

CHINOINT
SENSE CONNECT

AIOT



SENSE CONNECT

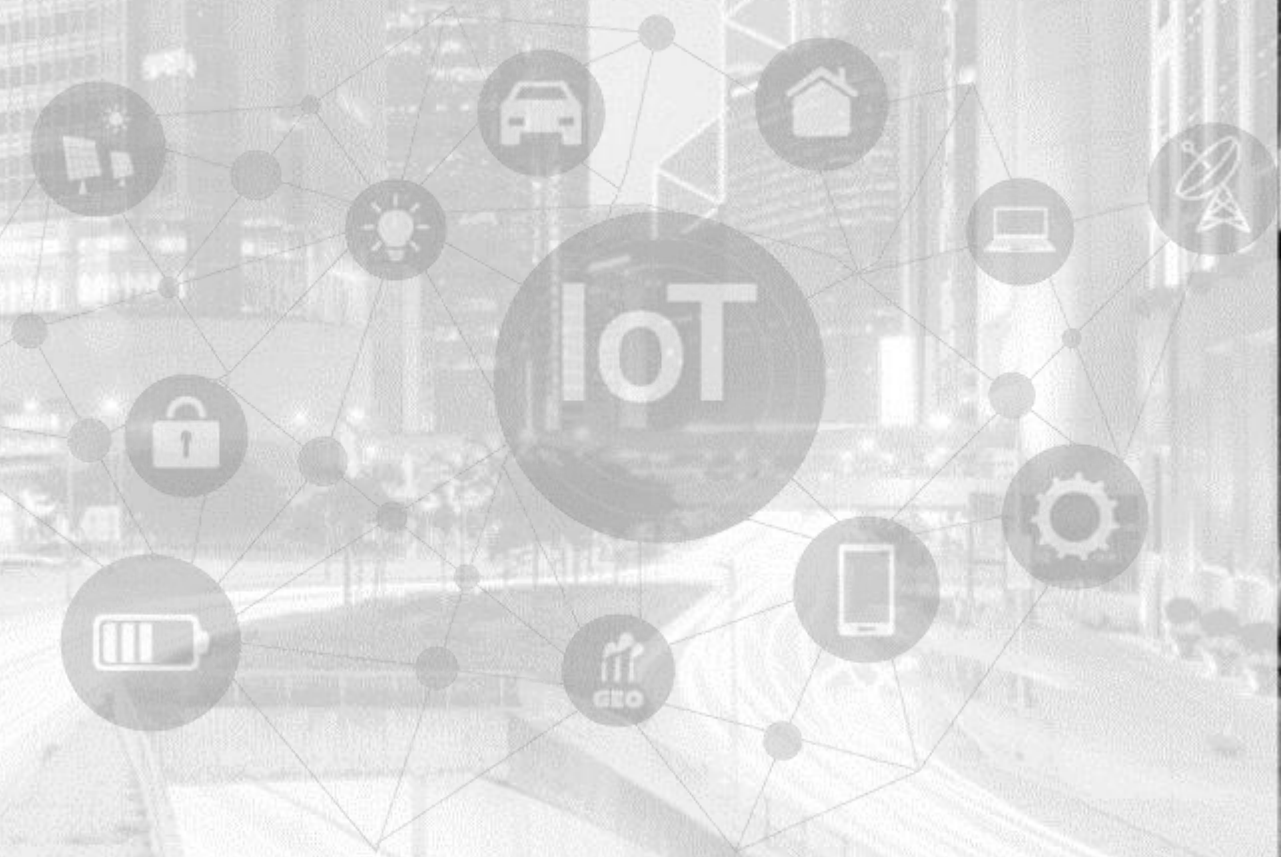
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Who is ChinoINT?



Customers & Solutions

IOT Smart Facility Management	Smart Site Safety System	AI + Predictive Maintenance
 建築署 Architectural Services Department 機電工程署 EMSD THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學 香港國際機場 HONG KONG INTERNATIONAL AIRPORT SIEMENS DSV	 CLP 中電 suez Nga Ying Decoration Ltd Por Mee Factory Building	 THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學 CLP 中電 仁安醫院 UNION HOSPITAL SIEMENS ITChannel

ChinoINT Know-How & Strengths

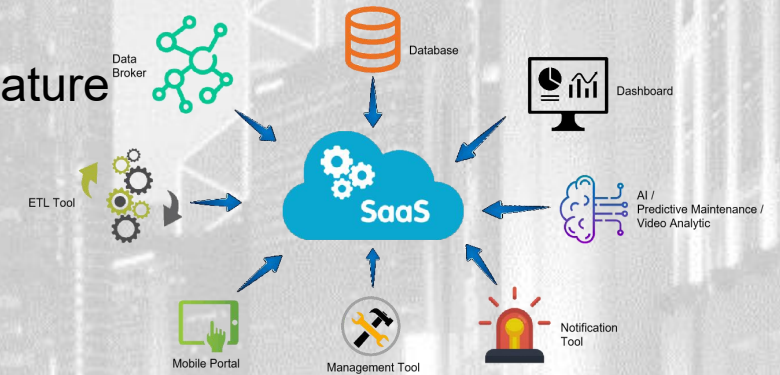
Hong Kong R&D

- local R&D team
- local expert support
- Chartered Engineer



Software Capability - AIOT Platform

- Complete Feature
- Deployed
- AI-integrated



Hardware Design Capability

- IOT sensor design
- Gateway design
- NRE cabability



AI & Algorithms Development

- 11 innovation patents owned by executives
- deployed 4S with AI
- deployed AI solutions at local univeristy, and government building



Customization to Fit All Situations

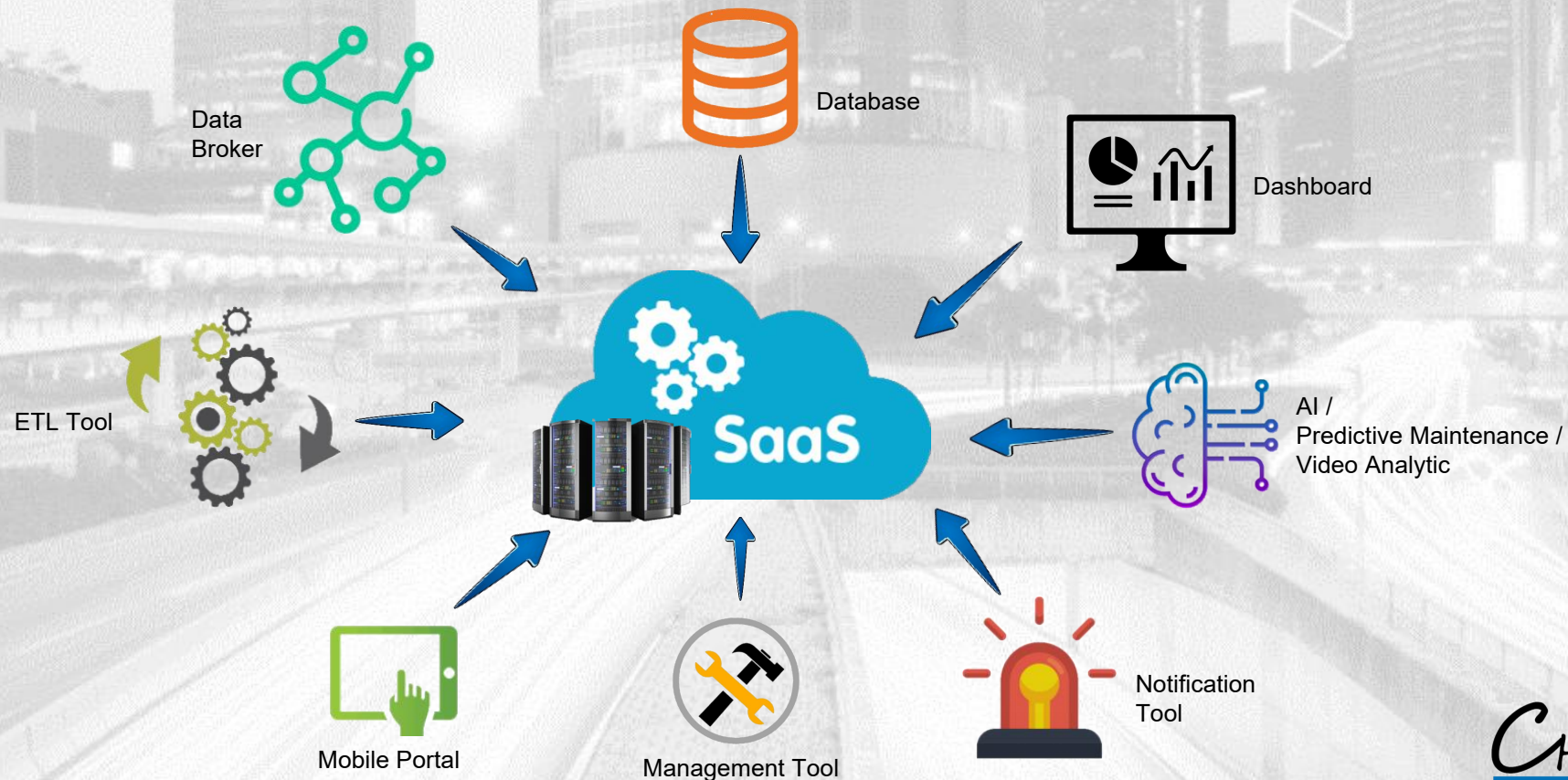
Tailor-made equipment and customization is one of ChinoINT's strength. No matter it is thick-wall / metallic-wall of ware-house, walk-in freezed, or signal dead-zones, ChinoINT is able to custom-made solution and equipment to fit into different environment. This offers the most cost effective solution to solve different problems.



