

The background of the slide features a faded image of three construction workers. One worker in the foreground wears a white hard hat with 'HSB' and 'NATHAN' labels, a yellow safety vest, and a communication device. Another worker in the background wears a blue hard hat and safety glasses. A third worker is partially visible in the lower left. The overall scene is a construction site with orange safety cones and structural elements.

# HSB

HWA SENG BUILDER PTE LTD

# Enhancing Performance & Productivity through Technologies





# WHY WE DO IT?







# WHY WE DO IT?

## What have safety culture done for us?

1. Safeguard our staff and our partners
2. Protect our business resilience & growth
3. Reduces loss
4. Ensure strong compliance
5. Brings about operational excellence







# HOW WE DO IT?





# HOW WE DO IT?



**TECHNOLOGY  
ADOPTION**



**STREAMLINING  
WSH  
PROCESSES**



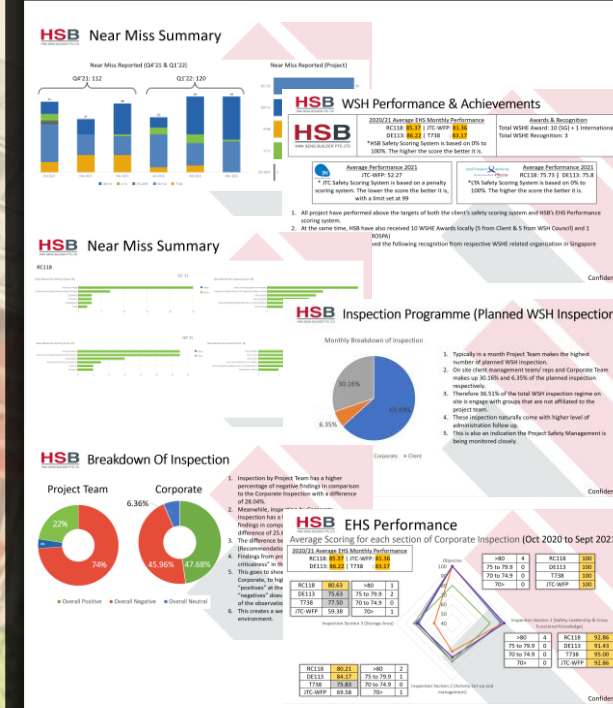
**TRAINING AND  
COMPETENCY**



# HOW WE DO IT?

1. HSB **takes measurement** from internal and external safety data and the direction of the industry.
2. These **continuous monitoring** to **identify gaps** and **grow** is key in **sustaining the cycle of improvement**.
3. With the numerous achievement and recognition, it have spur a lot of **motivation, satisfaction, drive and strengthen teamwork** in HSB.

## TECHNOLOGY ADOPTION



## Safety Data Analysis

## Novade Safety Data System



## HSB Mobile App



## HSB Augmented Reality Training App





# HOW WE DO IT?



## Wireless Watcher

**FEATURES**  
Wireless Watcher  
► Telescopic Crane  
► Hammerhead Crane



Full HD Crane Camera System

### 6 Unique Features

Industry's first!  
Full HD picture

- 2,120,000 pixels
- 30 times Optical Zoom

Stable Wireless  
Transmission  
No delay (1msec or less)  
► With automatic channel selection

Battery up to  
10 hours  
Charged in the cabin

No cable required!

Tools are not required  
Easy installation

Light Weight  
High quality  
Affordable Pricing

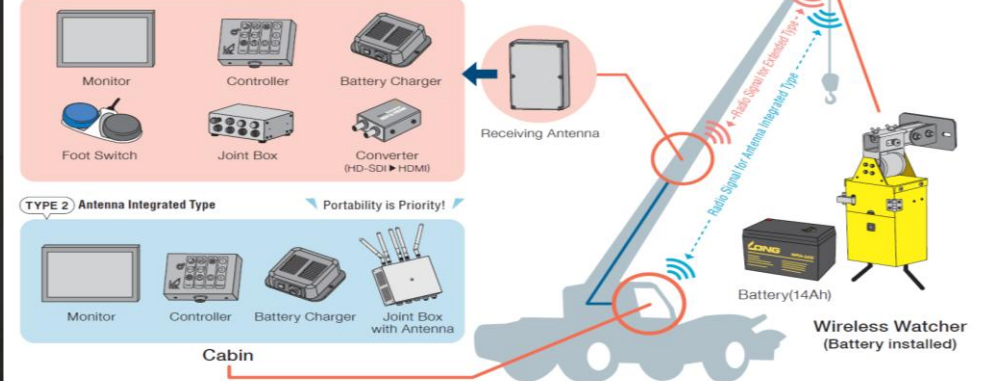
### COMPLETE PARTS

It becomes the second eye of the operator and clearly shows the checking status of the suspended loads outside the vision of the operators.

Two Options to choose from ◀ Depending on usage environment, Wireless communication may be difficult

#### TYPE 1 Extended Antenna Type

Reception sensitivity is Priority!



#### TYPE 2 Antenna Integrated Type

Portability is Priority!



TECHNOLOGY  
ADOPTION



# HOW WE DO IT?

Smart BSD DVR Monitor System is Powered by latest AI technology



TECHNOLOGY  
ADOPTION



A solution implemented on excavator, to detect human forms in real time. It features intelligent cameras with 360-degree view & alert systems. Alert operator of human presence within the vicinity.

