



**TIJARAH
MABRUR**
Sdn. Bhd

Exclusive Partner

Eyesite  **AISC**

Proposal

Site Safety Compliance Monitoring using Artificial Intelligence Monitoring Solutions.

Prepared by
Exis Group Sdn. Bhd.

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PROBLEM STATEMENT

Safety Compliance **CHALLENGES** at Construction & Plant Sites



Current Challenges

- Ensuring safety compliance during production, turnaround/shutdown, and construction is critical but challenging.
- Safety officers play a vital role, but manual monitoring has limitations due to:
 - High manpower requirements leading to increased operational costs.
 - Human errors and fatigue, reducing monitoring effectiveness.
 - Limited real-time response to unsafe conditions.

Key Concerns

- **Compliance Risks:** Inconsistent enforcement due to manpower constraints.
- **Incident Prevention:** Reactive rather than proactive safety monitoring.
- **Efficiency:** High dependency on manual oversight, limiting scalability.
- **Workforce Safety Culture:** Varying safety awareness levels among workers.

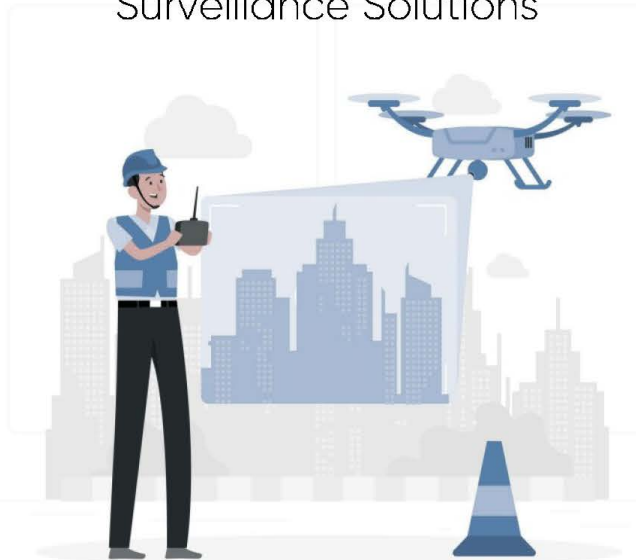
Need for Improvement!!

A smarter, real-time monitoring technology-driven approach is required to enhance safety compliance, reduce human error, and optimize resource allocation for safer and more efficient site operations.

Solutions

AI Remote Monitoring & Surveillance integrates smart cameras, computer vision, IoT sensors, and predictive analytics to enhance safety compliance at construction and plant sites. It enables real-time hazard detection, automated incident reporting, and proactive risk prevention, reducing human dependency, minimizing errors, and ensuring a safer, more efficient work environment with 24/7 AI-powered oversight.

AI Remote Monitoring & Surveillance Solutions



AI-Driven CCTV Surveillance

- Smart cameras with real-time hazard detection (e.g., PPE violations, unsafe actions).
- Instant alerts to safety officers for quick intervention.

Computer Vision & Machine Learning

- Detects unsafe behaviors, hazardous zones, and compliance breaches.
- Automates incident reporting with video evidence.

IoT-Enabled Wearables & Sensors

- Smart helmets, vests, and wristbands track worker fatigue, location, and environmental hazards.
- Sends alerts for risk prevention.

Automated Incident Reporting & Predictive Analytics

- AI analyzes past incidents to predict high-risk areas.
- Proactive safety measures reduce accident rates.

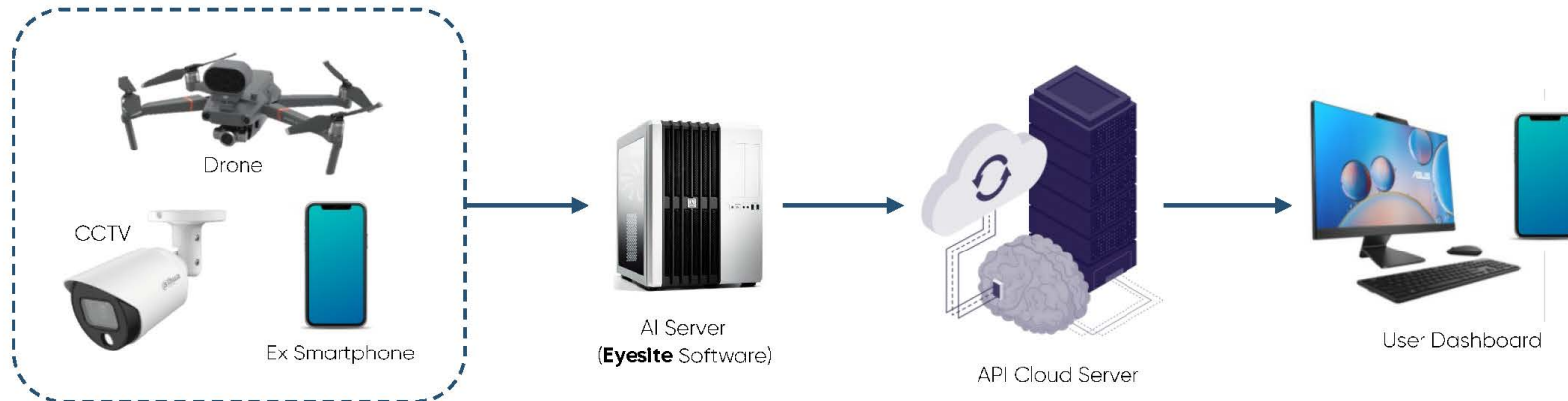
Cloud-Based Command Centre

- Centralized real-time monitoring dashboard for multiple sites.
- Remote access for safety managers to ensure compliance without excessive manpower.