ChinoINT SaaS

ChinoINT creates the next generation SaaS and IOT platforms.

The SaaS is a complete platform including data broker, ETL tool, Database, dashboard, management tools, mobile portal and notification tools, etc. This fulfills all your IOT needs and generates extra values to our clients.



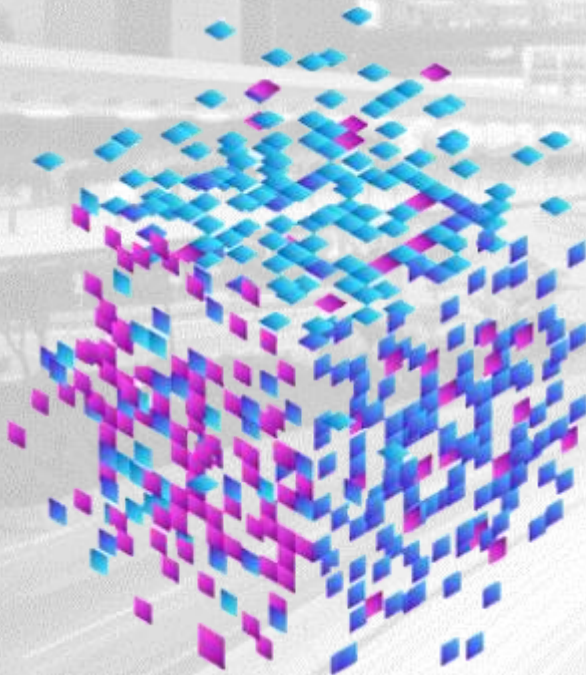
ChinoINT Big Data Analytic

ChinoINT is the Data Expert.

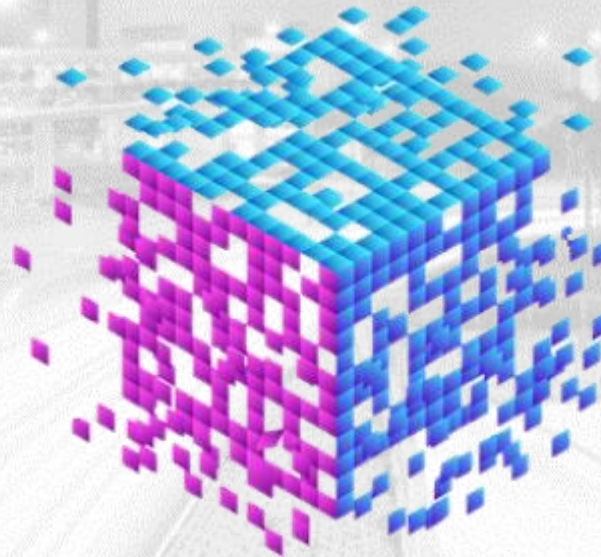
Not only expert in wireless sensor design, but also in data consolidation, storage, manipulation, analytic and data visualization.

Our experts help you to drill into the hidden meaning of data, and generate insight from the data.

