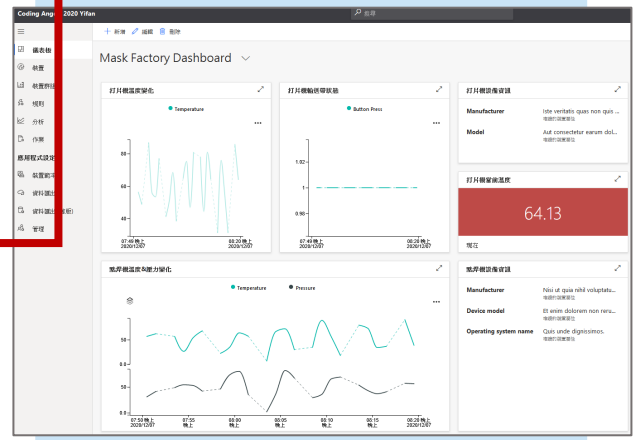
Azure Sphere Template

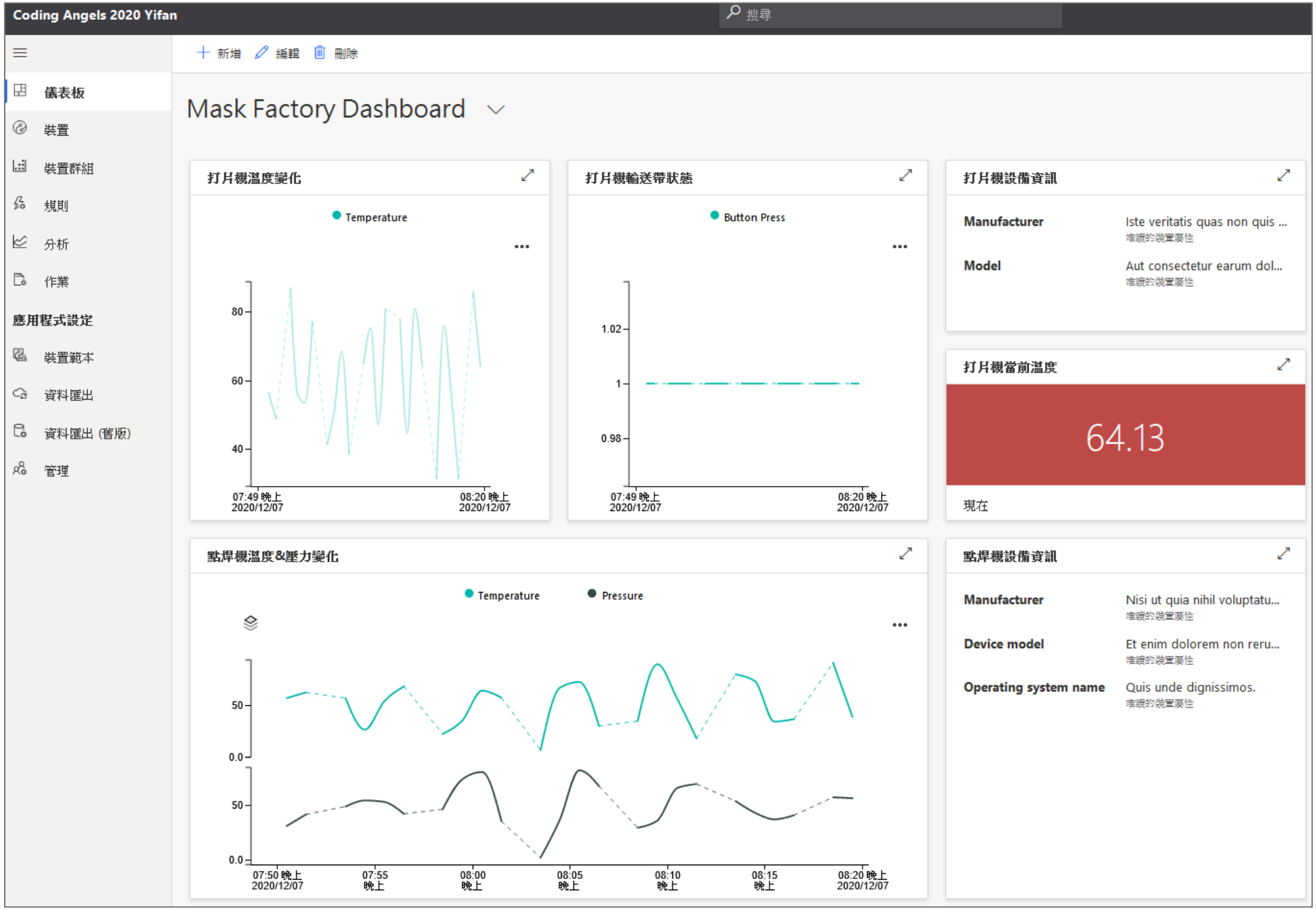
Azure MXChip Template

azure-sphere-simu-001
(監控口罩打片機)

azure-mxhip-simu-001
(監控口罩點焊機)

Mask Factory Dashboard




Coding Angels 2020 Yifan
搜尋
新增
編輯
刪除
儀表板
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裝置群組
規則
分析
作業
應用程式設定
裝置範本
資料匯出
資料匯出 (舊版)
管理
Mask Factory Dashboard
打片機溫度變化
Temperature
80
60
40
07:49 晚上
2020/12/07
08:20 晚上
2020/12/07
打片機輸送帶狀態
Button Press
1.02
1
0.98
07:49 晚上
2020/12/07
08:20 晚上
2020/12/07
打片機設備資訊
Manufacturer
Iste veritatis quas non quis ...
唯讀的裝置屬性
Model
Aut consectetur earum dol...
唯讀的裝置屬性
打片機當前溫度
64.13
現在
點焊機溫度&壓力變化
Temperature
Pressure
50
0.0
50
0.0
07:50 晚上
2020/12/07
07:55
晚上
08:00
晚上
08:05
晚上
08:10
晚上
08:15
晚上
08:20 晚上
2020/12/07
點焊機設備資訊
Manufacturer
Nisi ut quia nihil voluptatu...
唯讀的裝置屬性
Device model
Et enim dolorem non reru...
唯讀的裝置屬性
Operating system name
Quis unde dignissimos.
唯讀的裝置屬性

- Real Case Demo -

Mask Factory

https://aka.ms/coding.angels.2020