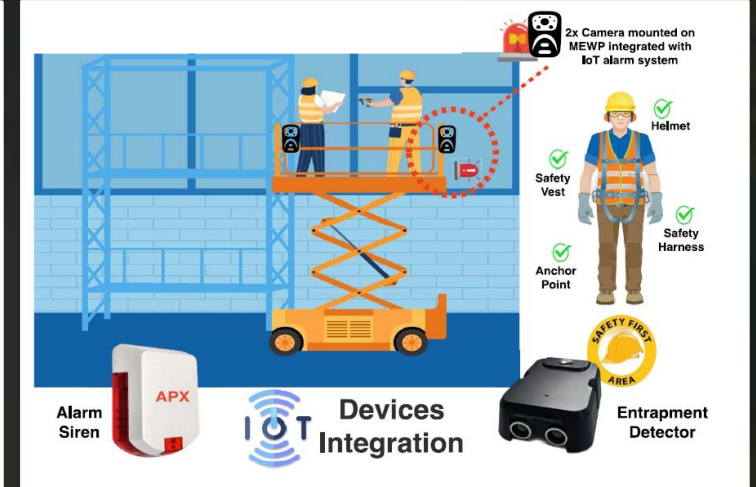
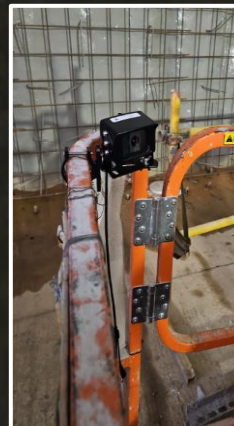
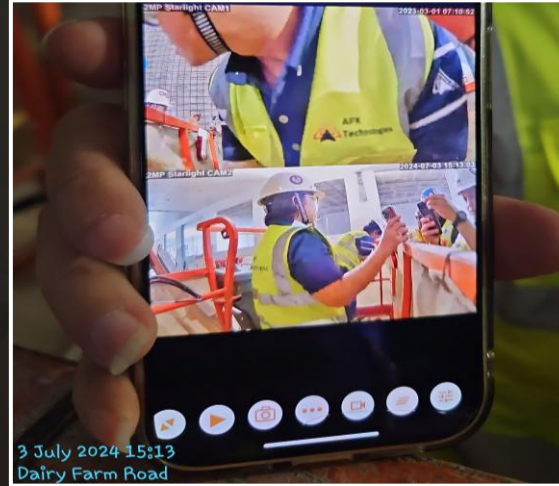


# HOW WE DO IT?

## Anti-Entrapment Device



### TECHNOLOGY ADOPTION



### BUILT-IN MULTI-CAST



SUPPORT MULTIPLE VIDEO ANALYTICS ENGINES

### LOW POWER & PORTABLE



5V DEVICES WITH >10HRS OF OPERATION DURATION

### SAFETY REPORTS



MULTI-SITES SAFETY DASHBOARD & KPI REPORTS

Source: APX Technologies



# HOW WE DO IT?

## Power Bank – Further utilization of Solar Power

### Sustainability

Harvesting of green energy from the sun



### Renewability

Charging of generator using solar power



### Zero Air Pollution

Replace burning of fuel in diesel generator. No fumes generated

### Noise Control

No noise & vibrations disrupting stakeholders



TECHNOLOGY  
ADOPTION



# HOW WE DO IT?

Manage all our health and safety process on a single platform



**STREAMLINING  
WSH  
PROCESSES**



Actions



Inspections



Toolbox meetings



Incidents



Observations



People qualifications



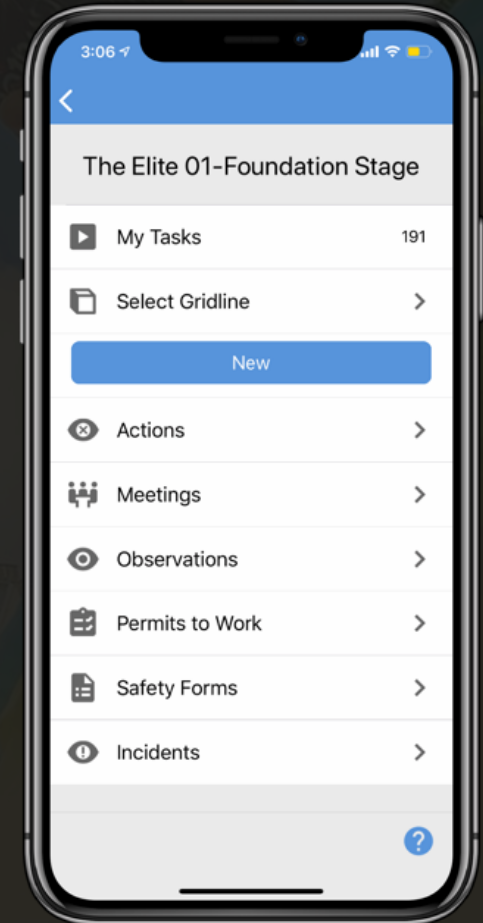
Permits to Work



Equipment certifications



Safety forms



Source: Novade Solutions



# HOW WE DO IT?

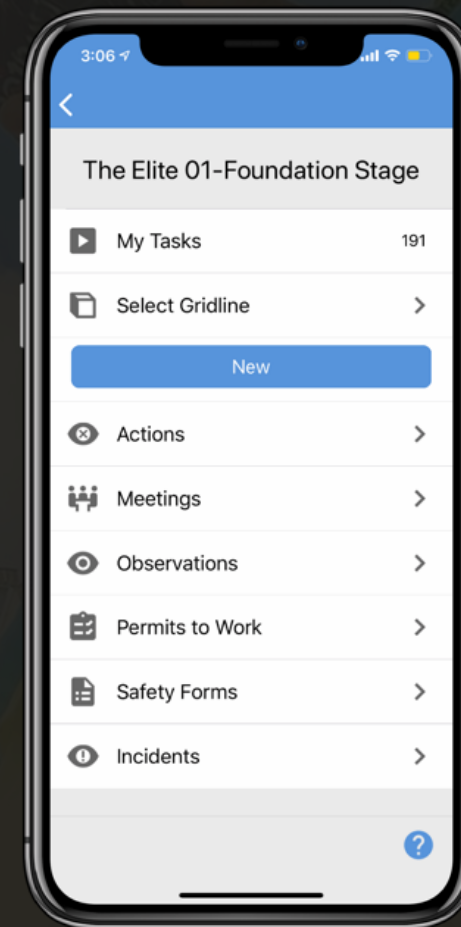
## Manage all our health and safety process on a single platform