Eyesite

Reduce Incidents, Increase Compliance with ZERO Human Supervision

Eyesite is the end-to-end solution with an AI driven technology that uses visual AI to intelligently identify industrial HSE non-compliance. Eyesite leverages AI and computer vision to identify unsafe acts and unsafe conditions at oil & gas facilities, construction sites and factories. It sends automated onsite non-compliance evidence notifications to respective HSE personnel via Desktop and Mobile Apps. **Eyesite's** main components consists of:



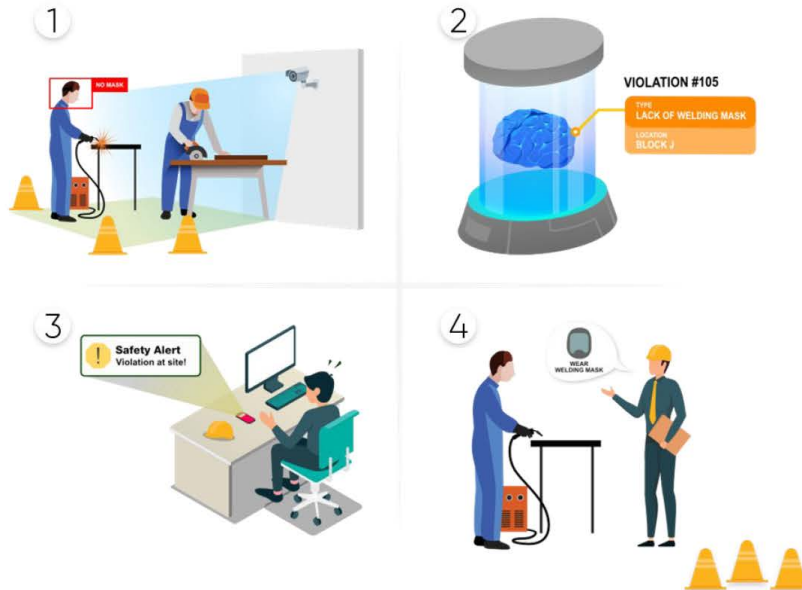
Eyesite's automated, AI-driven safety monitoring technology frees HSE personnel up to focus on more pressing matters. Adopting **Eyesite** in HSE:

Enables continuous and automated safety monitoring.

Enables proactive incident & LTI prevention through prompt response on HSE non-compliance evidence automated notification.

Increases safety implementation efficiency by more than 50%.

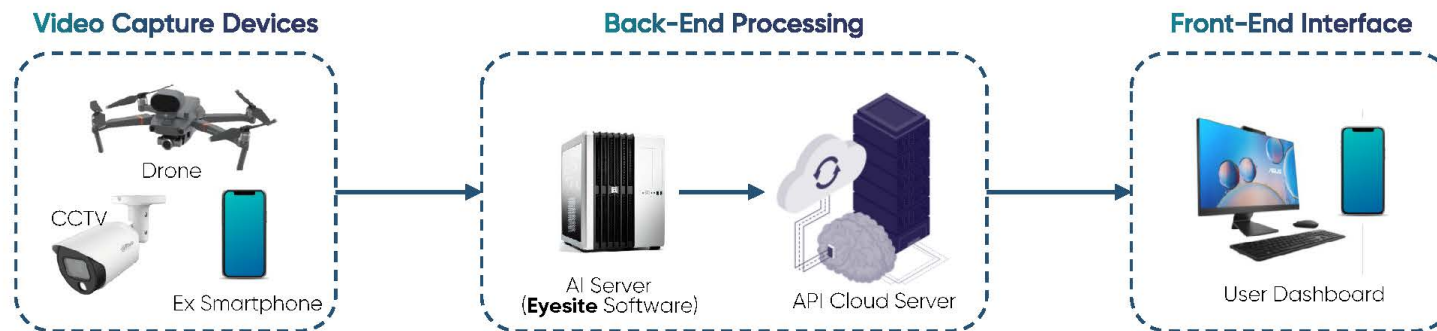
Increases workers' discipline & conformance to HSE guidelines.



How Does it Work?

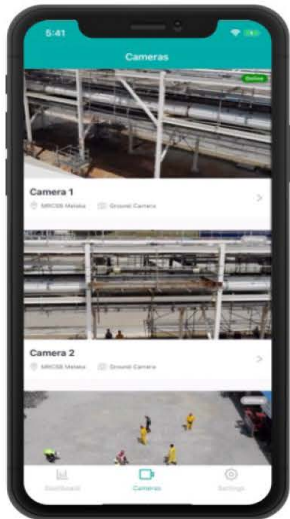
Explained in 4 Simple Steps

- 1** A worker violates safety guideline while working at site.
- 2** Eyesite identifies and locates the violation on the exact moment it happens.
- 3** HSE personnel is alerted of the violation via mobile push notification.
- 4** HSE personnel performs corrective actions to prevent incidents from happening.



Immediate Intervention on HSSE Non-Compliance

Mobile Apps & Website



Live Stream

See the actual condition of a work site in real-time through AISC mobile apps. Capable to simultaneously livestream videos from 14 cameras at > 30 FPS speed.

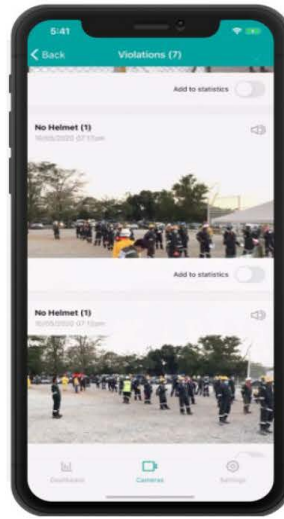
HSE Violation Detection:

Helmet and Face Mask violation real time detection

Push Notifications:

Send HSE violation report & push notification to end user within 5 seconds via mobile apps.

HSE Violation Intervention



HSE Violation Log

Each HSE violation is logged and time stamped. A visual proof (photo) of the violation is also saved.

On-site Speaker Announcement

Execute immediate HSE violation intervention via remote speaker announcement

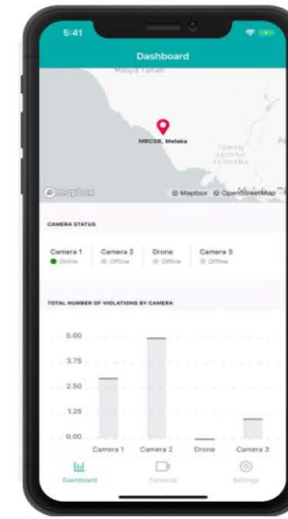
Call AA, RA or WL

AA, RA or WL is just a call away.



Click to play sound

HSE Violation Dashboard



Camera Status

Display status of all cameras (7 CCTV + 1 Drone)

Statistics

Breakdown of HSE violations by camera and violation categories. i.e. Violations tracking, type of violations, number of successful interventions, Violation vs contractors, Violation vs Project, violation trending.

PRODUCT & SOLUTIONS

Solution Architecture – overview from the device to the users

How EYESITE Addresses Safety Challenges

High manpower requirement

AI-driven remote monitoring reduces dependence on large safety teams.



Human errors & fatigue

24/7 automated surveillance eliminates fatigue-related lapses.