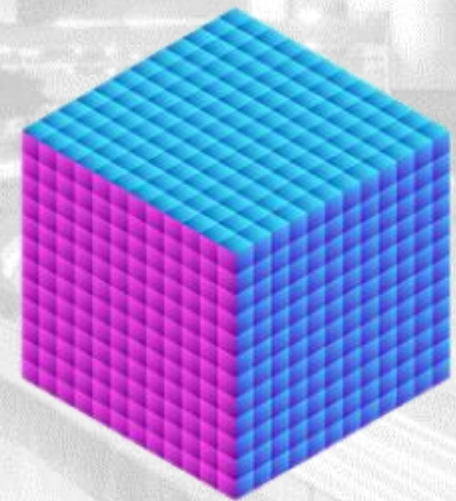
BIG DATA



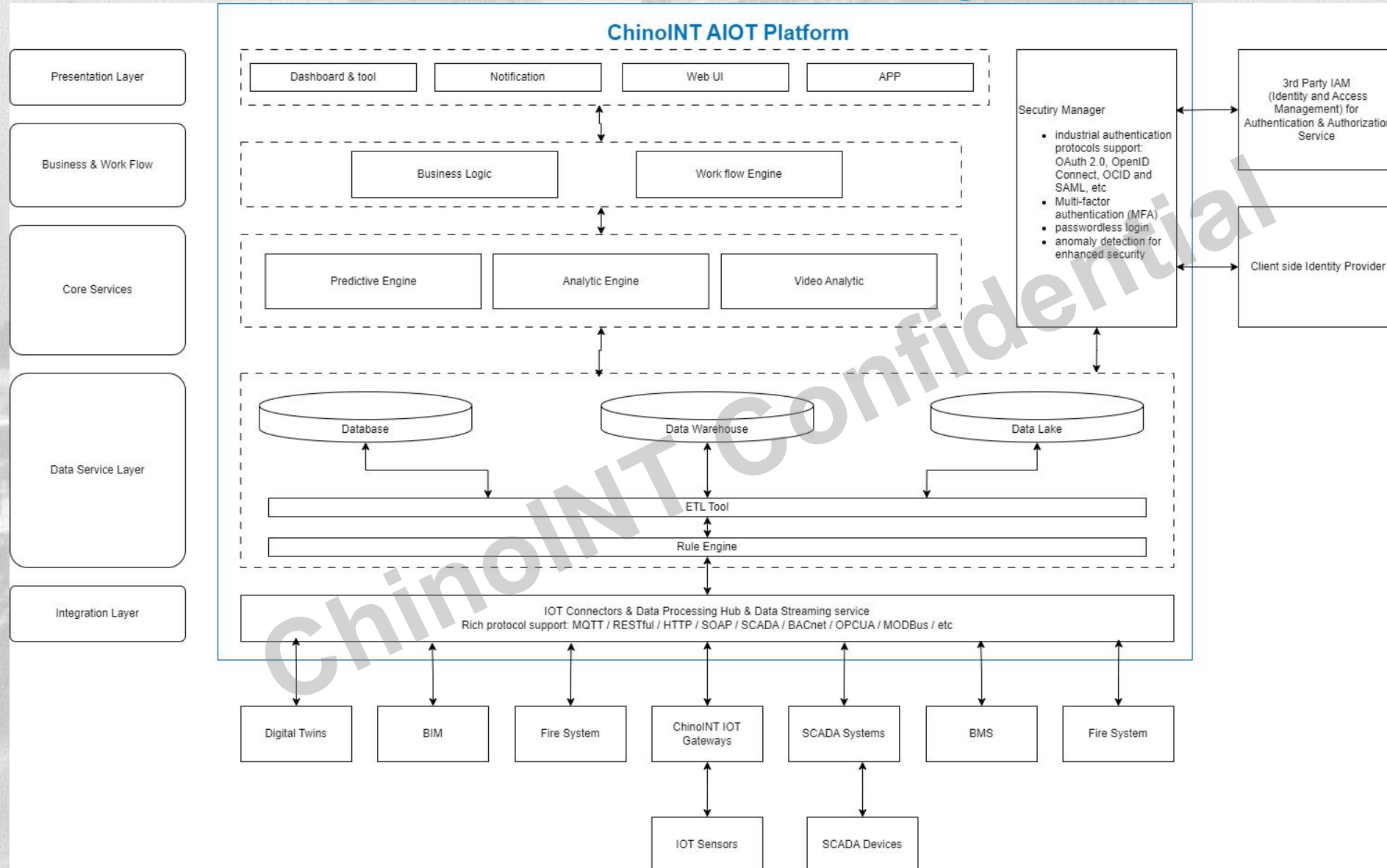
Analytic

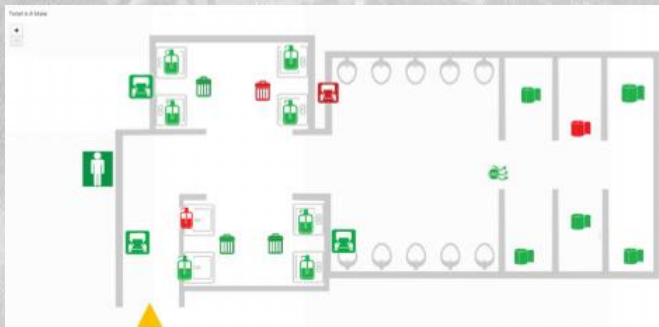


INSIGHT



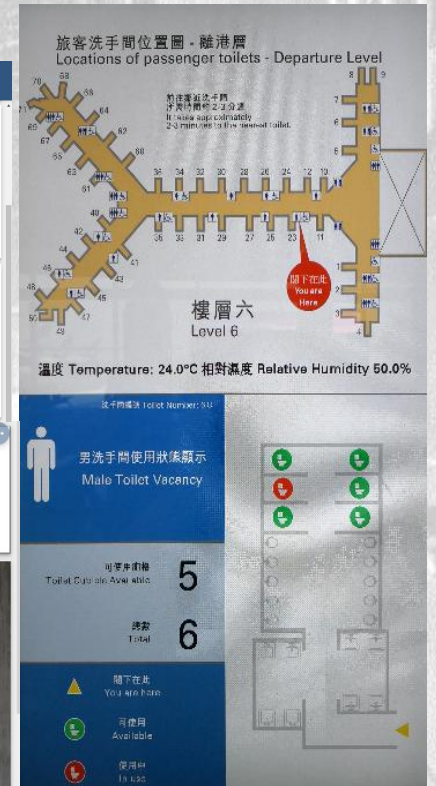
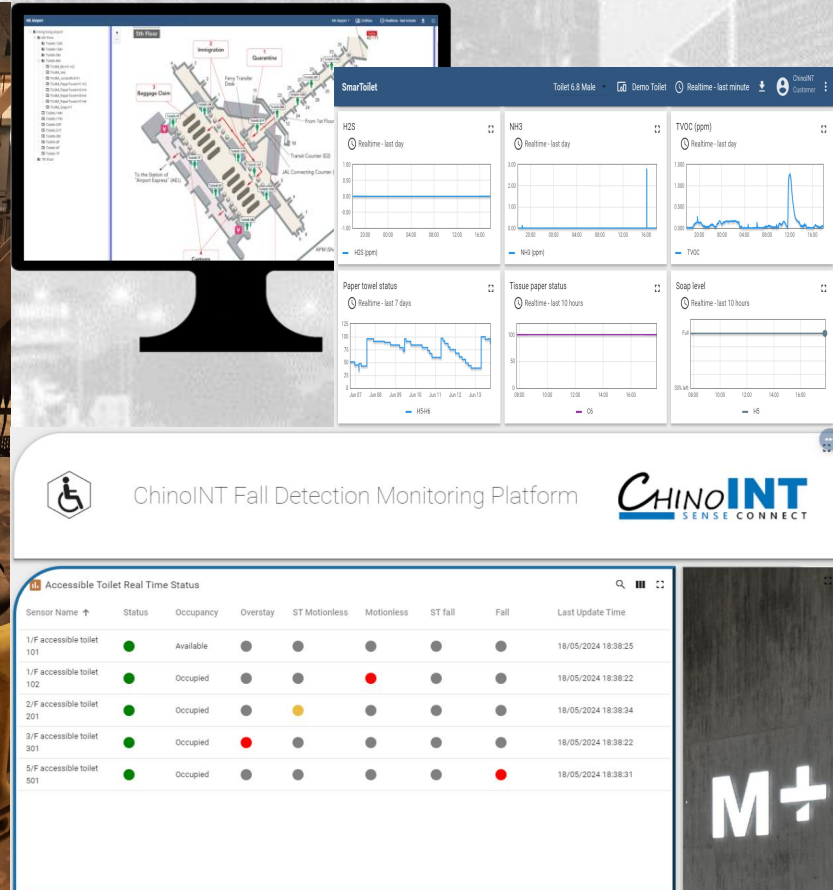
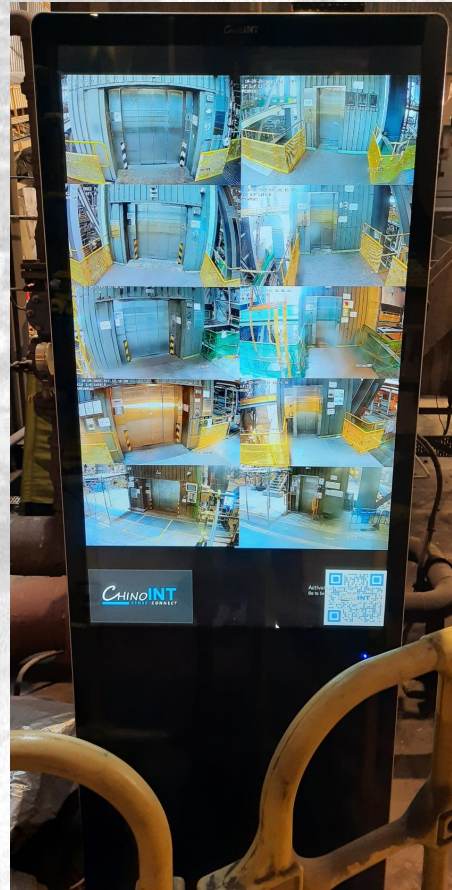
Architecture Diagram





Dashboard

Clean and clear dashboarding is one of the key element in an IoT system. The Smart Toilet platform provides easy to use dashboard, with multi-layer user account settings. GUI Maintenance Portal is provided with the platform. Both desktop and mobile version (Android and IOS) are available.



Notification

SMS Notification

Notification is one of the crucial feature for Smart Toilet, in order to achieve on-demand cleaning and best resource utilization.

Notification can be done through app, notification bar alert, SMS and through e-mail.

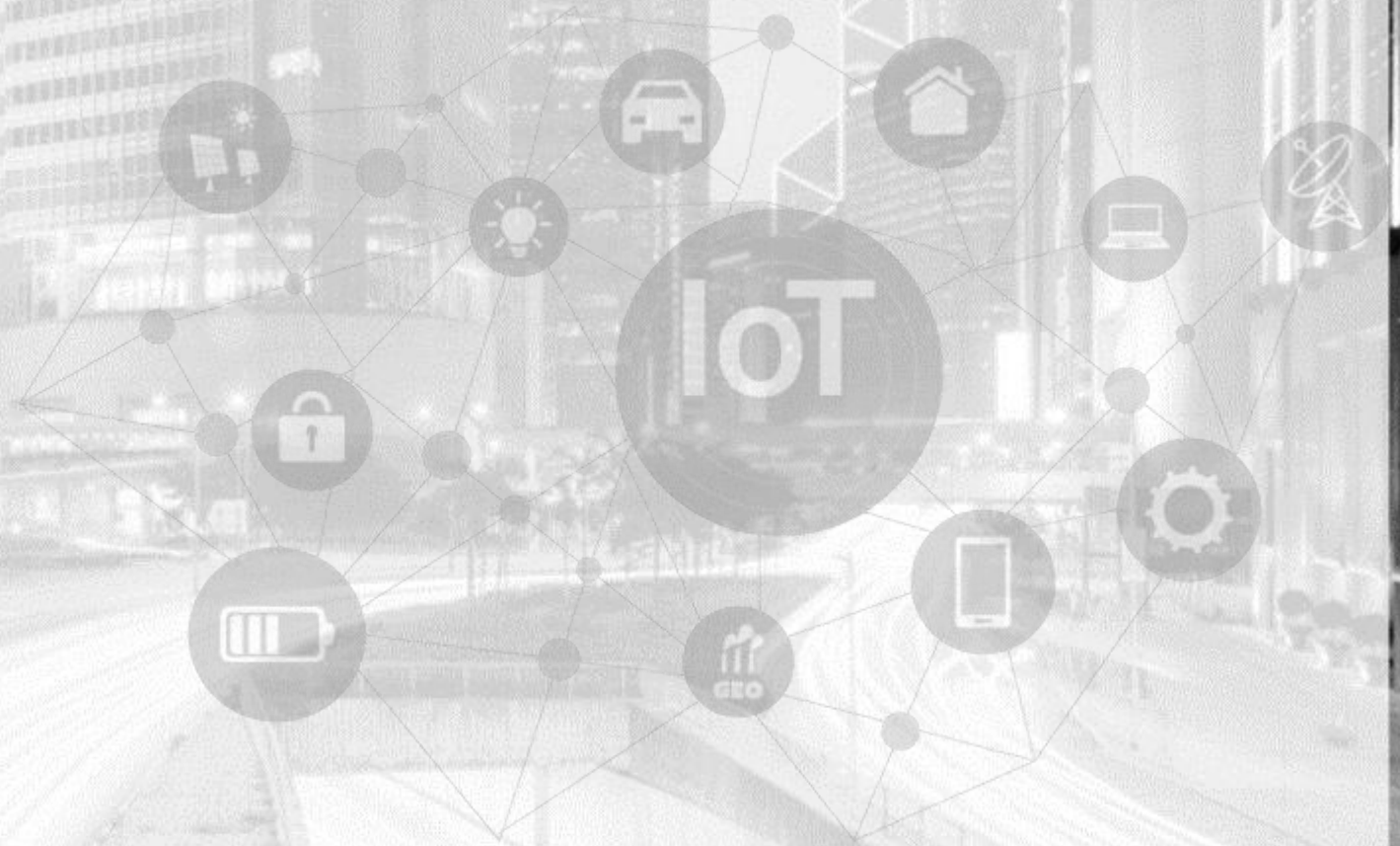
App message notification can be configured as group alert, and individual alert.