### STREAMLINING WSH PROCESSES

- Brings about standardization of processes and workstream throughout the organization
- Better change management i.e. manpower transfer
- Save time and reduce administration costs
- Consolidation of data
- Leverage data to drive HSE performance

Source: Novade Solutions







# HOW WE DO IT?



## Digital PTW

### Any checklist

Checkboxes, combo boxes, dates, photos, questions, QR codes,, custom fields, etc..

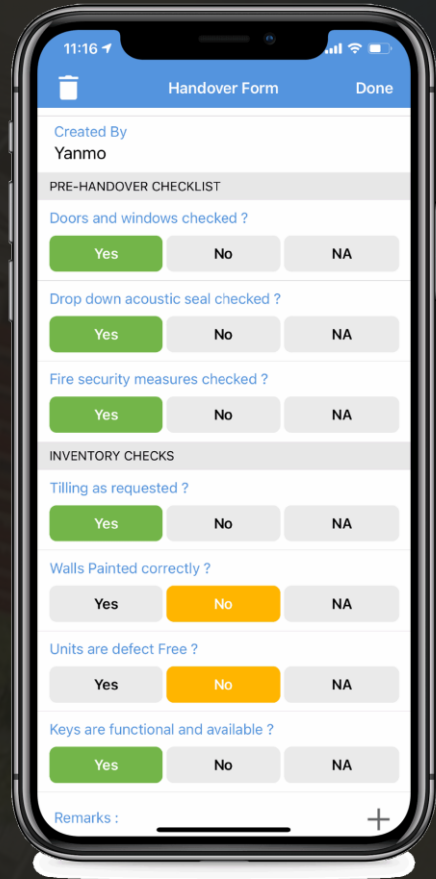
### Any workflows

from simple sequences to the most complex approval processes

### Documentation

Attach relevant documentation, drawings, qualifications and certifications

Source: Novade Solutions



Checklists

### Communication

Automate alerts and reminders to keep teams informed and engaged,

### Authentication

Mobile digital signature, time stamps and audit trails

### Geolocation

Record GPS coordinates for assets, personnel or actions



**STREAMLINING  
WSH  
PROCESSES**

# HOW WE DO IT?

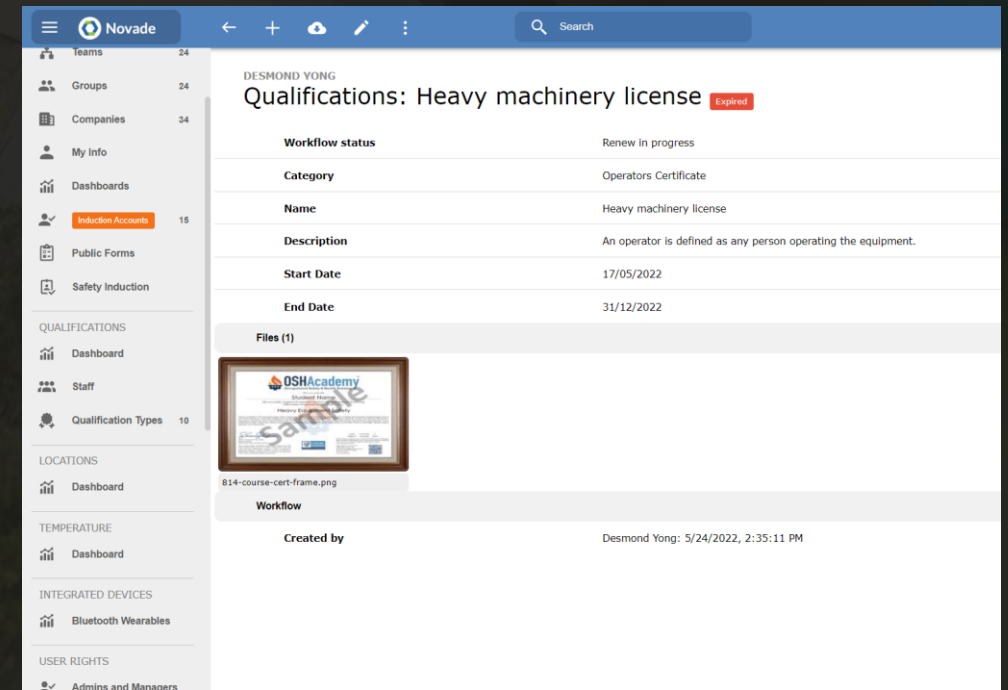
## Digital PTW

### Easily check personnel qualifications

- Ensure only qualified personnel undertake specific tasks
- Maintain an up-to-date database of each worker's credentials
- Verify workers' qualifications, certifications, and training records during PTW submission
- Easily confirm that personnel have the required skills and competencies to perform their tasks