Limited real-time response

Instant AI alerts & notifications for proactive risk mitigation.



Compliance enforcement gaps

Automated rule-based detection ensures consistent safety adherence.



Incident prevention

AI-powered hazard prediction and behavioral analysis enhance proactive safety.



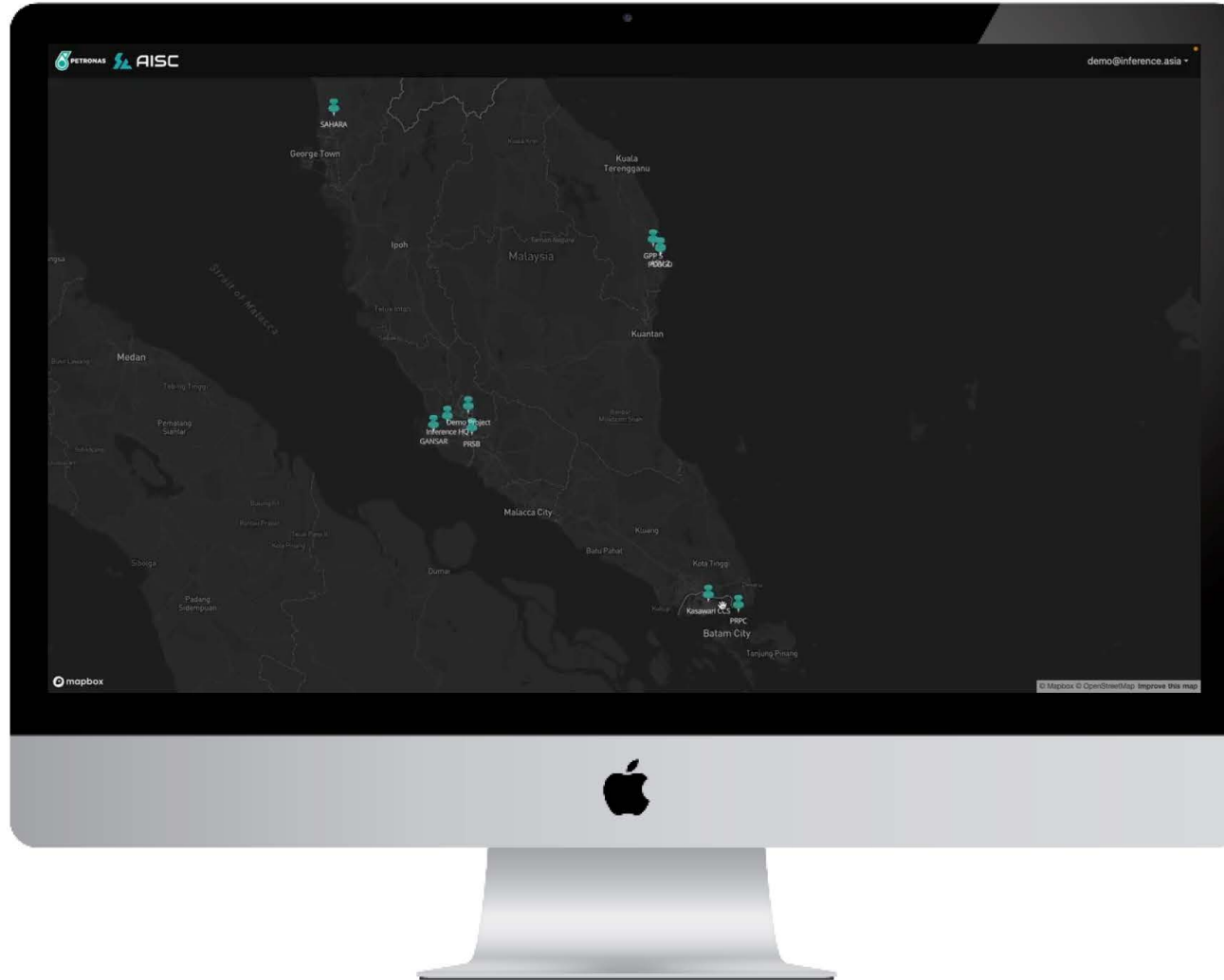
Scalability & efficiency

Centralized AI monitoring allows multiple site coverage with fewer resources.



PRODUCT & SOLUTIONS

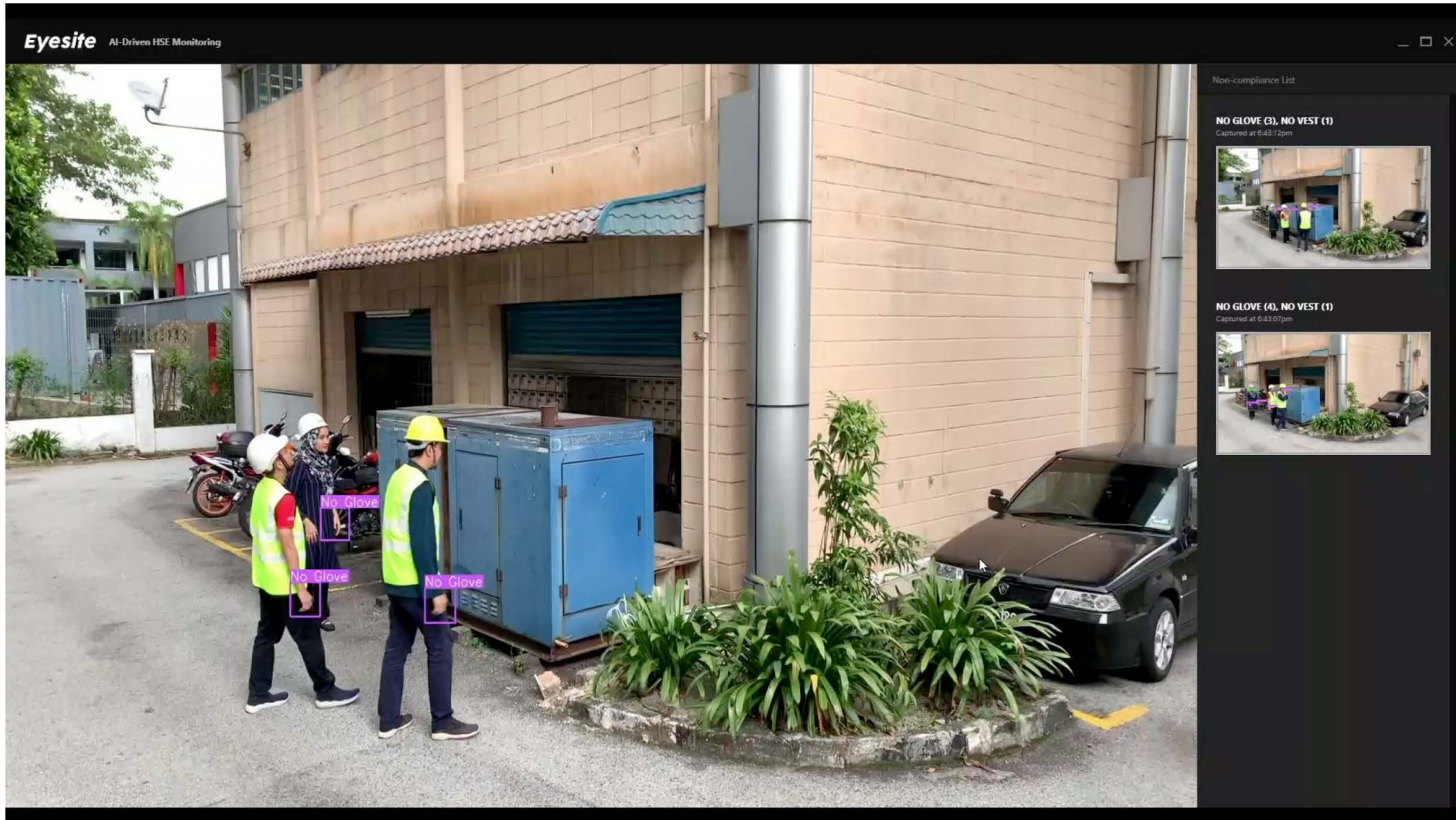
Solution Architecture – overview from the device to the users