App message notification

E-mail Alert

Notification Bar

Solutions & References



Smart Solutions Done Smartly

Category	Name	End user	Year of Completion
Smart Site Safety	Confined Space management	CLP - Black Point Power Plant	2020
Smart Site Safety	Confined Space management	CLP - Castle Peak Power Plant	2019
Smart Site Safety	Confined Space management	CLP - Black Point Power Plant	2021
Smart Site Safety	Confined Space management	CLP - Castle Peak Power Plant	2021
Smart Site Safety	Confined Space management	CLP - Black Point Power Plant	2022
Smart Site Safety	Confined Space management	CLP - Castle Peak Power Plant	2022
Smart Site Safety	Turbine Work Safety Video Analytic	CLP - Black Point Power Plant	2021
Smart Site Safety	Personnel management for containers during COVID	CLP - Castle Peak Power Plant	2021
Smart Site Safety	5G enabled Smart Construction Site Monitoring	Nga Ying Decoration Ltd	2023
Smart Site Safety	5G enabled Smart Construction Site Monitoring	Por Mee Factory Building	2023
Smart Site Safety	UWB-enabled Collision Avoidance System for Vehicle	SUEZ - IWTS	2021
Smart Site Safety	Ming Ying College Maintenance	Chun Wo	2025
Smart Facility Management	Smart Toilet - LoRaWan	Hong Kong International Airport	2023
Smart Facility Management	Smart Toilet - LoRaWan	Poly University	2022
Smart Facility Management	Smart Facility Management - LoRaWan @ M+	ASD	2022
Smart Facility Management	Smart Facility Management - LoRaWan	Kadoorie Estates Limited	2020-2023
Smart Facility Management	IOT Hub	Kai Tak Sports Park / ASD	2024
Smart Hospital	Smart Elderly Center - Zigbee	Vila Medalena Macau	2019
Smart Facility Management	Smart Metering	Poly U	2020
A.I. - ViGiSense	AI Fall Prevention System	Pine Care Point	2025
Smart Facility Management	Water leakage Detection	Queensway Government Office / ASD	2022
Smart Visitor Management	People Counting	Hong Kong U	2020
Smart Facility Management	Smart Facility Management Notification Platform	Queensway Government Office / ASD	2023
A.I. / Predictive Maintenance	AI Pipe Blockage Detection	Legislation Council / ASD	2025
Smart Facility Management	Smart Chiller Plant Monitoring	EMSD	2024
Smart Facility Management	Smart Chiller Plant Monitoring	Poly U	2025

Reference - Facility Management

Region	Name	End user	Year of Completion
Hong Kong	Smart Metering - LoRaWan	SUEZ - IWTS	2021
Hong Kong	Smart Toilet - LoRaWan	Hong Kong International Airport	2022
Hong Kong	Smart Facility Management - LoRaWan	M+ / ASD	2021
Hong Kong	Smart Facility Management - LoRaWan	Kadoorie Estates Limited	2020-2023
Hong Kong	IOT Hub	Kai Tak Sports Park / ASD	2023
Hong Kong	Smart Metering	Poly U	2020
Hong Kong	Smart Toilet	Poly U	2022
Hong Kong	Smart Facility Management - Water leakage Detection	Queensway Government Office / ASD	2022
Hong Kong	AI Pipe Blockage Detection	Legislation Council / ASD	2024
Hong Kong	Smart Chiller Plant - Yau Ma Tei Public Cargo smart switchboard	EMSD	2022
Hong Kong	Smart Chiller Plant - Po Ning Road Clinic Smart Switchroom	EMSD	2022
Hong Kong	Smart Chiller Plant - Hong Kong Heritage Museum	EMSD	2023
Hong Kong	Smart Chiller Plant - Digitalisation of switchrooms at Lockhart Road MSB	EMSD	2023
Hong Kong	Smart Chiller Plant - Hong Kong Museum of Coastal Defense	EMSD	2023
Hong Kong	Smart Chiller Plant & AI Pipe Blockage Detection	Poly U	2023



AI Pipe Blockage Detection - Legislation Council & Poly U



Readily Deployed Solution

ChinoINT Pipe Blockage Detection system has been deployed in Hong Kong, including local university and commercial buildings



Smart Chiller Plant and Switch Room Monitoring - EMSD & Poly U



Project Background

To maintain the environment safety and real time monitoring

Project Description

LoRaWan air quality sensors including Chlorine sensors are deployed. LoRaWan sensors such as people counter, water leakage, piep monitoring are being installed.

ChinoINT successfully deployed a LoRaWan infrastructure and achieved the above goals.



Smart Facility Management - Kadoorie Management



Project Background

A Hong Kong Real Estates Company would like to deploy a IoT system to collect the building alarms from remote sites (services apartment)

Project Description

LoRa sensors/LoRa Nodes for dry contact are deployed at their main building and remote site buildings to collect the alarm for water leakage, temperature & RH, water level, CT. pipe pressure, etc and transfer the alarms to main office via Internet.

ChinoINT successfully deployed a LoRaWan infrastructure and achieved the above goals.

Queensway Government Office - Water Leakage Detection & GWIN Integration



Project Background

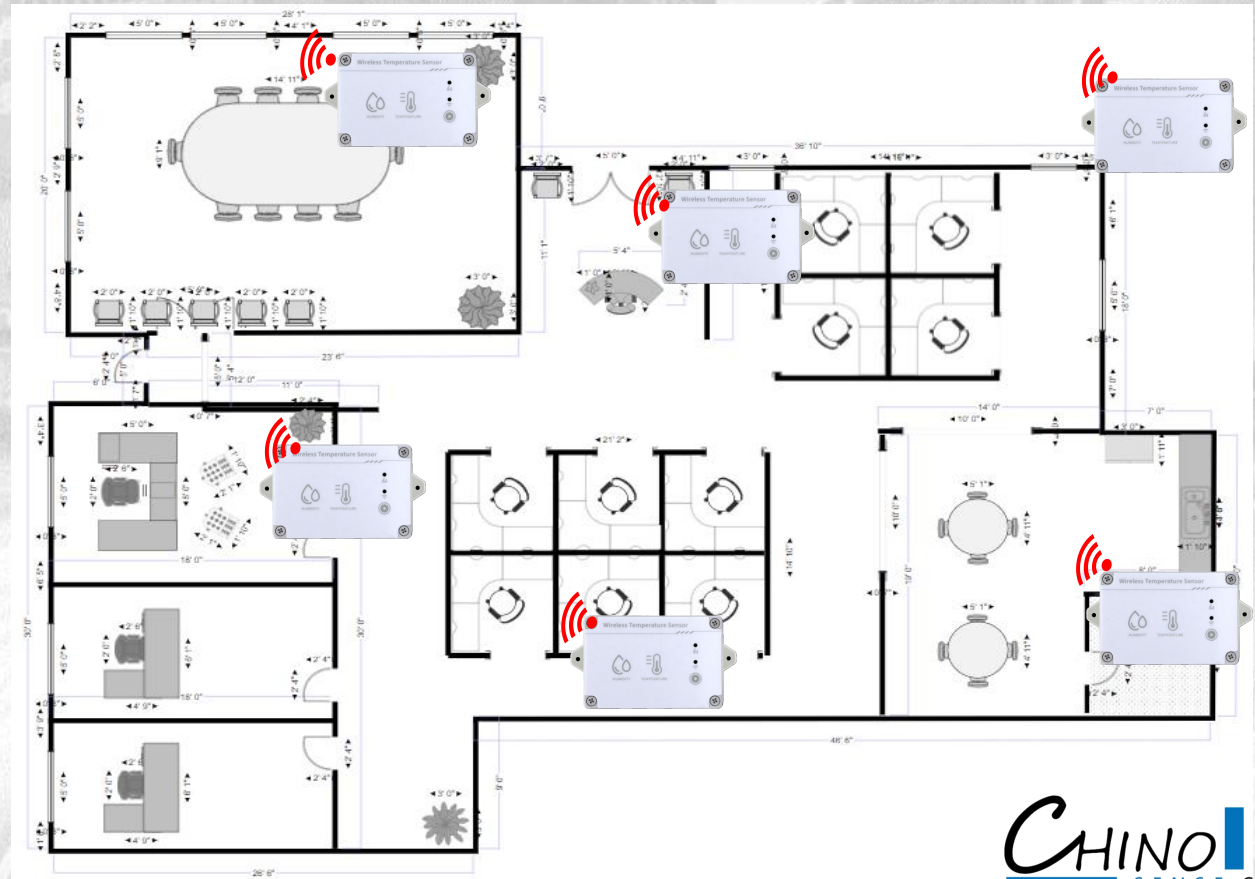
To deploy water leakage sensors and data integration to GWIN

Automated Air/Con Automation @ M+

ChinoINT masters on wireless technology.