**STREAMLINING  
WSH  
PROCESSES**





# HOW WE DO IT?

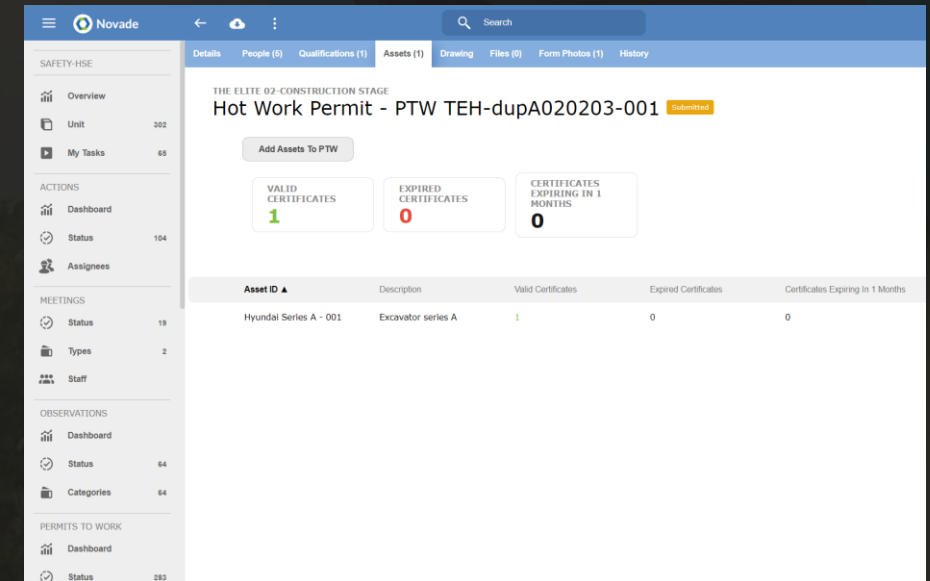
**STREAMLINING  
WSH  
PROCESSES**



## Digital PTW

### Easily Check machinery certifications

- Minimize the risk of accidents due to outdated or uncertified equipment
- Improve control and management of machinery on site
- Ensure that all equipment utilized on-site meets industry standards and regulations
- Easily verify their inspection, maintenance, and calibration records
- The system enables you to set reminders for certification renewals



Asset ID	Description	Valid Certificates	Expired Certificates	Certificates Expiring in 1 Month
Hyundai Series A - 001	Excavator series A	1	0	0



# HOW WE DO IT?

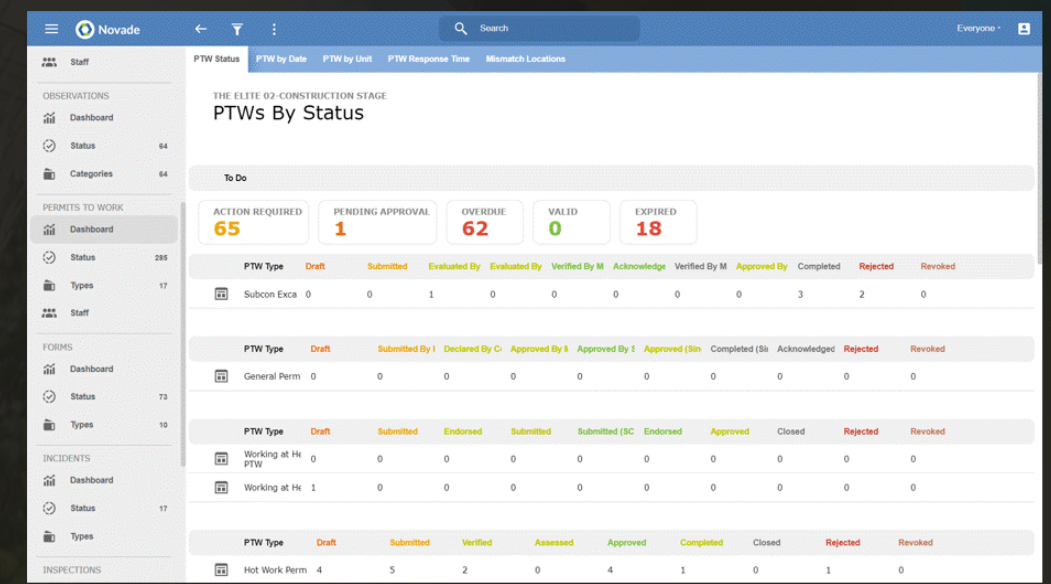
## Digital PTW

### Dashboards give you full visibility



STREAMLINING  
WSH  
PROCESSES

- Real time status all PTWs, categorised by types and workflow steps
- Real time spatial visualisation, to identify all the high-risk activities happening on site in a single glance
- Compliance efficiency: average time for submissions & approvals
- Immediately access records in case of incident or audit



