SMART SITE SAFETY SYSTEM THROUGH INTEGRATED ASSET MANAGEMENT

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LIFTING GEARS AND LIFTING APPLICANTS ARE ONE OF THE COMMONLY USED ASSET IN JOBSITE, REGULAR INSPECTION BY QUALIFIED PARTY IS CRUCIAL TO AVOID ACCIDENT

Typical Lifting Gear in jobsite

Form 7 for Lifting Gear cert.

Name of owner

FORM 7

Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations

CHAINS, ROPES AND LIFTING GEAR

CERTIFICATE OF RESULTS OF THOROUGH EXAMINATION IN THE PRECEDING SIX MONTHS

Address of installation

Description of chain, rope or gear, e.g. type, size and identification mark (1)	Date of examination (2)	Safe working load (tonnes) (3)	Result of examination (4)

Signature of Registered Professional Engineer

Qualification

Date of certificate

Discipline

Biannually inspection for lifting gear is essential to ensure up-to-standard quality of lifting gear to avoid failure when loading

CHALLENGES IN MANAGING THE LIFTING GEARS WITH TRADITIONAL METHOD

Managing thousands of physically LG

Challenges: Multiple excels to manage the data base of LALG information, including purchasing, location assignment and certificate management

Impact: misaligned information from different excel, causing missed certificates for existing LALGs

Excel 1

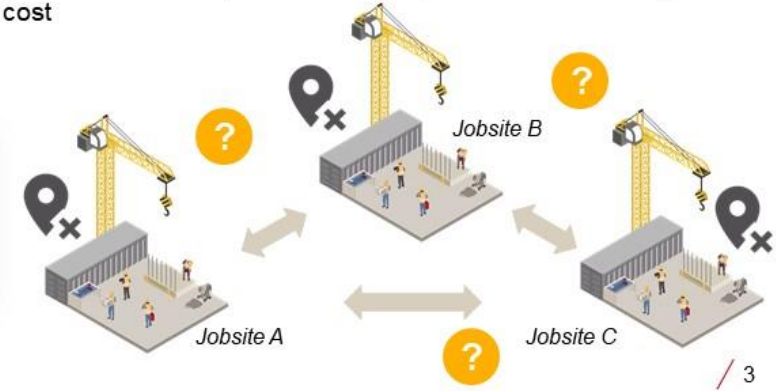
And many other excels…..

Excel 2

Identifying the real time location of expired LG

Challenges: Unable to locate the exact location of expired LG, as LG can moved around different jobsite and LG of same model looks identical. Workers fail to transfer asset in the system to report last updated jobsite of the LALG

Impact: The location of LALG can be wrong in report. Contractors might have to inspect all LG of the same model at the same time even just a few LG are expired. Causing high labour cost and inspection cost



UTILISE SSSS SOLUTION (ON!TRACK SOLUTION) TO MANAGE LALG DIGITALLY TO OVERCOME CHALLENGES

ON!Track

Proactive Tracking with Smart Tag Solution

Smart tagged LALG asset

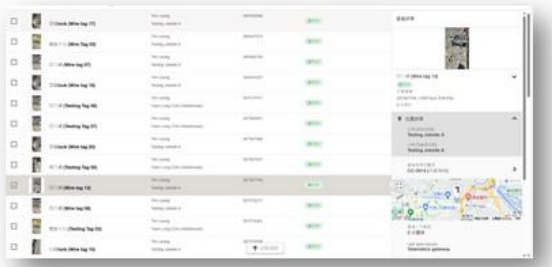
Install gateway in LA

Training to key stakeholders

UTILISE SSSS SOLUTION (ON!TRACK SOLUTION) TO MANAGE LALG DIGITALLY TO OVERCOME CHALLENGES

ON!Track

One stop platform



- ✓ Cloud based server to manage all LALG in one platform.
- ✓ Real time update and aligned information

Real time location tracking

- ✓ Real time tracking of geolocation of LALG
- ✓ No manual management of LALG location required, minimize human error from data input
- ✓ Use mobile to track the exact location of LALG to search expired asset in jobsite

Service alert and management

- ✓ Service alert will be sent to user in apps / by email when certificate is going to expired / already expired
- ✓ Stored all historic certificates in apps / webpage for future reference and inspection

HILTI ON!TRACK IS IN CITF PRE-APPROVED LIST UNDER SSSS IN CATEGORY 2

ON!Track

安全智慧工地系統10個主要類別 10 Main Categories of SSSS Products :