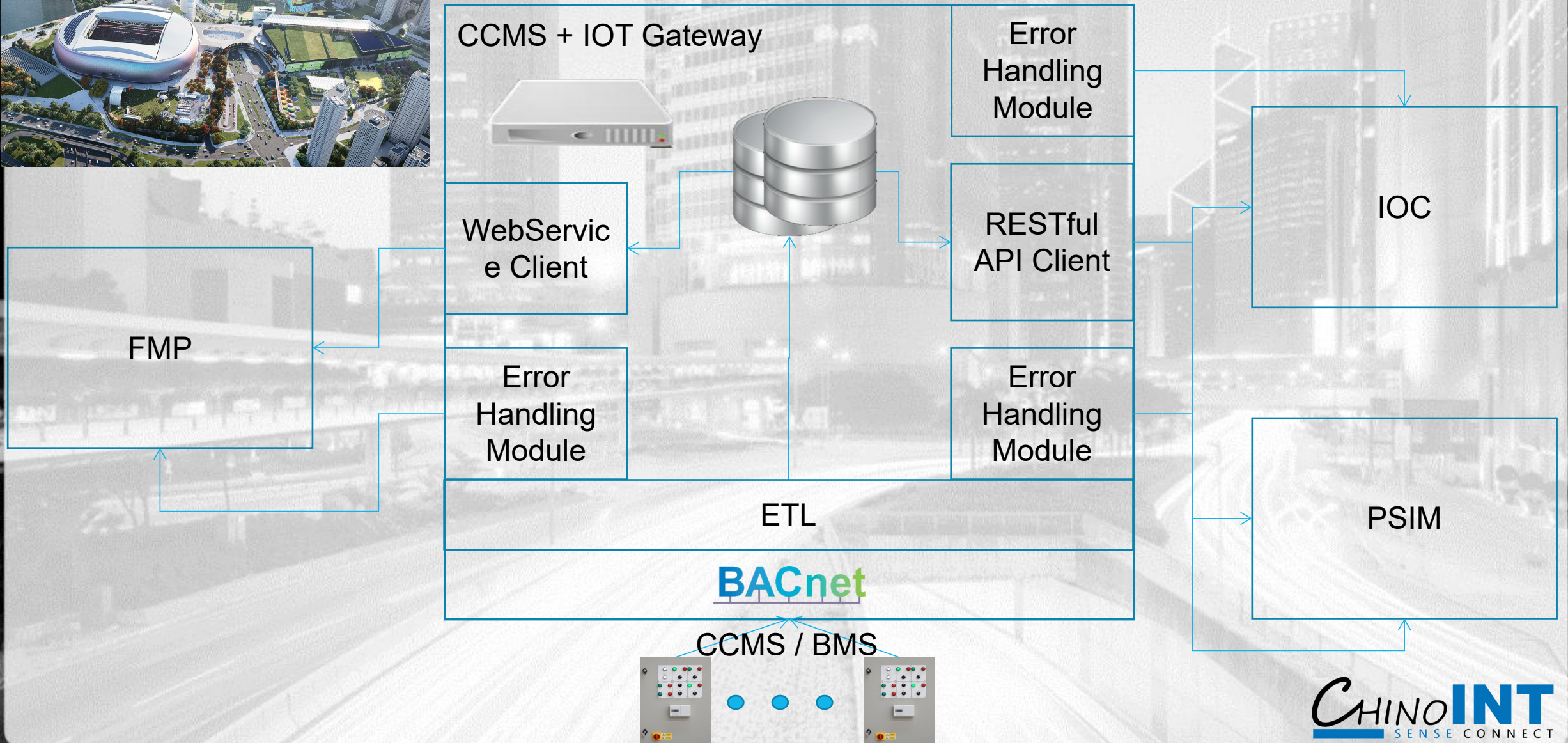
Temperature and humidity feeds to the IoT gateway.

Feedback to BMS and control HVAC locally





IOT Hub @ Kai Tak Sports Park



Smart Metering @ Transfer Station

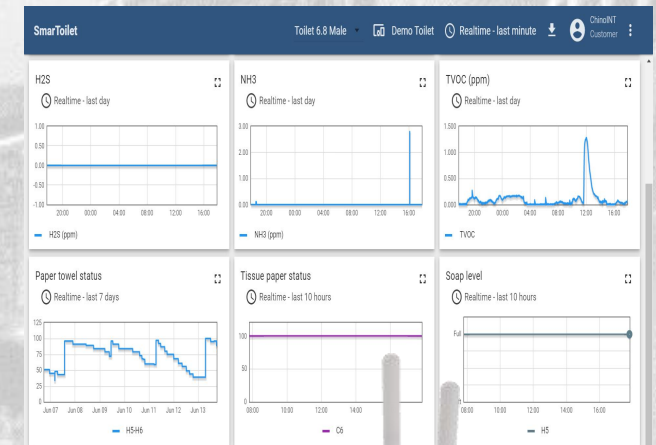
ChinoINT has show-cased our strengths in IOT technologies

We have enabled smart metering solution in Transfer Station in Hong Kong

Not only providing IOT metering with fully integrated dashboard with dashboard for real time and historical data, and also enabling real time analytic and alerts with extra values



LoRaWan Meter
Battery powered
(4.5 years battery life)



Reference - SSSS

Region	Name	End user	Year of Completion
Hong Kong	Confined Space management	CLP - Black Point Power Plant	2020
Hong Kong	Confined Space management	CLP - Castle Peak Power Plant	2019
Hong Kong	Confined Space management	CLP - Black Point Power Plant	2021
Hong Kong	Confined Space management	CLP - Castle Peak Power Plant	2021
Hong Kong	Confined Space management	CLP - Black Point Power Plant	2022
Hong Kong	Confined Space management	CLP - Castle Peak Power Plant	2022
Hong Kong	Turbine Work Safety Video Analytic	CLP - Black Point Power Plant	2021
Hong Kong	Personnel management for containers during COVID	CLP - Castle Peak Power Plant	2021
Hong Kong	5G enabled Smart Construction Site Monitoring	Nga Ying Decoration Ltd	2023
Hong Kong	5G enabled Smart Construction Site Monitoring	Por Mee Factory Building	2023
Hong Kong	UWB-enabled Collision Avoidance System for Vehicle	SUEZ - IWTS	2021
Hong Kong	Ming Ying College Maintenance	Chun Wo / EDB	2025



Video Analytic of SSSS - CLP



SSSS - Confined Space Management @ Power Plant & University



SSSS - Collision Avoiding System @ Transfer Station

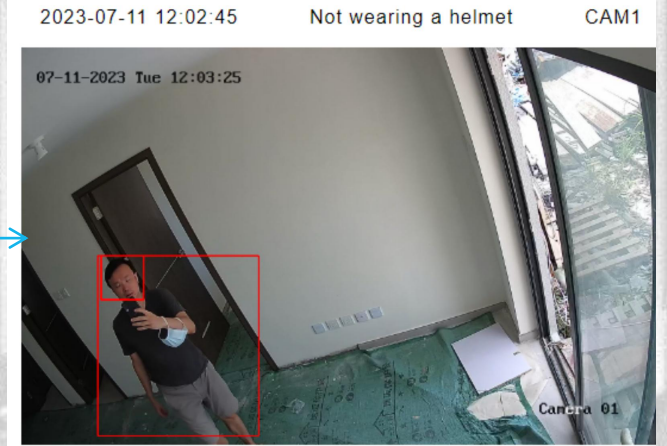
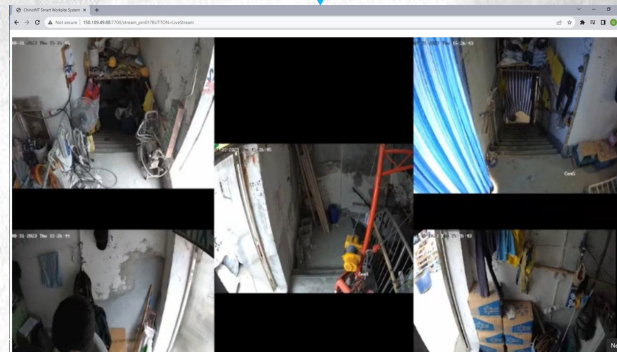
ChinoINT also masters on latest technology such as UWB to design real time monitoring system to raise safety to the next level



Rich functionality

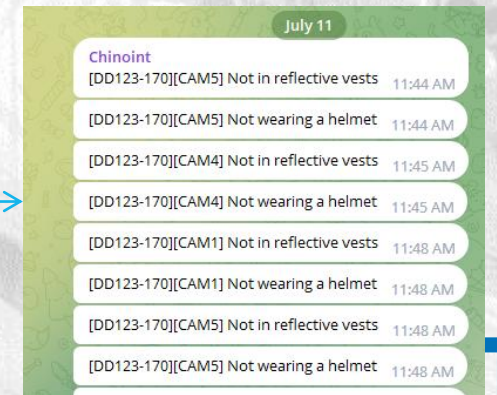
- Human face recognition
- human body recognition
- license plate recognition
- smoke and flame recognition
- helmet recognition
- phone calling recognition
- cigarette smoking
- gathering of people recognition
- work clothes recognition
- leaving work and sleeping recognition
- zone intrusion warning
- human fall recognition
- running recognition
- clothes color
- Fire escape blockage identification
- etc