Source: Novade Solutions





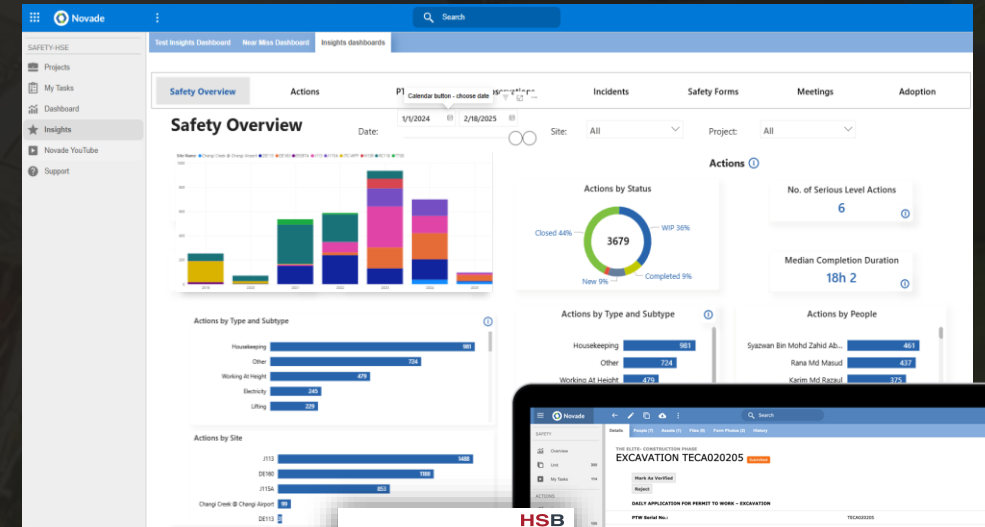
# HOW WE DO IT?

## Digital PTW

### Data insights improves HSE performance

- Leverage data captured in the field to conduct powerful analytics
- Easily understand the number of PTWs created, rejected and revoked across your sites
- Identify potential bottlenecks and reasons for PTW delays
- Visualize all PTW activities done on sites in a monthly basis

STREAMLINING  
WSH  
PROCESSES

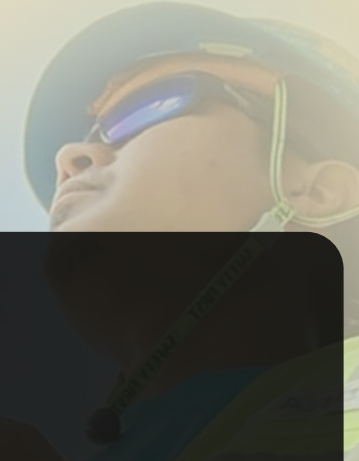


The screenshot shows a detailed PTW form for 'EXCAVATION TECA020205'. The form includes sections for 'PTW Details', 'Application Details', 'Brief Description of Activities', 'Location of Work', and 'Valid From/To'. It also features a 'Valid Until' section and a 'Valid Until' section. The form is filled out with various details, including dates, times, and signatures.

Source: Novade Solutions



# HOW WE DO IT?



## Audit & Monitoring Framework



The Cycle

Performance Measurement

Banding



### Corporate EHS Inspection CROSS-AUDIT Program

To bring about standardization across the organization, participation of EHS personnel or Project Management team from other project sites as inspectorate will be done during the planned Corporate Inspection

#### Top Management & Corporate EHS Inspection

- EHS Inspection on documentation and physical site EHS Implementations & Standards
- Top Management EHS Inspection is an ad-hoc (unplanned) inspection and Lead by MD with inspectorate from Corporate Office & WSHE
- Corporate EHS Inspection is planned and lead by WSHE Department (Corporate) with participation from other project (if any)

#### Top Management EHS Meeting

- Quarterly
- Attended by all PD, PM, WSHM, WSHO and ECO
- Align EHS Standards
- Review and Sharing of Top Management & Corporate EHS Inspection

Typical Schedule	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Top Management EHS Inspection												
Corporate EHS Inspection												
Top Management EHS Meeting												

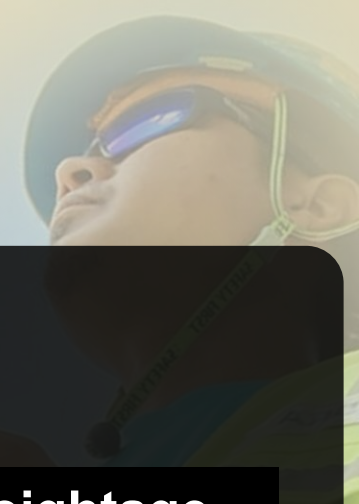
TRAINING AND  
COMPETENCY







# HOW WE DO IT?



## Audit & Monitoring Framework



### TRAINING AND COMPETENCY



The Cycle

Performance  
Measurement

Banding

Component	Weightage
PD/PM Lead EHS Inspection (Safety Leadership)	10%
Inspections <ul style="list-style-type: none"><li>• Client</li><li>• Corporate</li></ul>	60%
Training	10%
ConSASS Maturity Score (Based on Latest Score Sheet)	10%
Positives from Inspection	10%

# HOW WE DO IT?

## Audit & Monitoring Framework

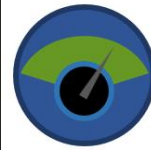


## TRAINING AND COMPETENCY

The Cycle

Performance  
Measurement

**Banding**



## Measurement

Project Yearly Award (EHS Performance Banding)



### Within Assessment period

- Scores Average 85% in Monthly EHS Performance
- Scores Average 80% in all Corporate Inspection Section
- Conducted Average 4.5 counts of PD/PM lead EHS Inspection
- Produced min 2 EHS Innovation or Best Practiced
- No MOM reportable Accident/ Incident or fine from agency/ client



### Within Assessment period

- Scores Average 80% in Monthly EHS Performance
- Scores Average 75% in all Corporate Inspection Section
- Conducted Average 4.1 counts of PD/PM lead EHS Inspection
- Produced min 1 EHS Innovation or Best Practiced
- No MOM reportable Accident/ Incident or fine from agency/ client



### Within Assessment period

- Scores Average 75% in Monthly EHS Performance
- Scores Average 75% in all Corporate Inspection Section
- Conducted Average 4 counts Project Leadership EHS Inspection
- Produced min 1 EHS Innovation or Best Practiced
- No MOM reportable Accident/ Incident or fine from agency/ client