1. 中央管理平台 Centralised Management Platform
2. 數碼化追蹤系統 (工地機械,電動工具及梯架) Digitised tracking system for site plants, powered tools and ladders
3. 數碼化工作許可系統 (高風險工作) Digitalised permit-to-work system for high risk activities
4. 危險區域進出管制 (電子鎖系統) Hazardous areas access control by electronic lock and key system
5. 移動設備操作區域的不安全行為/危險情況警報 Unsafe acts / dangerous situation alert for mobile plant operation danger zone
6. 天秤吊運區域的不安全行為/危險情況警報 Unsafe acts / dangerous situation alert for tower crane lifting zone
7. 前線工人智能監控設備 Smart monitoring devices for workers and frontline site personnel
8. 人工智能安全監察系統 Safety Monitoring System using Artificial Intelligence
9. 密閉空間監控系統 Confined Space Monitoring System
10. 虛擬實境安全培訓 Safety Training with Virtual Reality Technology

PA19-025 | ON!Track

此產品是一個專為建造業而設的數碼化資產管理解決方案，有關資產資料透過網站和手機應用程式存取在雲端上。

用戶可以在資產上附加耐用的二維條碼/二維碼作識別用途，並通過掃描來查閱資料，資料包括圖片、文件、位置、採購資訊、保養到期日及預定服務。

ON!Track is a digitalised asset management solution designed for construction industry. It uses cloud-based server for information storage and can be retrieved or updated with two interfaces which are web portal and mobile app.

User can attach a robust 2-D barcode/QR code on the asset for unique identification purpose and the information can be retrieved by scanning. Asset information includes pictures, documents, locations, purchase information, warranty expiration dates and scheduled services.

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類別 Cat. 2

Hilti (Hong Kong) Limited

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 Ivan Sou

Head of Tool Services Marketing, Hilti (Hong Kong) Limited

His topic is

“Smart Site Safety System Through Integrated Asset Management”

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(00:27)

Hello everyone, I am Ivan Sou from Hilti

Today I will share

how software technology can help improve site safety

I believe everyone's first impression of Hilti

is electric tools or anchor bolts

However, we have also done a lot in software development

Let me start by sharing some background about the company

We have developed software for asset management

On many common construction sites

there are often numerous identical lifting gears

sometimes over a thousand of lifting gears

For example, chain slings that all look the same

As mentioned earlier

Some accidents are caused by falling objects from heights

often due to worn chains

When they become damaged, it can lead to failures

Therefore, filling out Form 7 regularly

ensure they still meet the safety standards for use

However, using traditional methods on-site

presents significant challenges

I have also discussed with peers in the industry

and they usually manage these lifting gears

through spreadsheets for tracking and record-keeping

However, different sites use various spreadsheet formats

often resulting in one site having ten different spreadsheets

If one spreadsheet is updated

the others may not be linked

leading to a lack of synchronisation across the board

I believe the biggest challenge is the second point

which is the lifting gears look identical

and are often used across different sites

or in various locations on-site

After six months, when it is time for inspection

it becomes nearly impossible to locate a specific gear

It is because their positions are unknown

as all the lifting gears look exactly the same

I have discussed this with others in the industry

and they also struggle to locate specific lifting gears

To proceed the checking

they have to inspect every lifting gear on site

to ensure that all certificates are up to date

which is very time consuming

Hilti's solution

is to implement a tracking system

that uses smart labels on the lifting gears and installs network connectors on heavy machinery

This enables the system to report the lifting gears' locations

We also install network connectors on heavy machinery

to cover the entire site

and we train the key stakeholders

especially the safety officers

because we hope most of the work can be handled from the office

The fewer frontline workers involved, the better

Full automation is ideal

The result is that

we can manage everything within a single platform

allowing for real-time monitoring of these lifting gears

The system provides

the exact global positioning of each gear

When maintenance is required

it sends an alert to the system

Through the central platform

the client will be informed about which lifting gears need maintenance service

With a quick check, you will know which site it is on

and roughly which crane it is near

Then you can take appropriate action

Lastly, this "ON!Track" system

is a software approved under the Construction Innovation and Technology Fund

So if anyone wants

to apply this software to private projects

They can apply for funding through the Construction Innovation and Technology Fund platform

That is all for my sharing today

If you want to learn more

please visit our booth in the exhibition hall

Thank you

Thank you for watching

(03:58)