SSSS - 5G AI Safety Monitoring

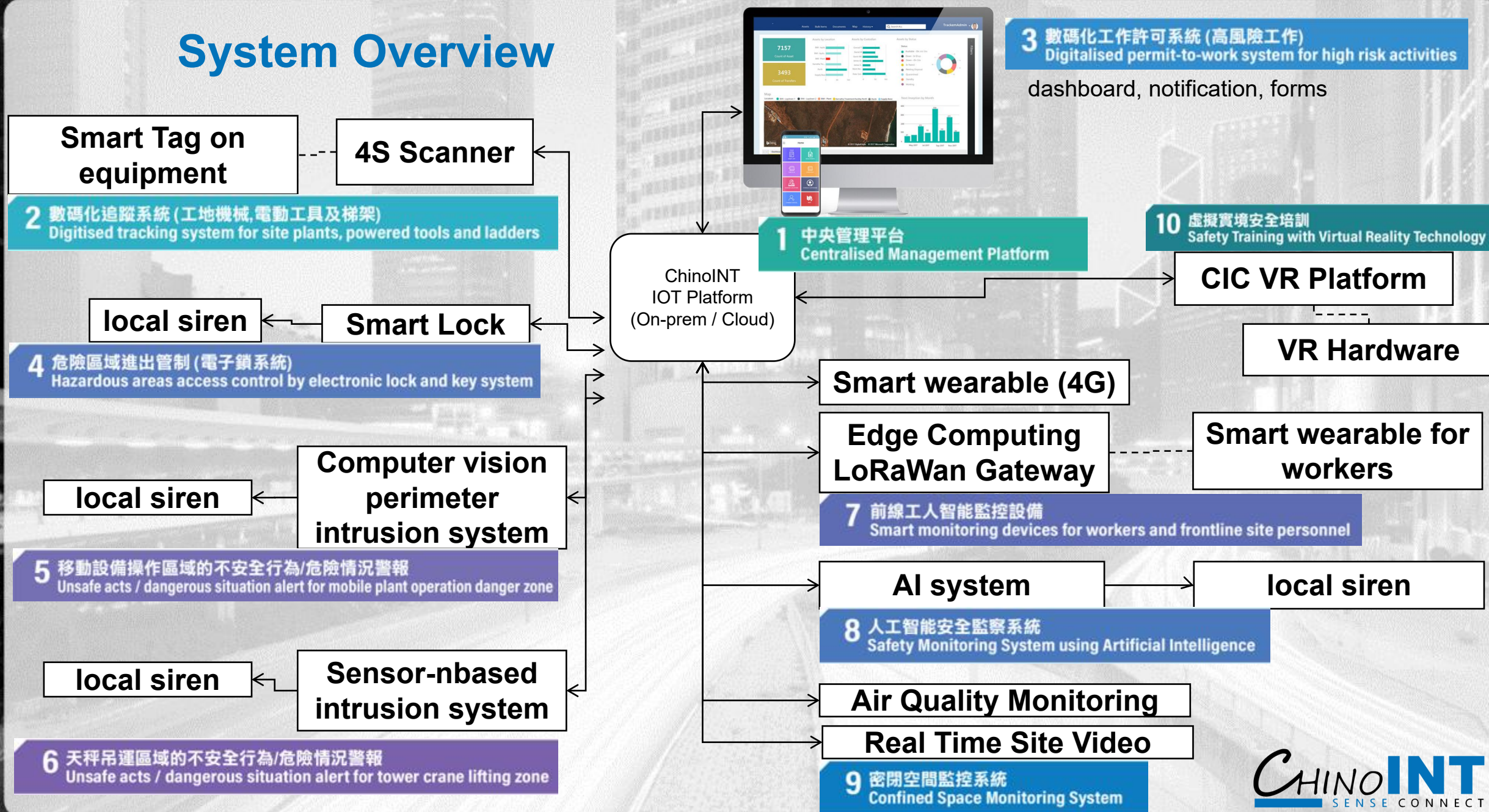


Platform alert: AI detects "not wearing a helmet" under CAM1

- Real time streaming
- APP Notification
- Evidence with photo



System Overview



CIC Pre-Approved Solutions

PA-722

AI construction site monitoring Box



- accuracy >95%
- upto 32 computer vision modules
- slim design
- all-in-one
- simple installation



Nga Ying Decoration Ltd
Por Mee Factory Building

PA-725

Vehicle Collision Avoidance System



- accuracy $\leq 10\text{cm}$
- detection range 0.1 to 100m
- easy installation
- local + APP notification



PA-698 (Pending)

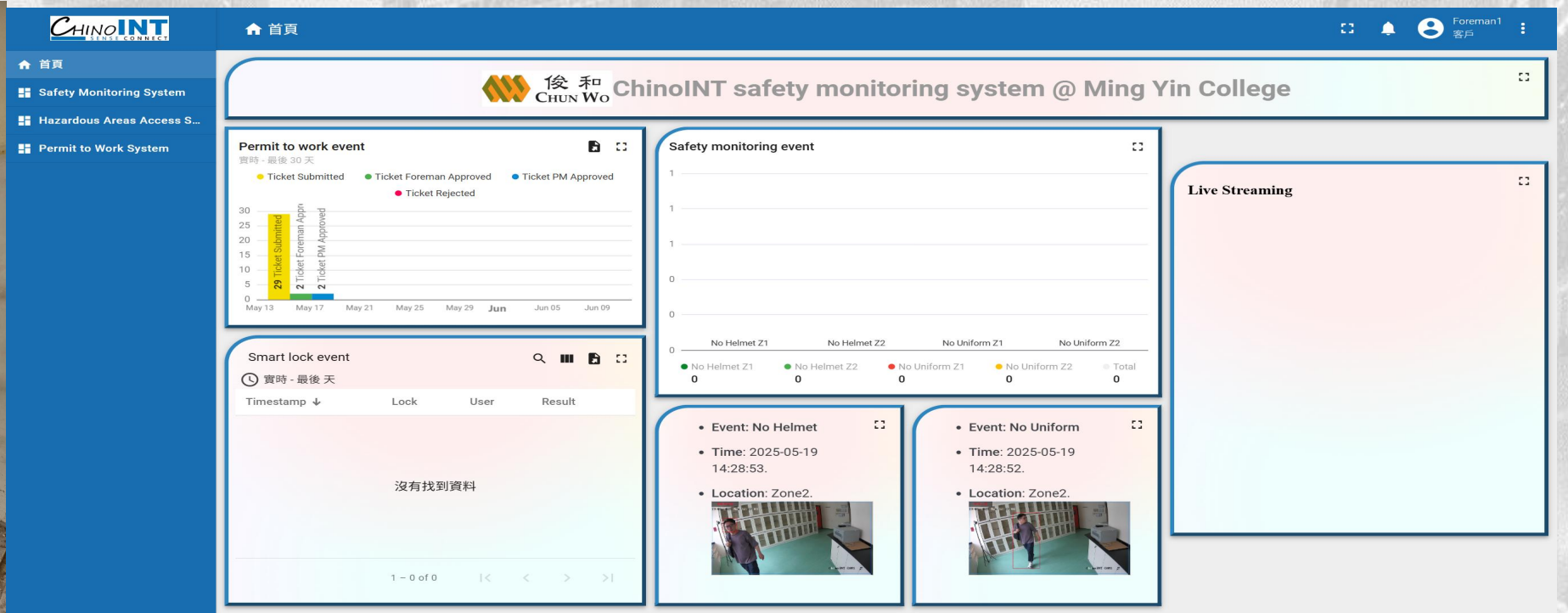
Confined Space Management System



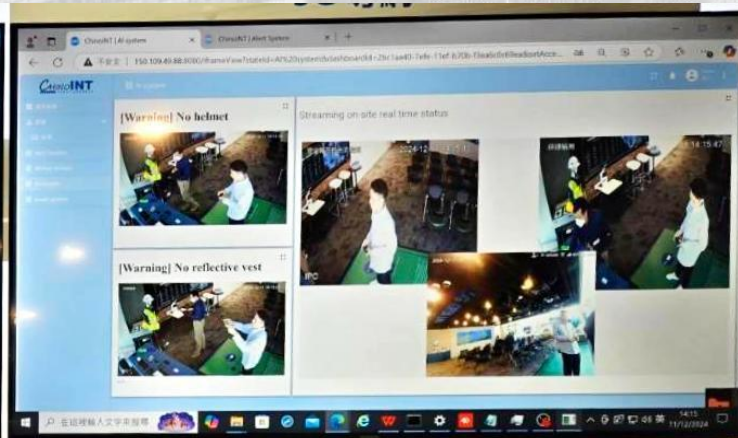
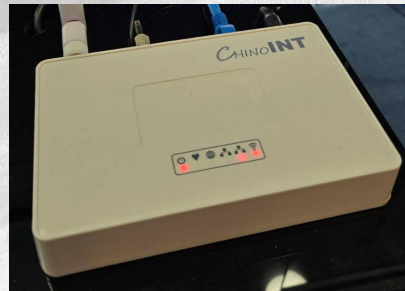
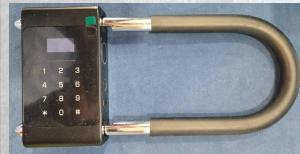
- helmet detection (non-video)
- prolonged stay detection
- real time location
- contractor attendance system



SSSS - ChunWo CMP & Maintenance Project



ChinoINT X CMHK: SSSS with 5G Open Lab @ HKSTP



Event Information Status
Welcome to scan the device

Event Serial number: [input]
Event: [input]
Event location: [input]
Event date: [input]
Event time: [input]

Construction: [input]
Project Manager: [input]
PPE status: [input]
PPE contact number: [input]
Emerging contact person: [input]

Worker list:
Name: [input]
Position: [input]
Contact info: [input]
ECC worker name: [input]
ECC worker phone: [input]
ECC worker ID: [input]