# HOW WE DO IT?

## Training Paths



**Worker**

- Corporate WSHE Orientation Program for New Worker
- On-Job Training
- Monthly Site WSHE Training based on site work progress
- Reformative Training
- Targeted Hazard & Activity Training

Supervisor

Management

Subcontractors

**TRAINING AND  
COMPETENCY**



# HOW WE DO IT?

## Training Paths



### TRAINING AND COMPETENCY

Worker

Supervisor

Management

Subcontractors

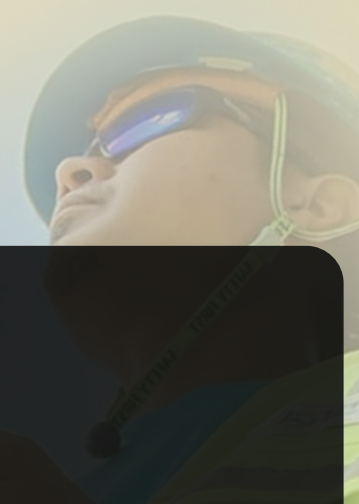
- Corporate Orientation Program for New Supervisors
- Apprenticeship Program for supervisor
- Competency Assessment
- Reformative Training
- Targeted Hazard & Activity Training
- Positive Mindset Training for Supervisory







# HOW WE DO IT?



## Training Paths

- Corporate Orientation Program for New Staff
- Management Positive WSHE Mindset Workshop
- Senior Management WSHE Workshops

Worker

Supervisor

Management

Subcontractors



### PLEDGE for ZERO ACCIDENT & ENVIRONMENTAL HARM

**I acknowledge** that a good governance of Workplace Safety, Health and Environmental (WSHE) management is fundamental to the well-being of our staff and partners. This must be instilled in every individual as every workplace accident or environmental harm carries with it a cost to individuals and society.

**I believe that**

- WSHE is vital in everything we do
- All accidents and environmental harm are preventable
- All workplace exposures can be managed and controlled
- Everyone is responsible for WSHE and is ultimately accountable for the outcome and personal benefits
- Good WSHE values bring good business results

**I aim for** zero accident and environmental harm at my workplace

**I pledge to deliver**

- Leadership in WSHE that cut across all staff levels.
- A workplace guided by a WSHE policy that states clearly its philosophy and objectives.
- An effective WSHE management including dedicated and committed WSHE committees to cover specific areas of concern.
- WSHE strategies and plans at each stage of a project, including project design, construction, commission, maintenance and demolition.
- Effective and regular communication on WSHE outcome for all levels to prevent accidents and harm to the environment we work in.
- Effective WSHE management system with clearly defined goals and performance standards.

**I will demonstrate and uphold our WSHE Commitment by pledging to:**

- Stop all unsafe acts
- Must report all unsafe conditions
- Always put health and safety first
- Remember to be gracious
- Take care of our environment

I, whereof the undersigned, undertake to carry out our above-mentioned commitments and sign this pledge.

TRAINING AND  
COMPETENCY

# HOW WE DO IT?

## Training Paths

Worker

- Business Partner Management, WSHE Training
- Monthly Site WSHE Training based on site work progress
- Targeted Hazard & Activity Training