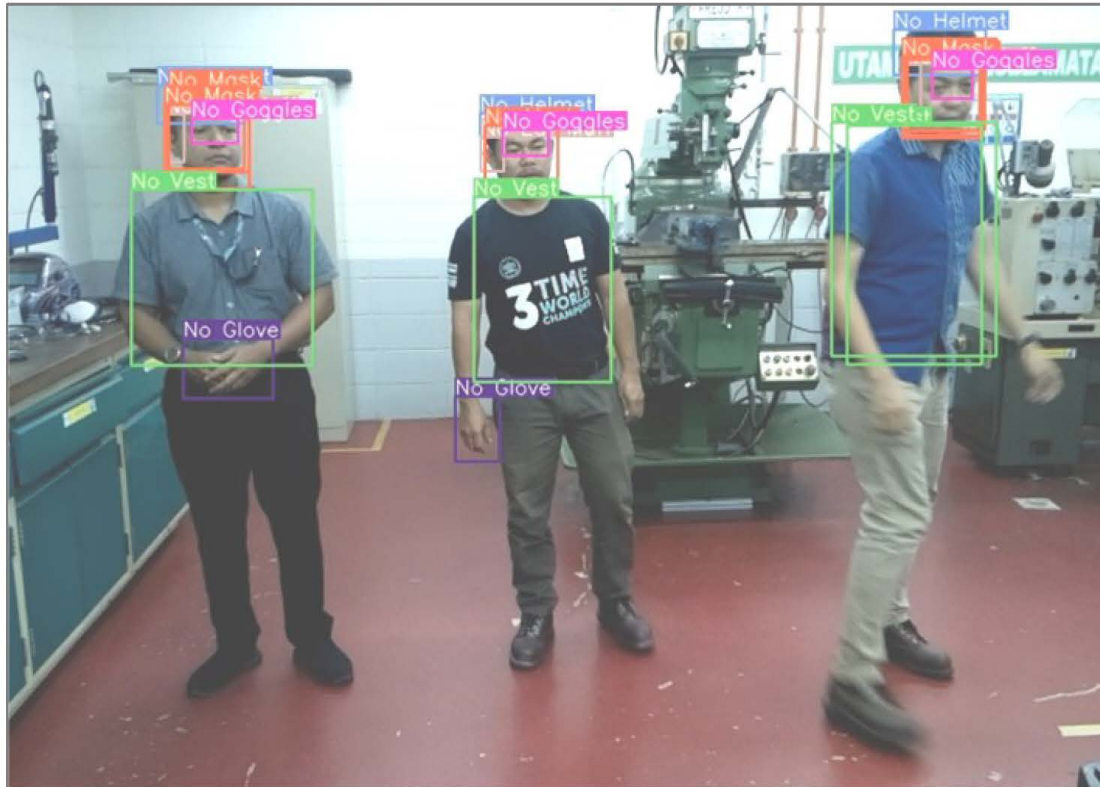
- ✓ Live monitoring of work sites
- ✓ Remote intervention (alarm)
- ✓ Cloud recording
- ✓ Real-time detection of HSE violations
- ✓ Analytics & reports

PRODUCT & SOLUTIONS

Solution Architecture – overview from the device to the users



AISC Detection Accuracy Testing for common PPE: Helmet, Goggle, Mask, Vest, Glove & Ear Muffler



Detection of Various Unsafe Acts



AI Remote Monitoring & Surveillance Detection Parameter Capability.

No.	Parameter	Details	No.	Parameter	Details
1	Coverall	- Able to detect person not wearing coverall - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area	9	Welding Mask	- Able to detect person not wearing welding mask or not wearing it properly - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area
2	Safety Helmet	- Able to detect person not wearing safety helmet - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area	10	Fire Extinguisher	- Able to detect absence of fire extinguisher - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area
3	Goggles/Safety Glasses	- Able to detect person not wearing goggles or safety glasses - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area	11	Standby Person	- Able to detect absence of standby person during critical work which requires standby person e.g., working at height less than 2m and confined space work - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area
4	Ear Muffler	- Able to identify person not wearing ear muffler - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area	12	Speed Limit	- Able to detect vehicle exceed speed limit (pre-set at 30km/h) at work areas - Video resolution of 1080p with ground level camera angle - Speed detection accuracy of +/- 5km/h - Detection latency of not more than 20 seconds in normal LTE coverage area
5	Glove	- Able to identify person without wearing glove which include different type of glove (e.g: rubber glove, nitrile glove, etc) - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area	13	Smoking	- Able to detect person smoking at prohibited area identified by user - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area
6	Shoes	- Able to detect person not wearing a shoe or wearing flip-flops - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area	14	Mobile Phone	- Able to detect person using mobile phone i.e., texting, talking at work areas where mobile phone usage is not allowed - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area
7	Face Mask	- Able to detect person not wearing face mask properly (between nose to mouth) - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Able to detect person not wearing face mask properly - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area	15	Unauthorised Entry	- Able to detect unauthorized personnel entry at hazardous work area e.g., confined space, excavation area and heavy lifting area - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area
8	Gas Mask	- Able to detect person not wearing gas mask or not wearing it properly - Video resolution of 1080p with sufficient lighting condition (facial and PPE features are clearly visible) - Detection accuracy of 90% (not more than 10% false positives) - Detection latency of not more than 20 seconds in normal LTE coverage area			