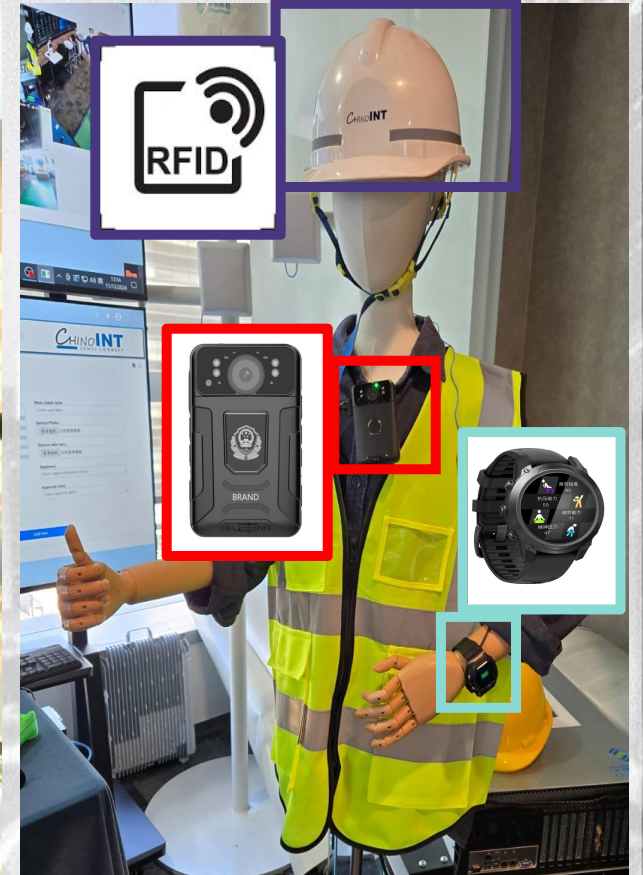
Approval status: [input]
Approval person: [input]
Approval date: [input]

Device Information Status
Please scan the device

Serial number: [input]
Device Name: [input]
Type: [input]
Applicant: [input]
Model number: [input]
Status: [input]

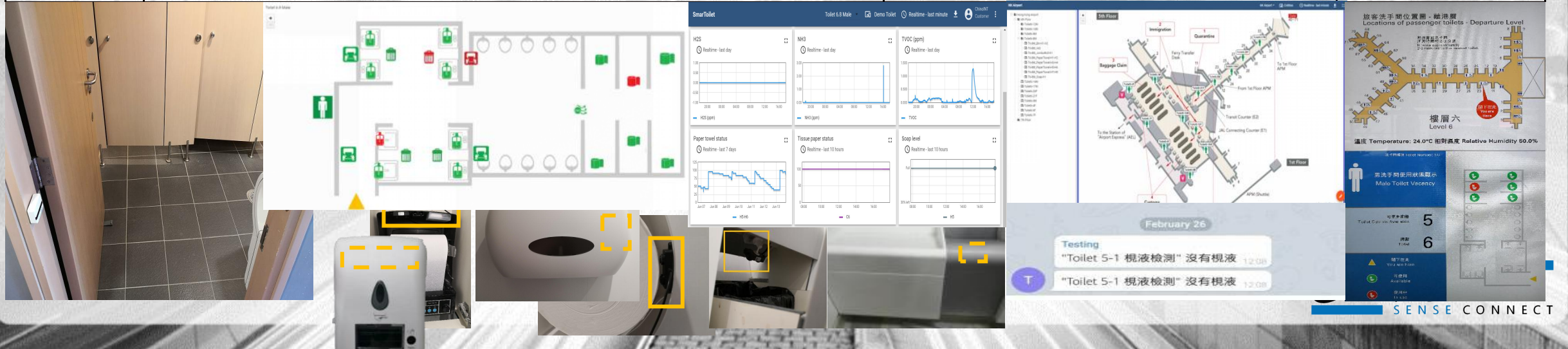
Approval History:
Date: [input]
Location: [input]
Approvers: [input]

Next check date: [input]
Device Photo: [input]
Device code type: [input]
Approvers: [input]
Approval date: [input]



Reference - Smart Toilet & Air Quality

Region	Name	End user	Year of Completion
Hong Kong	Confined Space management	CLP - Black Point Power Plant	2021
Hong Kong	Confined Space management	CLP - Castle Peak Power Plant	2021
Hong Kong	Confined Space management	CLP - Black Point Power Plant	2022
Hong Kong	Confined Space management	CLP - Castle Peak Power Plant	2022
Hong Kong	Smart Toilet - LoRaWan	Hong Kong International Airport	2022
Hong Kong	Smart Facility Management - LoRaWan @ M+	ASD	2021
Hong Kong	Smart Facility Management - LoRaWan	Kadoorie Estates Limited	2020-2023
Hong Kong	Smart Toilet	Poly U	2022
Hong Kong	Smart Chiller Plant - Yau Ma Tei Public Cargo smart switchboard	EMSD	2022
Hong Kong	Smart Chiller Plant - Po Ning Road Clinic Smart Switchroom	EMSD	2022
Hong Kong	Smart Chiller Plant - Hong Kong Heritage Museum	EMSD	2023
Hong Kong	Smart Chiller Plant - Digitalisation of switchrooms at Lockhart Road MSB	EMSD	2023
Hong Kong	Smart Toilet	Advance Manufacturing Center - HKSTP	2023
Hong Kong	Smart Chiller Plant Monitoring	Poly U	2023
Hong Kong	Air Quality Monitoring	Legislation Council / ASD	2025
Hong Kong	Air quality Monitoring @ Carpark and Basement	Tokin Street / ASD	2025



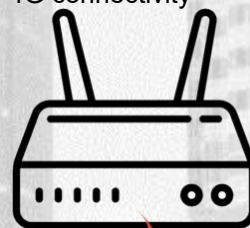
All-in-One IAQ sensor:
°C, Humidity, H2S, NH3, TVOC, PM2.5,
with HCHO, CO2, CO, O2, stc as options

Connection :
RS485/LoRaWan

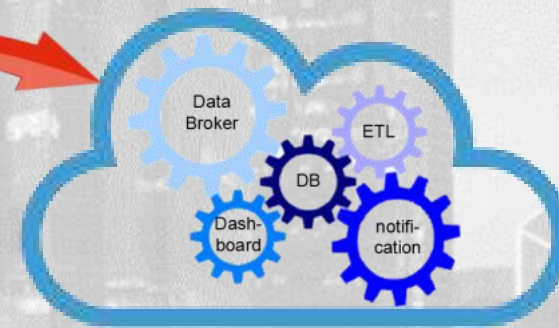


HKIA Smart Toilet over LoRaWan

Edge computing
LoRaWan Gateway
with 4G connectivity



4G



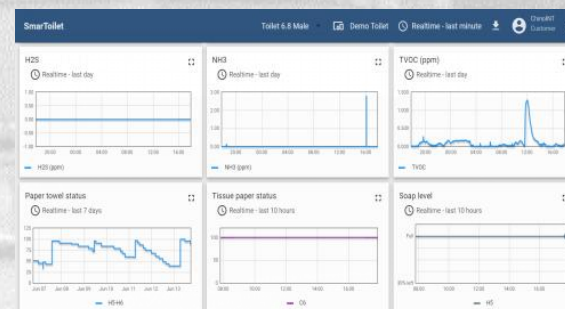
Benefits

- Latest long range low power wireless technology
- Tailor-made, fully integrated design to fit into existing equipment style
- Real time status for consumables, air quality
- On-demand cleaning to save > 60% of resource
- Clear dashboard for management team
- Real time notification for operation team
- Performance data for maintenance team
- Clean and neat on-site dashboard for airport users

Tailor-made, fully integrated, implicit design
LoRaWan sensors
running on battery with long battery life
for consumable status detection



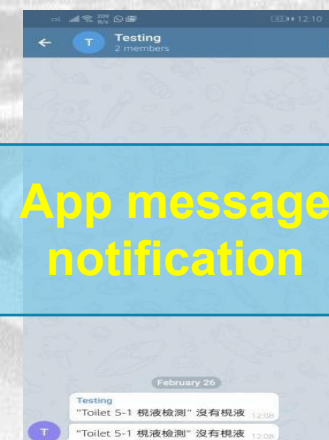
On-site dashboard



Real time alert for rubbish bin,
consumable, air quality, etc



App message notification



CHINOINT
SENSE CONNECT

PolyU Smart Toilet



System Component:

- IOT Edge Computing Gateway
- Odor gas sensors
- People Counting solution
- RFID auto attendance system



