



工程和物業管理安全研討會 2024

Safety Forum for Works and Property Management Services 2024

善用智慧科技 職安健同邁進

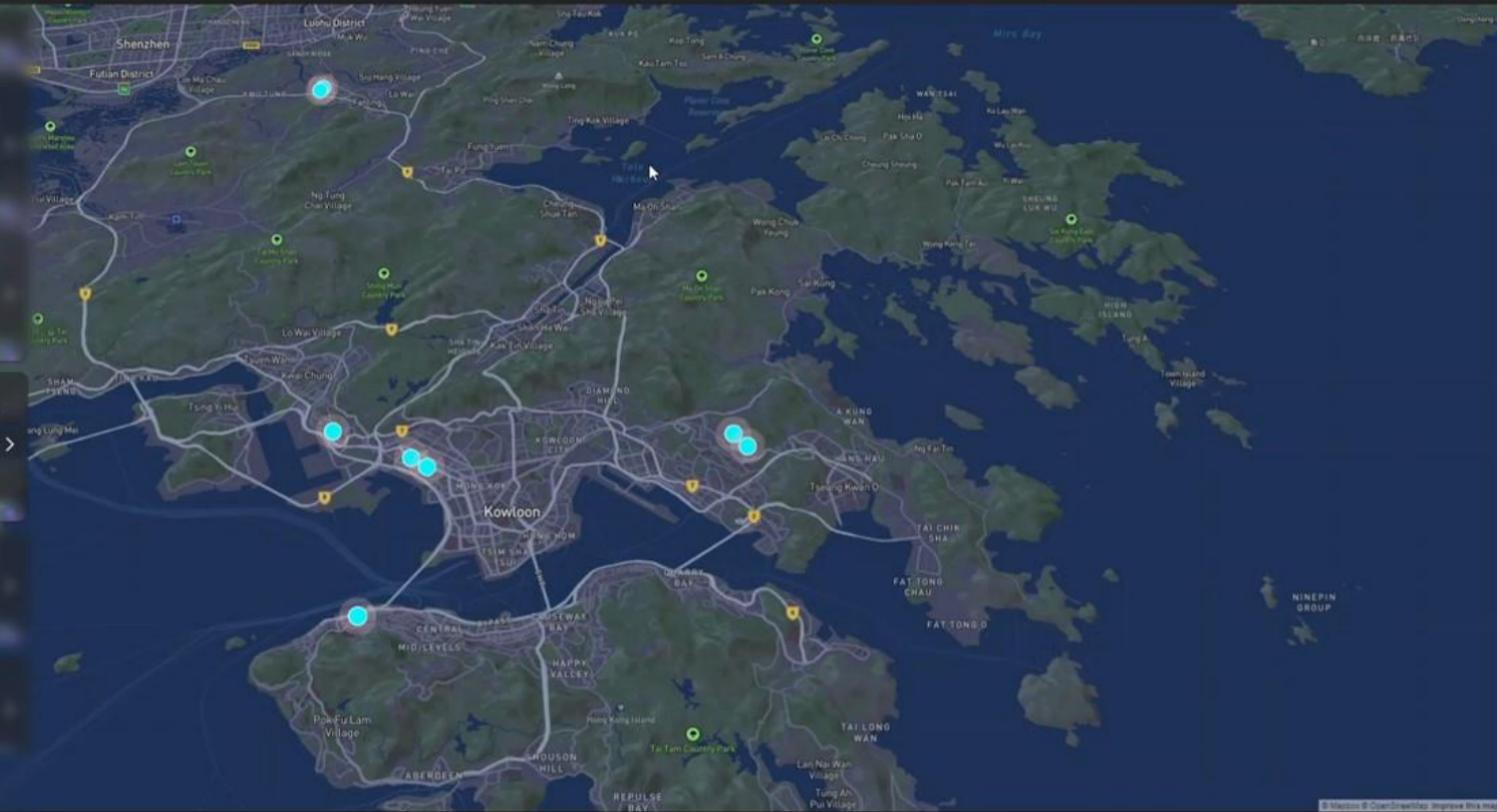
Application of Safety Technology for
Enhancement of OSH

31 Jul 2024

Centralized Management Platform

香港智慧工地平台

21°C 2023/12/04 09:39AM ☁ A R



Site Safety Management for MiC



MiC Delivery and Installation

MiC 安裝進度

漢安建築 Janus 安建臣道石潔場 R2-6&7

22°C 2023/11/28 11:11PM



MiC Logistics Tracking for J.I.T.