The safety detection parameters in Eyesite achieve >90% accuracy from the 600,000 photographs used for AI improvements and machine learning captured since July 2020



Coverall



Safety Helmet



Safety Glass



Earmuff



Glove



Safety Boot



Mask



Half-Face Mask



Welding Shield



Fire Extinguisher



Mobile Phone



Standby Person - Hole Watcher



Smoking



Unauthorized Entry



Vehicle Speed

PRODUCT & SOLUTIONS

Strategic Appointment and Contract

Strategic Appointment of Exis Group

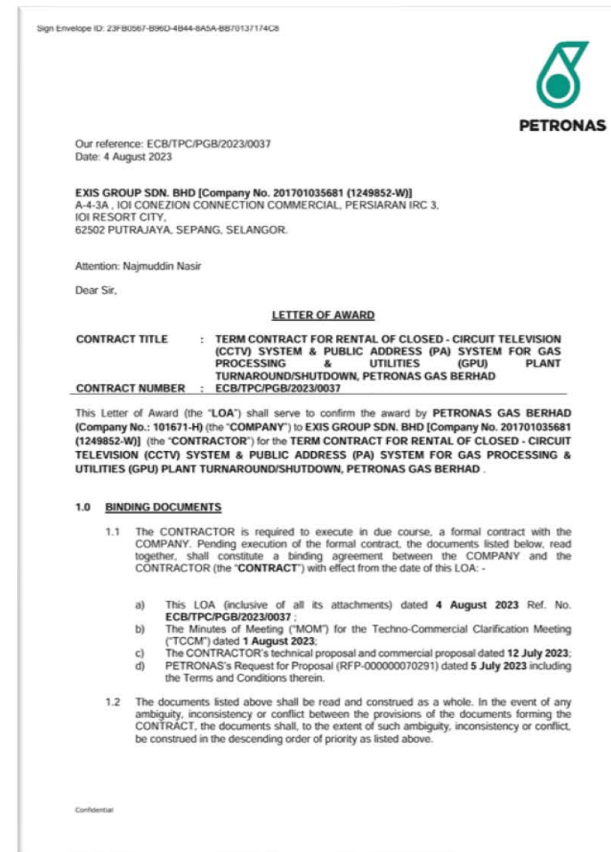
Exis Group has been officially appointed as the exclusive agent by Inference, the co-developer of EYESITE (AISC) in collaboration with Petronas. This partnership positions Exis Group as the key technology and implementation partner for deploying EYESITE across all Petronas Operating Units (OPUs).

Significance of the Contract Award

- Nationwide Implementation – EYESITE will be deployed across all Petronas OPUs, ensuring standardized safety monitoring at critical sites.
- Enhanced Safety Compliance – AI-driven remote safety surveillance will significantly improve hazard detection and incident prevention.
- Operational Efficiency – Automation will reduce the reliance on large safety teams, cutting operational costs and increasing monitoring effectiveness.
- Strengthening Digital Transformation – The deployment aligns with Petronas' commitment to Industry 4.0 and smart safety solutions.

Role of Exis Group in EYESITE Deployment

- Project Management & Execution – Overseeing seamless installation, integration, and commissioning of EYESITE in all OPUs.
- Technical Support & Maintenance – Providing ongoing service, troubleshooting, and AI system optimization.
- Training & Compliance Assurance – Educating safety teams and ensuring maximized utilization of AI-powered monitoring.
- This appointment solidifies Exis Group's position as a leading AI-driven safety solutions provider and marks a major step forward in digital transformation for industrial safety in Malaysia.



CASE STUDY

EYESITE AI Remote Monitoring Solutions Past Deployment

Project

- PRSB - Phase 1 (Perimeter) ,2 (Mobile) & 3 (Lab)
- STAR - Kluang, Johor (Southern)EMAS - MRCBSB, Melaka (West Coast)
- SAHARA - PCFK, Gurun, Kedah (Northern)
- KASAWARI CCS - MMHE, Pasir Gudang, Johor (Southern)
- GLORY - MLNG, Bintulu, Sarawak (Borneo)
- BAGSF 2 - Tanjung Kidurong, Bintulu, Sarawak (Borneo)
- Kuantan Fuel Terminal

Turn Around (TA)