Supervisor

Management

Subcontractors



TRAINING AND  
COMPETENCY





# HOW WE DO IT?

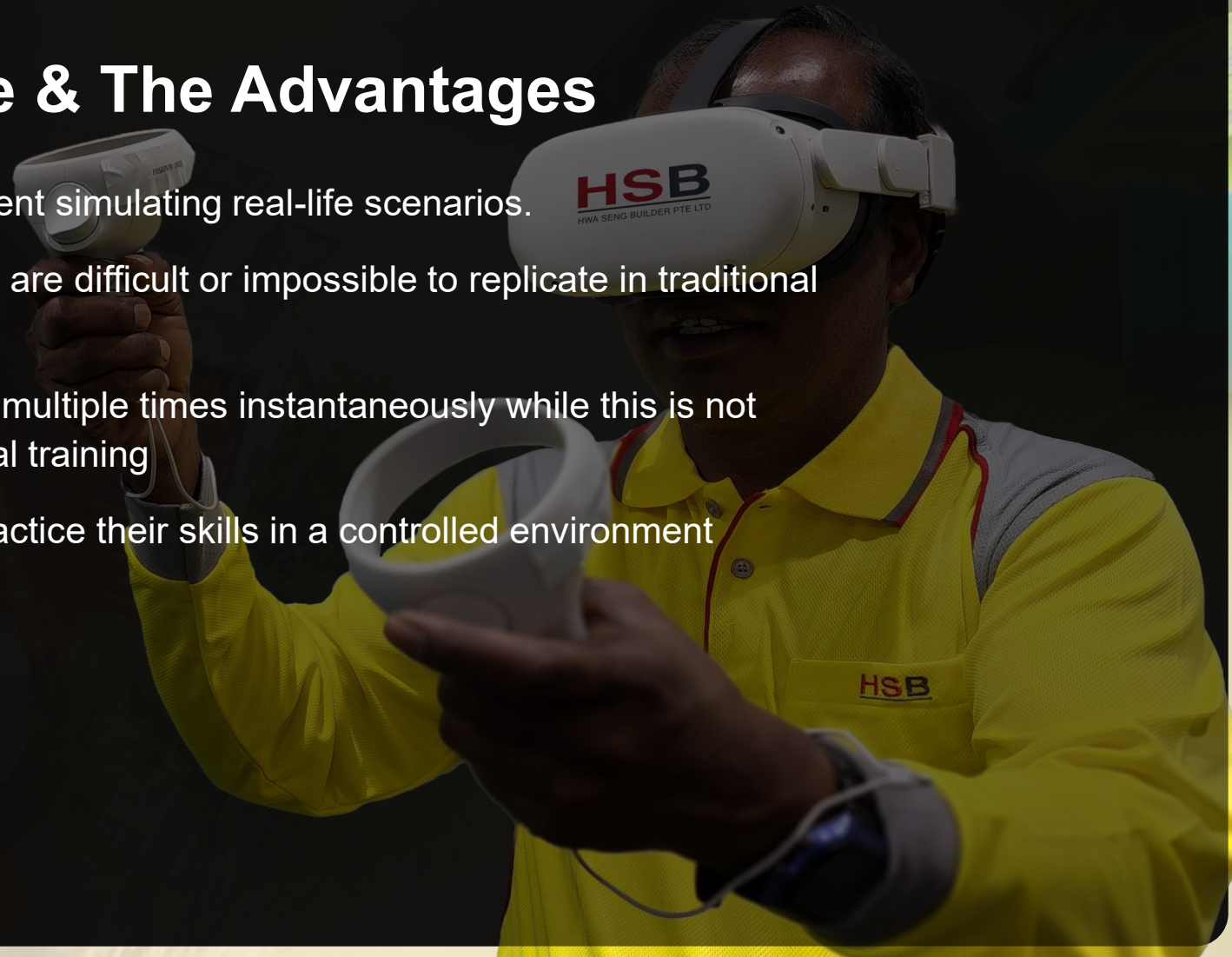
## VR in HSB

### What VR Provide & The Advantages

- Immersive training environment simulating real-life scenarios.
- Wide range of scenarios that are difficult or impossible to replicate in traditional training environments
- Repeat the scenario training multiple times instantaneously while this is not possible through conventional training
- Employees can learn and practice their skills in a controlled environment