Smart Toilet

Shared dashboard
for real time status

Lighting Control

IAQ

Occupancy

Soap level sensor

Edge Computing
AIOT Gateway + 4G

Flood sensor

Rubbish bin /
Tissue sensor

Equipment Control

SOS Button

Door sensor

People counting
statistic for toilet usage analysis

SaaS

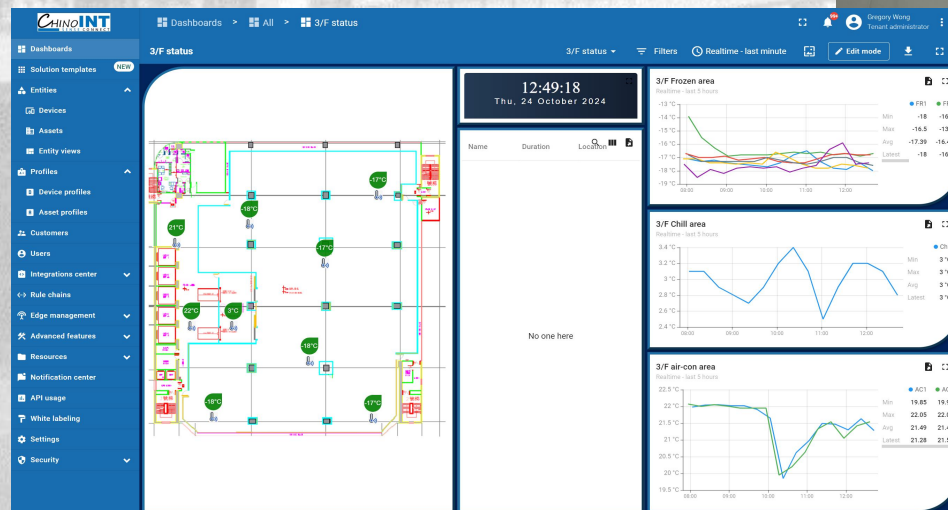
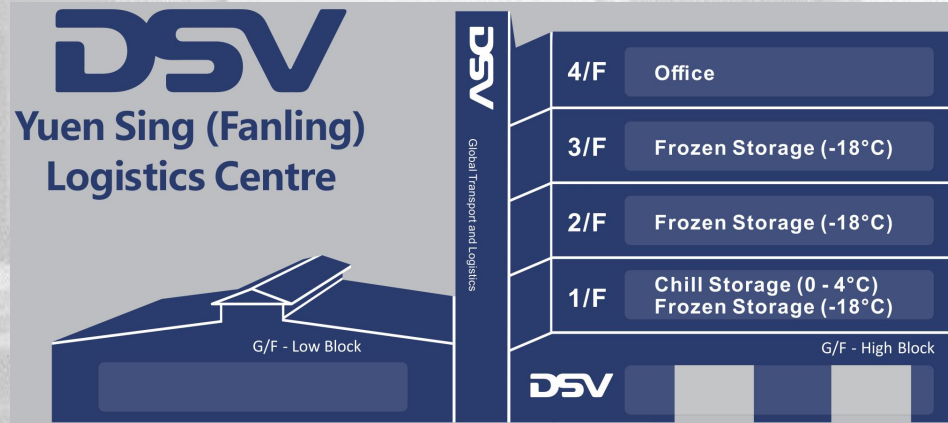
Cloud
SaaS

On-Premise

Warehouse and Walk-in Freezer Monitoring - DSV

For this client, they operate walk-in freezer and warehouse. Staff have to work in a cold and enclosed spaces all the time. To keep their staff safe and with ZERO incidence, they invited ChinoINT to design a RTLS for that is suitable for their entire warehouse building.

The most important features are the real time location tracking, and environment monitoring.



Reference - Real Time Tracking & Counting

Region	Name	End user	Year of Completion
Hong Kong	SSSS - Confined Space management	CLP - Black Point Power Plant	2020
Hong Kong	SSSS - Confined Space management	CLP - Castle Peak Power Plant	2019
Hong Kong	SSSS - Confined Space management	CLP - Black Point Power Plant	2021
Hong Kong	SSSS - Confined Space management	CLP - Castle Peak Power Plant	2021
Hong Kong	SSSS - Confined Space management	CLP - Black Point Power Plant	2022
Hong Kong	SSSS - Confined Space management	CLP - Castle Peak Power Plant	2022
Hong Kong	SSSS - Turbine Work Safety Video Analytic	CLP - Black Point Power Plant	2021
Hong Kong	SSSS - Personnel management for containers during COVID	CLP - Castle Peak Power Plant	2021
Hong Kong	SSSS - 5G enabled Smart Construction Site Monitoring	Nga Ying Decoration Ltd	2023
Hong Kong	SSSS - 5G enabled Smart Construction Site Monitoring	Por Mee Factory Building	2023
Hong Kong	SSSS - UWB-enabled Collision Avoidance System for Vehicle	SUEZ - IWTS	2021
Hong Kong	Smart Facility Management - LoRaWan	Kadoorie Estates Limited	2020-2023
Macau	Smart Elderly Center - Zigbee	Vila Medalena Macau	2019
Hong Kong	Smart Toilet	Poly U	2022
Hong Kong	Smart Visitor Management - People Counting	Hong Kong U	2020
Hong Kong	Smart Toilet	Advance Manufacturing Center - HKSTP	2022
Hong Kong	Smart Warehouse Monitoring and Staff Tracking	DSV	2024

Smart Elderly Center - Macau

Indoor Location

The Indoor Location system locates patients, nurses within the coverage of the Smart Hospital system.

Anti-Wanderer

The Anti-Wanderer system alerts when specific people gets out of the Smart Hospital area. This prevents from missing patients and elderly.

Nurse Call

Whenever in need, the patients, nurses and doctor are able to get immediate help by using the Nurse Call system, together with the Indoor Location system. No false alarm!!

Fall Prevention

Some patients and elderly are not quite mobile. The Fall Prevention system protects them by alerting related personnel to offer assistance when they need to move around.

Remote Home Care

Home pension is getting traction. The Remote Home Care system allows family and nurses to learn the status and needs from the home pensions.



Reference

ChinoINT RFID Family has been deployed successfully. Our RFID devices have been integrated into the Smart Worksite solution invented by ChinoINT at a power plant in Hong Kong, to raise the worksite safety to the next level.

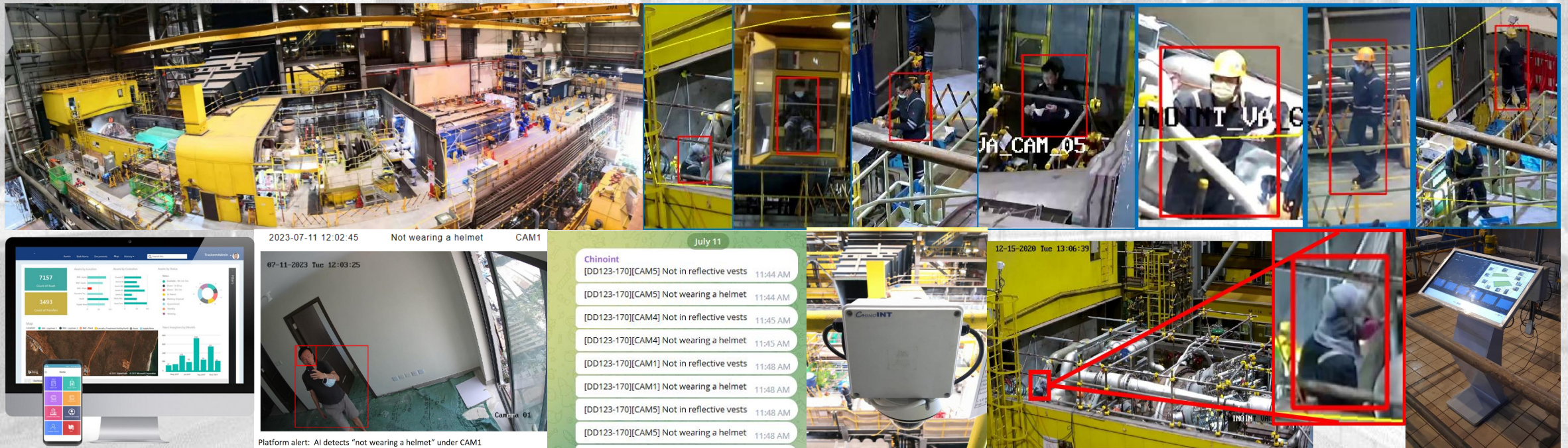


Reference - LoRaWan

Region	Name	End user	Year of Completion
Hong Kong	Smart Metering - LoRaWan	SUEZ - IWTS	2021
Hong Kong	Smart Toilet - LoRaWan	Hong Kong International Airport	2022
Hong Kong	Smart Toilet - LoRaWan	Poly University	2021
Hong Kong	Smart Facility Management - LoRaWan @ M+	ASD	2021
Hong Kong	Smart Facility Management - LoRaWan	Kadoorie Estates Limited	2020-2023
Hong Kong	Smart Metering	Poly U	2020
Hong Kong	Smart Facility Management - Water leakage Detection	Queensway Government Office / ASD	2022
Hong Kong	Smart Visitor Management - People Counting	Hong Kong U	2020
Hong Kong	Smart Facility Management Notification Platform	Queensway Government Office / ASD	2023
Hong Kong	Smart Chiller Plant Monitoring	EMSD	2022
Hong Kong	Smart Chiller Plant Monitoring	EMSD	2023
Hong Kong	Smart Chiller Plant Monitoring	Poly U	2023

Reference - Video Analytic

Region	Name	End user	Year of Completion
Hong Kong	SSSS - Turbine Work Safety Video Analytic	CLP - Black Point Power Plant	2021
Hong Kong	SSSS - 5G enabled Smart Construction Site Monitoring	Nga Ying Decoration Ltd	2023
Hong Kong	SSSS - 5G enabled Smart Construction Site Monitoring	Por Mee Factory Building	2023
Hong Kong	Facial Recognition Terminal with fever detection	Siemens Hong Kong	2020
Hong Kong	Ming Ying College Maintenance	Chun Wo / EDB	2025





Thank You

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