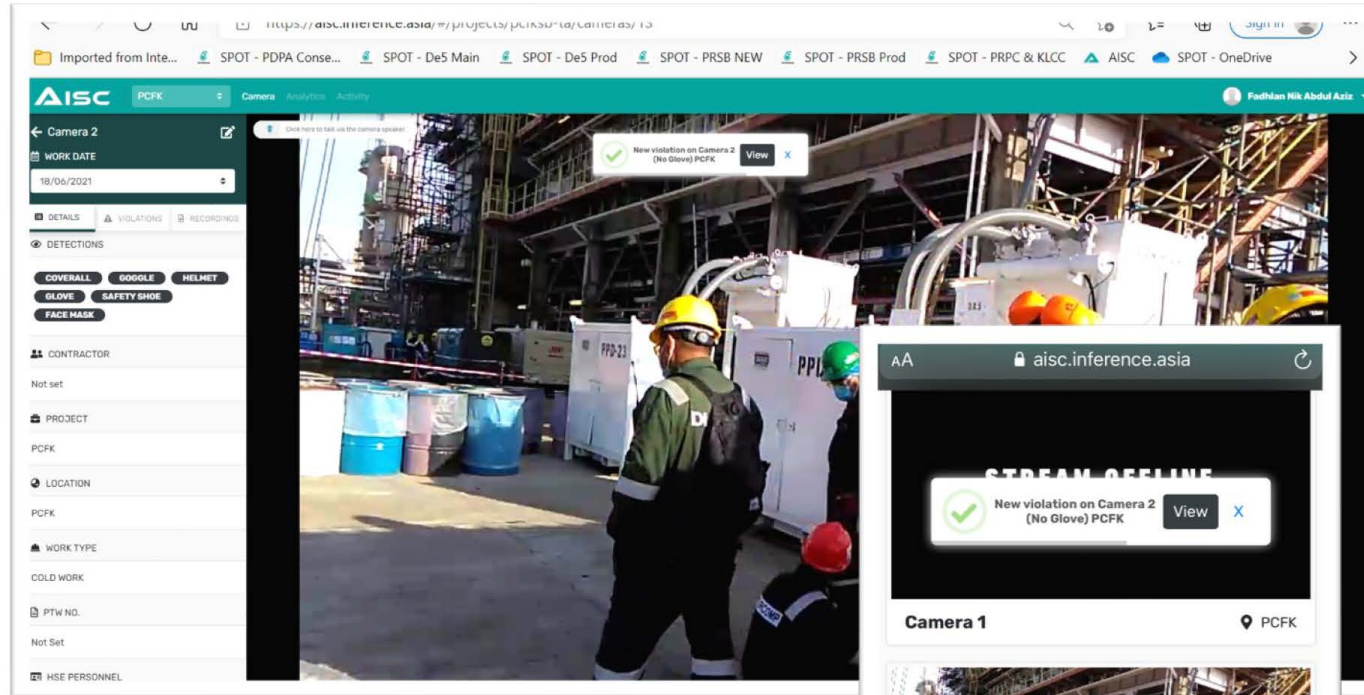
- Petronas Gas Berhad (PGB)
- Petronas Chemical Fertilizer Kedah (PCFK), Gurun, Kedah
- MLNG Bintulu, Sarawak



CASE STUDY

Case Study Example – PCFK Gurun, Turn Around Activity

Working at height, repair & maintenance work and scaffold erection & dismantle

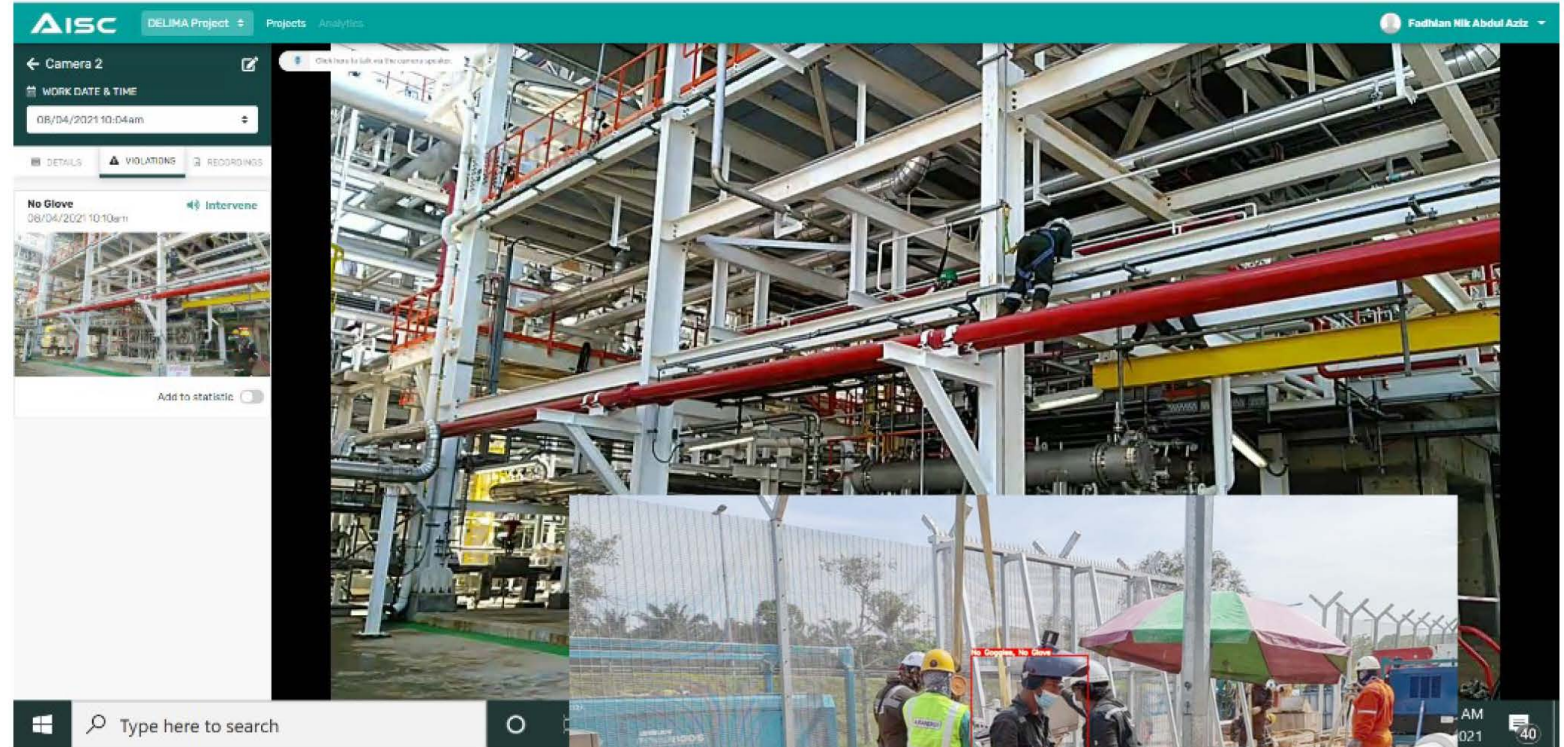
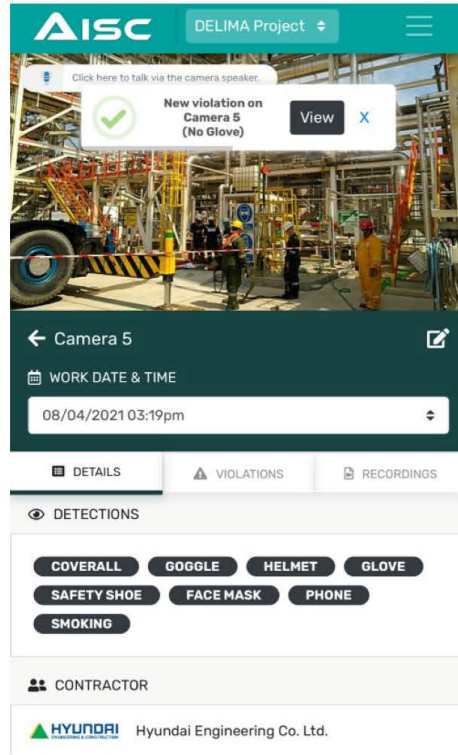