⋮⋮⋮ MiC 物流追蹤

瑞安建築 Janus 安達臣道石蔭場 R2-6&7

22°C 2023/11/28 11:20PM

248

- 車隊進程

51128T

RF9275
CSHL/AR267/BLC/4F/D/MIC-3/003

6669+X7 Dousmen District, Zhuhai, Guangdong Province, China

安達臣道地盤

預計到達時間 最後更新時間
97 分 (101.592 km) 2023/11/23 00:59:57

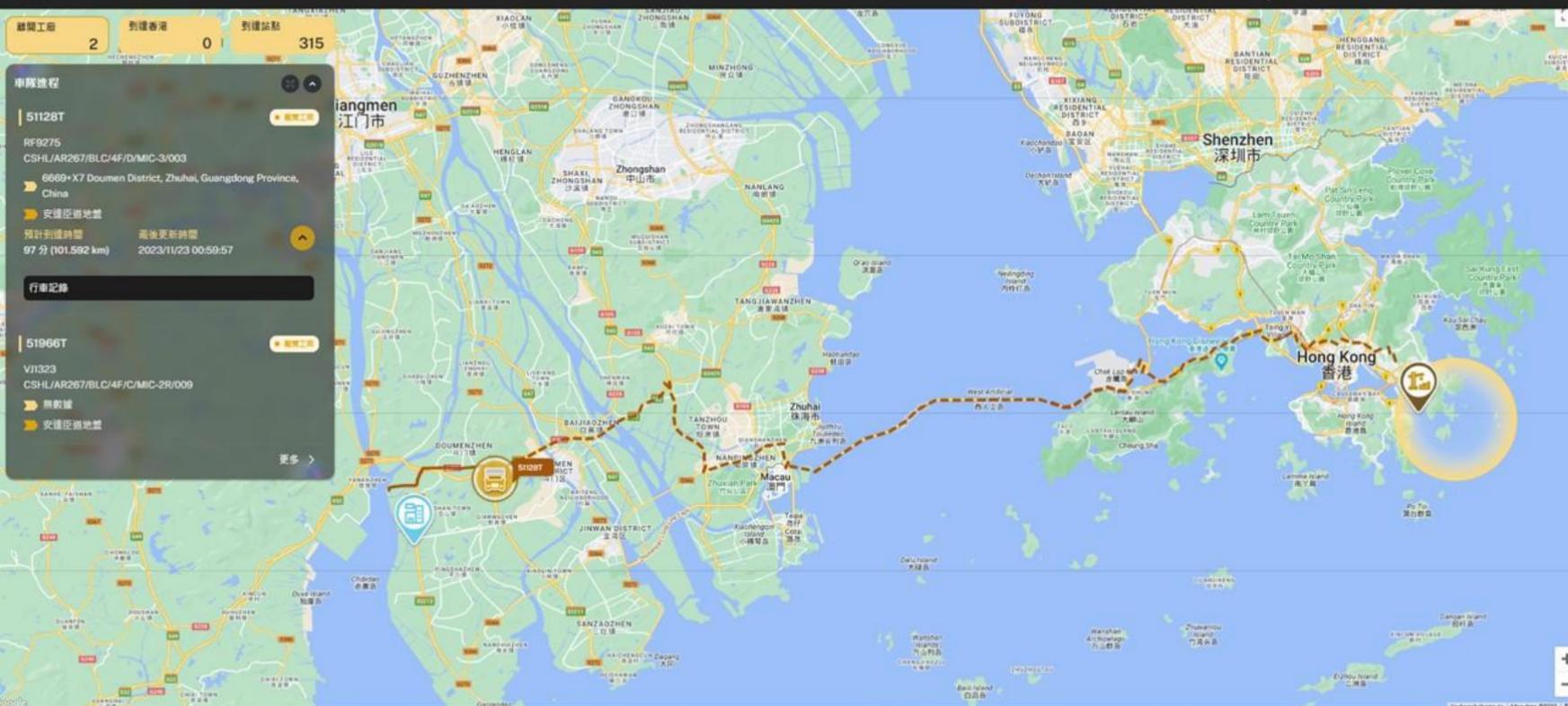
行車記錄
- 51966T

VJ1323
CSHL/AR267/BLC/4F/C/MIC-2R/009

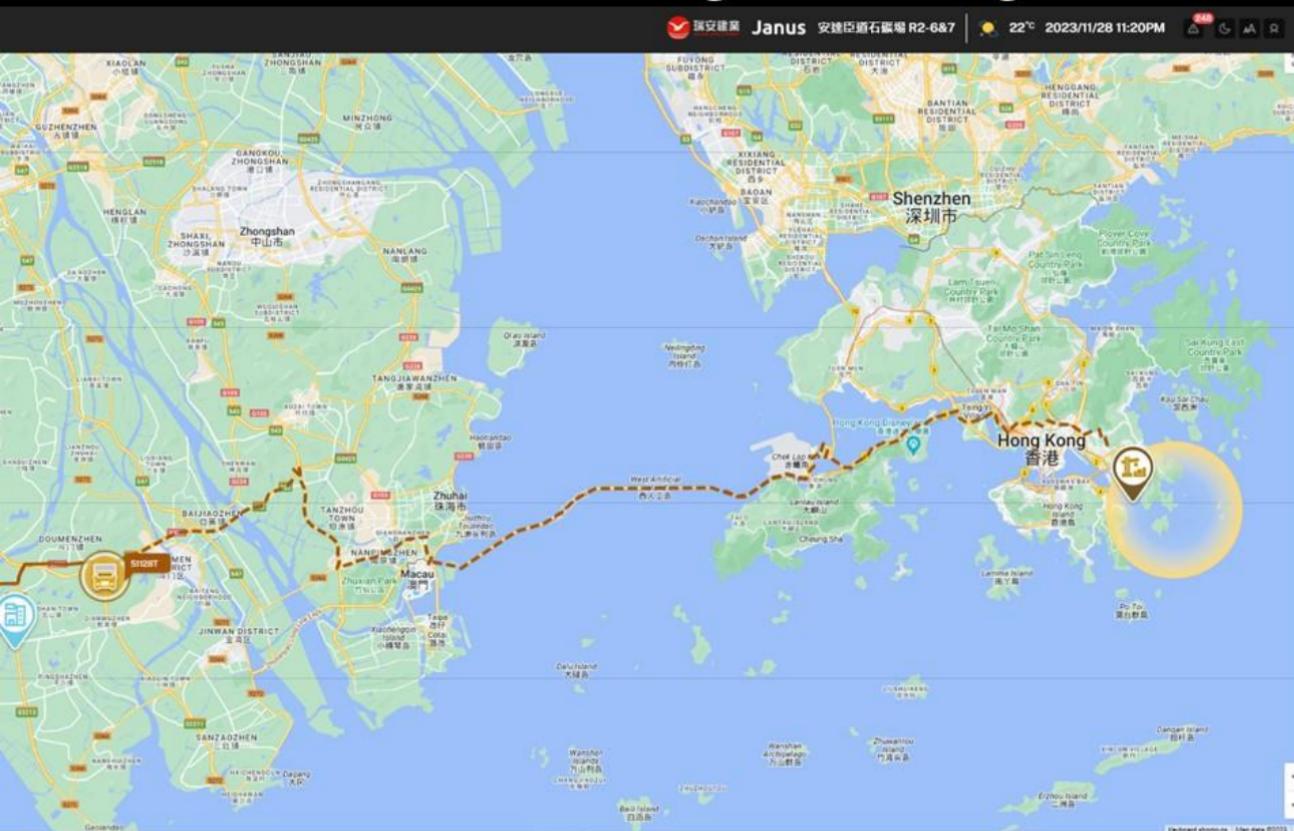
無數據

安達臣道地盤

更多 >



MiC Logistics Tracking for J.I.T.