**TRAINING AND  
COMPETENCY**

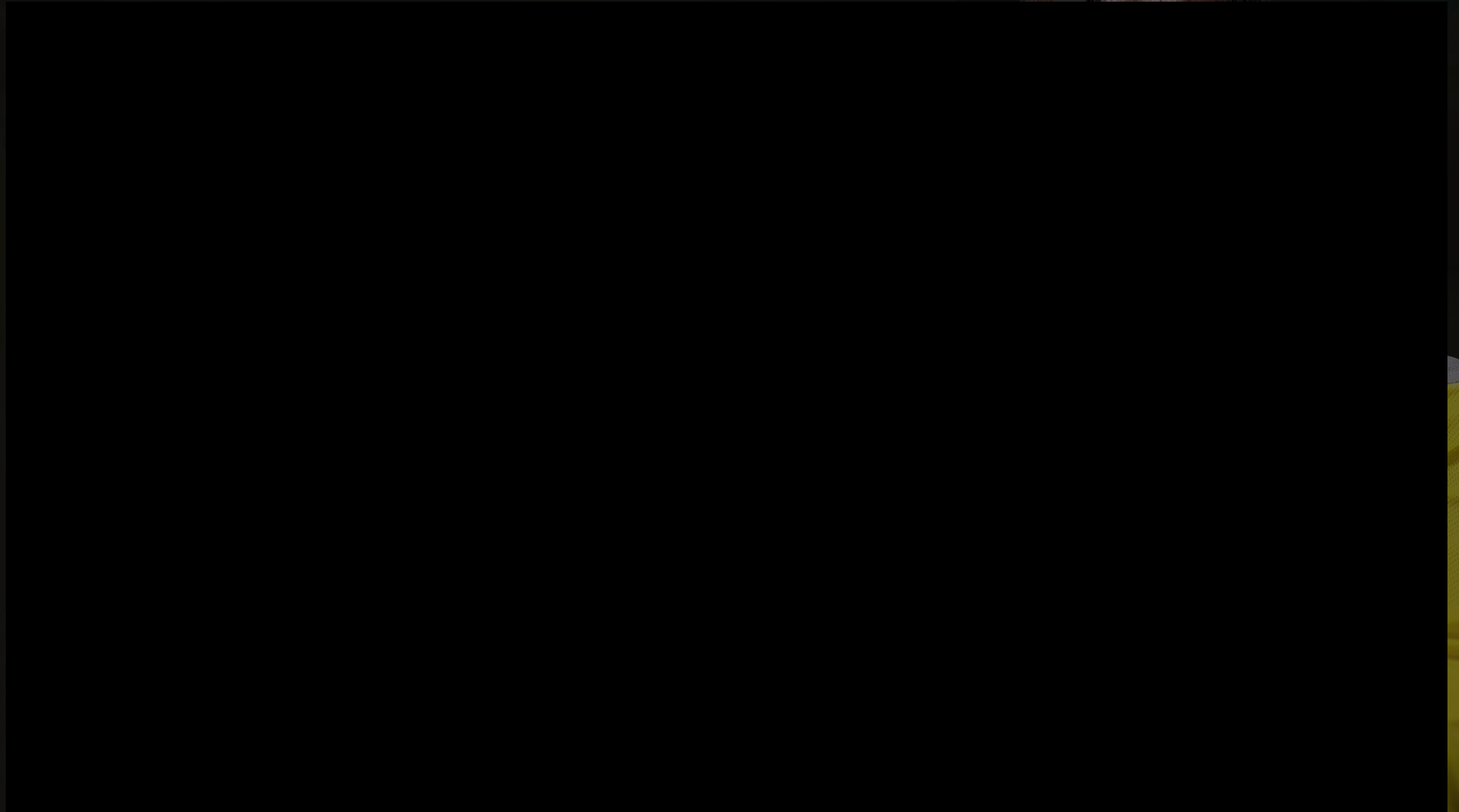




# HOW WE DO IT?

## VR in HSB

### Virtual Reality Training on Lane Closure



**TRAINING AND  
COMPETENCY**





# HOW WE DO IT?

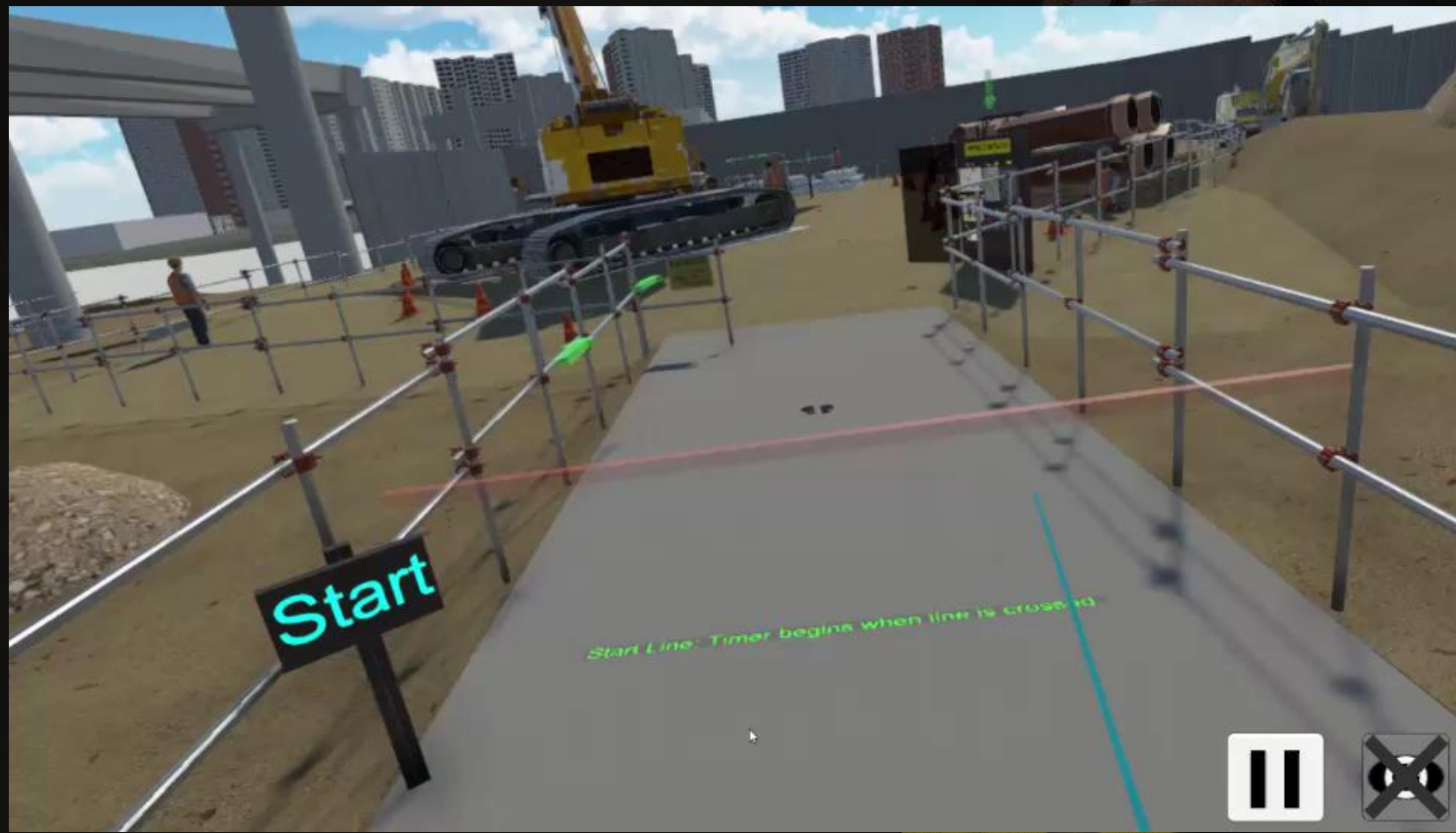


## VR in HSB

### Virtual Reality Training on Lifting



## TRAINING AND COMPETENCY





# HOW WE DO IT?



## VR in HSB

### Productivity Improvements

**INCREASED**

- Productivity.
- Effectiveness of work.
- Familiarity to work environment.



### TRAINING AND COMPETENCY

**REDUCTION**

- OJT days from 12 days to 6 days. (50%)
- In reliance for project to facilitate training.

**48%**

**REDUCTION**  
of manpower resource  
for OJT

**REDUCTION**  
of training hours

**43%**





# A Slice of Our Company Culture

- Set Clear Vision for safety to be top priority and measure safety and health performance as one of the key indicators for success.
- Leadership Commitment and Accountability – Put strong emphasis on ground leadership; walk the site regularly, to ensure that the wellness and wellbeing of the workforce are being taken care of.
- Investment in technology and provide relevant training
- Celebrate milestones achieved with the team to recognize their efforts and encourage employees to stay vigilant, responsible while keeping their morale high.
- Encourage Communication by listening to employees feedback. Take them seriously. By fostering a conducive environment, workforce is at rest in reporting EHS concerns and accidents can be avoided.

**HSB**  
HWA SENG BUILDER PTE LTD





# HSB

HWA SENG BUILDER PTE LTD

# Thank You

Mr Sharul Juma'at  
Corporate WSHE Manager  
**HWA SENG BUILDER PTE LTD**