"AISC reduces the physical human interaction, which is an absolute requirements during a pandemic and at an environment where there are more than 3000 personnel at one location during Turnaround" –
Khairil Mohammed, PCFK Gurun HSSE Manager



CASE STUDY

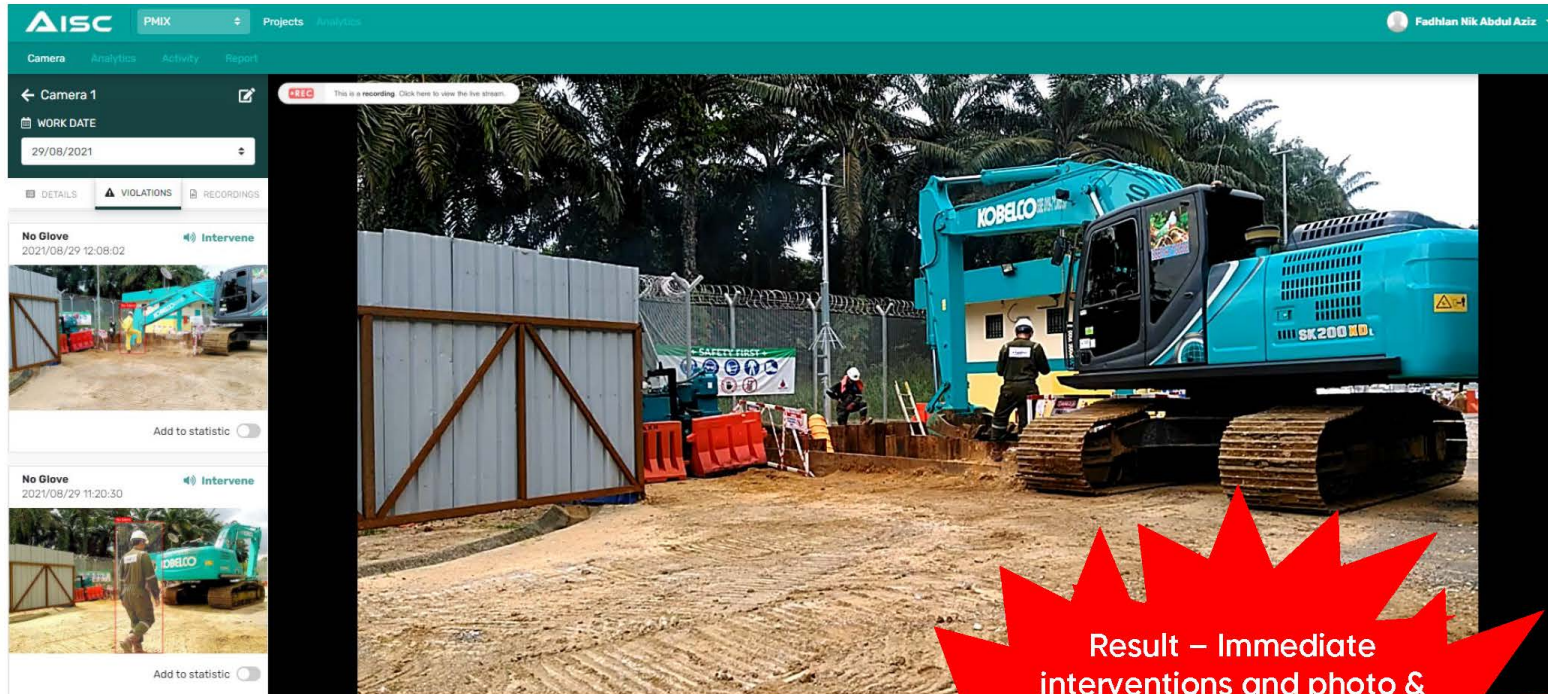
Case Study Example – User experience from Project Delima Sg Udang & Project KLIPP Sepang



"AISC has increased the effectiveness of my HSSE team on the ground in monitoring HSSE compliance. We can immediately intervene on site from our project office" – **M Azzudin Nordin, Delima HSSE Manager**

CASE STUDY

Case Study Example – Project PMIX ML504 – new control valve at a remote gas substation