Smart Site Management System

Centralised Project Information Management System (CPIMS) Smart Control Room



香港房屋委員會
Hong Kong Housing Authority



瑞安建業
SOCAN DEVELOPMENT



Smart Site Management System

項目總覽

開工日期
2022/10/10

完工日期
2024/12/09

距離完工
376日

瑞安建築 Janus

21°C



Real Time Alert

MIC 進度

地盤人員統計

實時環境監測

安全警報

項目相片

總開工工人數目

Top 5 工種人數

新入職人員

Data Integration

人
機

物

法

環



Smart Watch



Digital Asset Management



Digital Access Control



E-Permit to Work



Confine Space Management



VR Safety Training



AI CAM for
Mobile Plant Alert



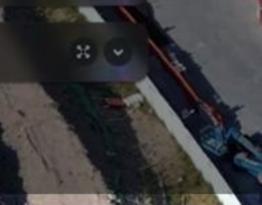
GPS for Logistic



Digital Progress Tracking



Environmental Monitoring



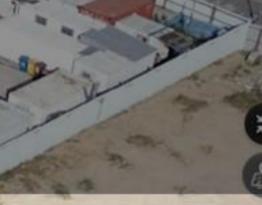
Data Integration



AI CAM
Lift Zone Management



Robotic Application



Personnel and Access Management

項目總覽



Janus

安達臣道石礦場 R2-6&7

21°C 2023/11/29 09:24AM

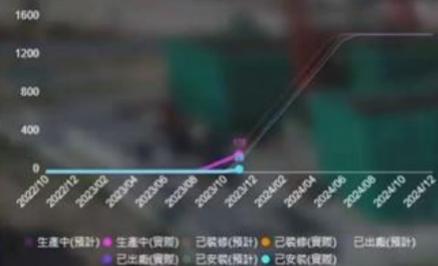


開工日期
2022/10/10

完工日期
2024/12/09

距離完工
376日

MIC 進度



地盤人員統計



實時環境監測



上水第4區及第30區1/1
On-site name...
1 page • 102 KB • pdf

[在場人員名單]
上水第4區及第30區1/1
2023/11/26 06:30:03 PM
人數: 4

-SOCAM Develop... +852 9173 6903

安達臣道石礦場
R2-6_7 On-site na...
1 page • 105 KB • pdf

[在場人員名單]
安達臣道石礦場 R2-6_7
2023/11/26 09:00:16 PM
人數: 3

-SOCAM Develop... +852 9173 6903

基濤醫院重建工程/第

Smart Monitoring Devices for Workers and Frontline Site Personnel

Smart Watch Integration to CMP



日照模擬

天氣記錄

監控管理

進度查看

人員管理



孔鑽



訊號員



訂板, 訂詰橫



瑞安



HSE



Safety Knowledge Management

Virtual Reality Safety Training

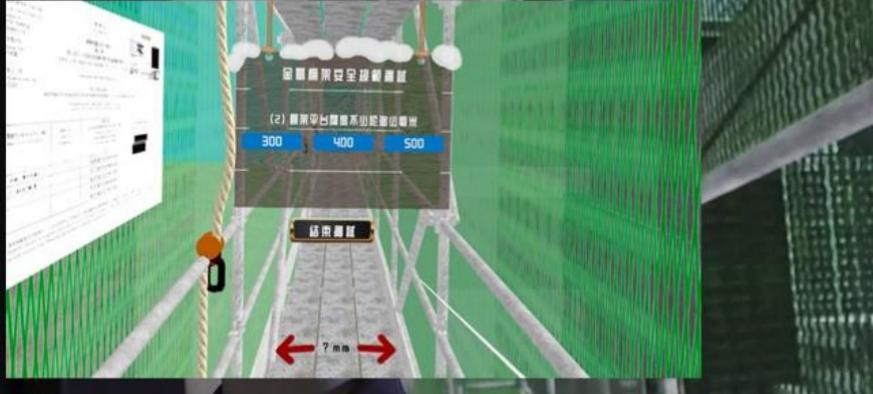
VR Training Module

- Heavy Lifting Operation
- Heavy Machinery Operation
- Working in Confined Space
- Use of Suspended Working Platform
- Erection/alteration/dismantle of bamboo scaffolds
- Electrical and other works with potential electrical hazards



Safety Knowledge Management

In-house developed VR Training



Safety Knowledge Management

In-house Online Safety Trainings



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Safety Sharing Session

Design for Safety & Temporary Works Management



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承傳經驗 智建未來

第2節 【安全管理】

主講者 王克活先生 (Mr. Louis Wong)
李永基先生 (Mr. Stephen Lee)
主持人 陳慶全先生 (Mr. Harry Chan)
2022年12月12日



瑞安建業
SOCAM DEVELOPMENT

安全健康及環保措施決議系列

安全措施決議第A1號

升降機槽閘門



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SOCAM DEVELOPMENT

總承建商安全角色及責任

(監督管理人員篇)