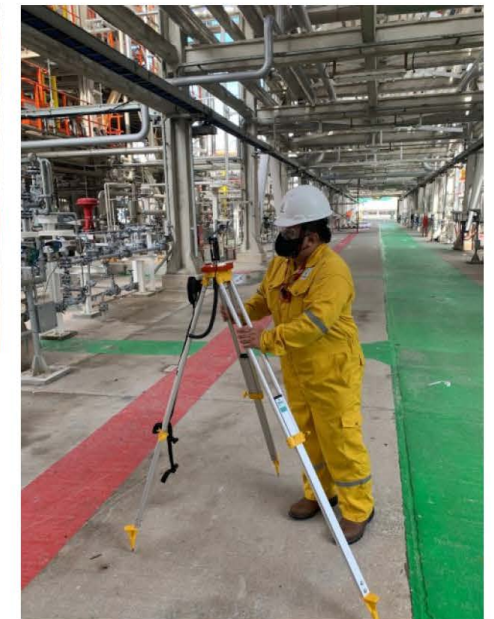
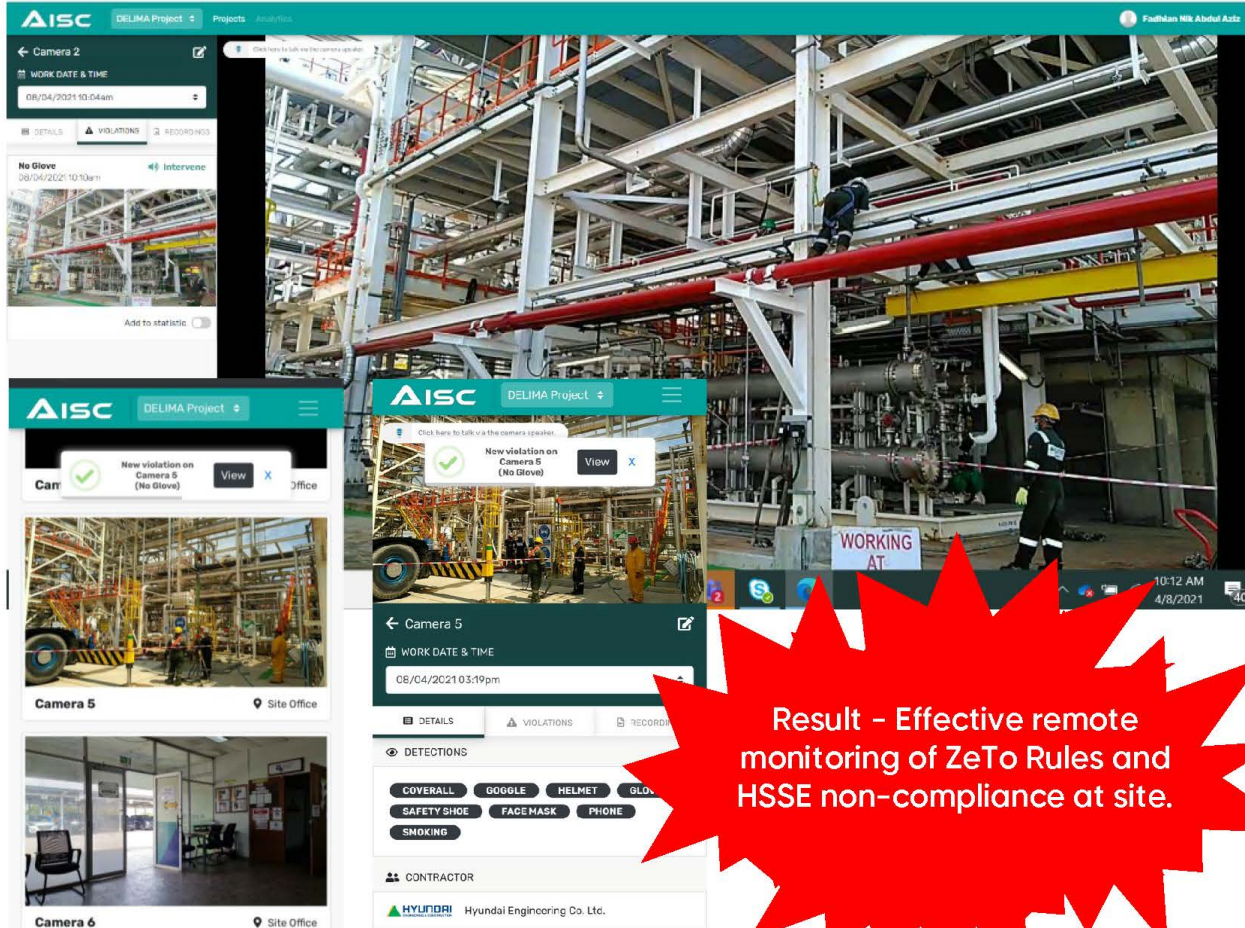


Result – Immediate interventions and photo & video evidence record on HSSE non-compliance at site!



CASE STUDY

Case Study Example – Project PMIX ML504 – new control valve at a remote gas substation



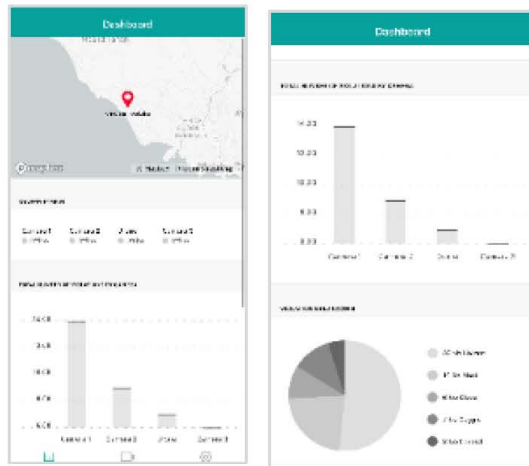
- Oct 2020: 1700 HSSE non-compliance interventions per week
- April 2021: 120 HSSE non-compliance interventions per week

CASE STUDY

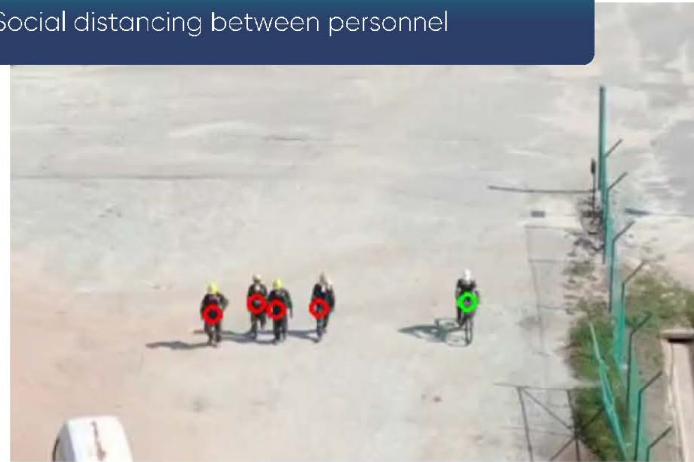
Case Study Example – Project PMIX ML504 – new control valve at a remote gas substation

HSSE violation statistical dashboard

Display status of all cameras, HSE violation tracking by location & violation categories



Social distancing between personnel



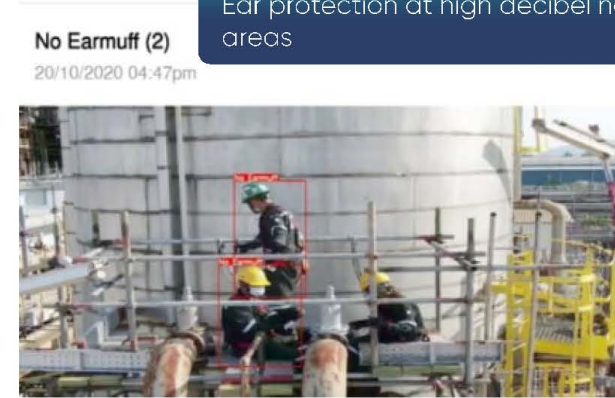
Unhooked harness while working at height



Gas detector on personnel coverall



Ear protection at high decibel noise working areas



WORK TOGETHER DO BETTER

Unity is strength.
When there is **TEAMWORK**,
Wonderful things can be **ACHIEVED**.

Bringing Technology
Closer to You.



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