工程主任/管工/助管/安全督導員/合資格人士/工程師

MAIN CONTRACTOR

IoT Weather Station with Communication Panel





Technology
Empowering
Construction

This is a clip from the 31 July 2024 recording of the

Hong Kong Housing Authority

“Safety Forum 2024 for Works and Property Management Services”

The speaker on stage is Mr Marcus Tang

Senior Manager (Health Safety & Environment), SOCAM Development Limited

His topic is

“Application of Safety Technology for Enhancement of OSH”

(00:25)

Hello everyone, we are honoured that SOCAM Development Limited

was invited today to share our self-developed systems and technologies

that enhance occupational safety performance

Due to time constraints, I will explain through examples

What you are seeing now

is our self-developed Centralised Management Platform

developed by our in-house tech company, Janus

The blue dots on the map

represent one of our Housing Authority sites

Clicking the blue dot brings us to the project in Centralised Management Platform

On the left, you can see a full list of project data

including progress, safety alerts

images and workforce statistics at a glance

Back to today's theme of risk management

Our company has always

aimed to consider both engineering and safety risks together

and address them during both planning and execution stages

This photo shows one of our Housing Authority sites

which adopts the MiC method

I believe everyone understands now

As Mr Daniel Leung from the Housing Authority mentioned earlier

one of the biggest risks in MiC projects

is the lifting operation which involves hoisting MiC modules weighing several tonnes

This poses a significant risk

The second consideration

is the limited space on construction sites

For the successful execution of MiC projects

Can we store MiC modules temporarily on site

Usually we may not have sufficient space on-site to do so

Therefore, during the project planning stage

we consulted with the Housing Authority

to explore an 'on-demand' installation approach

for the MiC projects

We added this interface to the Centralised Management Platform

to monitor the entire MiC installation workflow

You can clearly see different colours

representing the progress of various modular components

Orange and yellow indicate components in production at the factory

blue represents those in transit

green shows components currently being installed

and dark grey indicates those that are completed

It's all very straightforward

helping both engineering and safety teams monitor progress

To enable on-demand installation

One of the features to be integrated into the Centralised Management Platform is GPS tracking for each MiC module

We track each modular component throughout the entire process from mainland factories to our sites

Additionally, the Centralised Management Platform includes a feature that sends a report about 15 minutes before the components arrive to relevant supervisors

This allows them to prepare and manage traffic conditions and other situations outside the site in advance and ensure smooth delivery

Before the module even arrives they can prepare all qualified personnel and tools to ensure a safe lifting and installation process Besides supporting MiC works our Centralised Management Platform also fulfils various Smart Site Safety System requirements

Due to time constraints, I won't go into each one in detail

But I would like to highlight some examples related to people and environment

For manpower, the platform stores individual training records and real-time status of each worker

Why is this important?

In recent years, the construction industry has become increasingly concerned about workers' situations after hours

We will use daily entry and exit records to generate regular reports for relevant supervisors after work They can check the day's work schedule to see if any workers who are not required to stay late

are still listed as present on site

They will follow up with subcontractors immediately
to find out why someone has not left the site

Another aspect is the health status of workers

Special attention will be given to certain colleagues
using smartwatches

to continuously monitor their health metrics
including body temperature and work location

If any issues arise
the relevant supervisors will receive reports to follow up

On safety knowledge management

we also use virtual reality tools and courses

In addition to vendor-provided training
we develop our own VR safety training courses

tailored to our specific projects

On the screen, you can see
the virtual reality training course that we developed and designed in-house

We also have an online safety training platform
aiming for all construction personnel

to receive new safety knowledge not just during working hours
but around the clock

We offer a range of training modules
so they can study any time

More importantly

Over past 50 years
Our company has maintained excellent safety management intelligence

We hope this system can carry forward our commitment on safety management intelligence

Lastly

regarding the recent concerns about heatstroke

we are implementing various preventive measures

to address this issue

Last year, we have installed electronic displays at prominent site locations

These screens display real-time weather signals, including heat warnings

real-time connected directly to the Observatory's signals

When a warning is issued, it is immediately shown

We also set up environmental monitoring stations on site

that display the actual temperature on the electronic screens

This aims to prompt workers

to take appropriate measures to prevent heatstroke

That concludes my sharing on how our company

applies technology to improve OSH performance

and reduce risk

Thank you

Thank you for watching.

(07:14)