



Automating Operations Monitoring

Enhance Safety, Maximize Productivity

Who Are We

2 Years of R&D with NUS & HDB

>80 Active Deployments in Singapore and Hong Kong

Extensive Industrial Use Cases

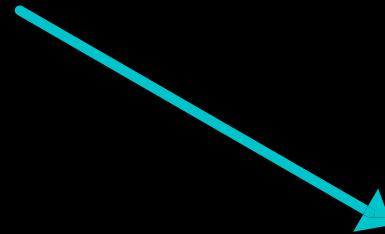


Hardware Agnostic | Automated | Hassle Free

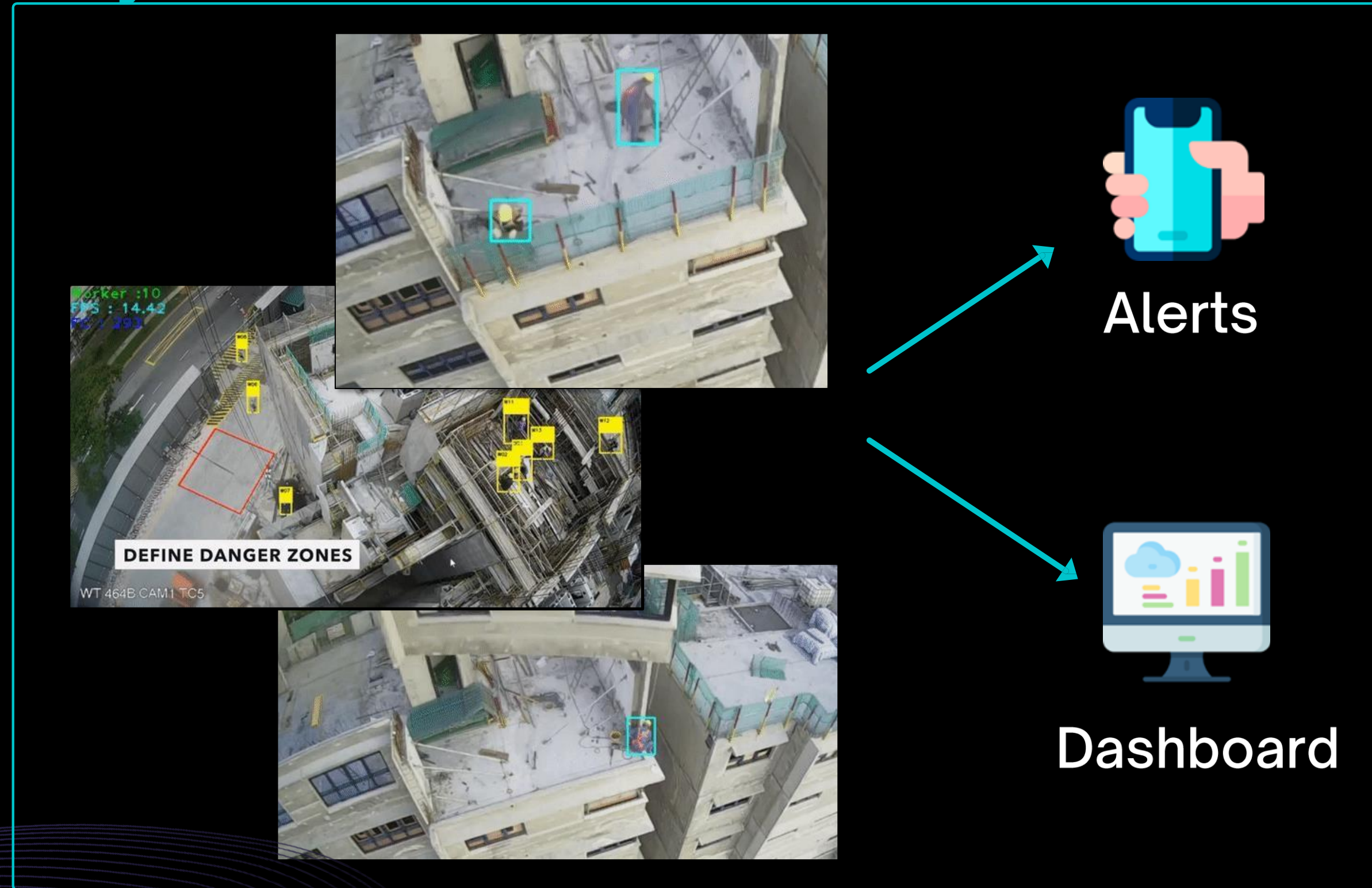
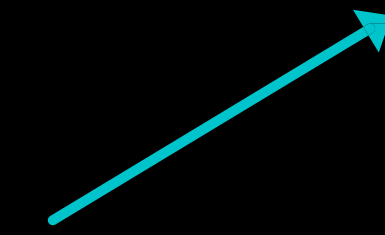
Ailyssa



CCTV*



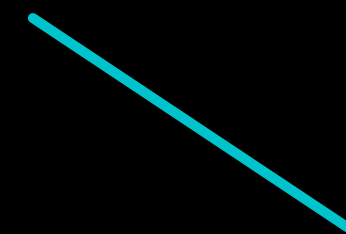
CCTV*



Alerts



Dashboard



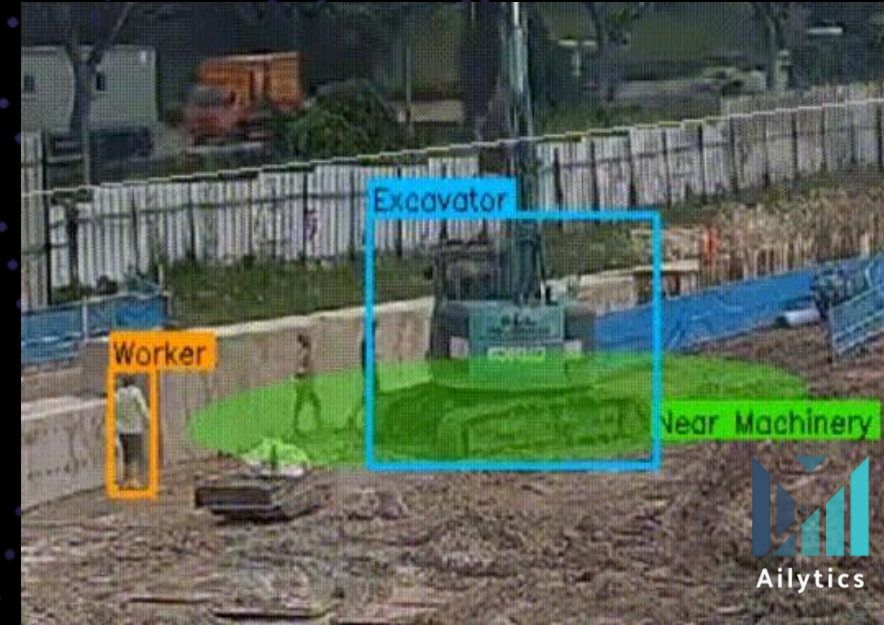
*Existing IP 2MP cameras

20+ Pre-built AI Use Cases



Open Edges

Ensure that workers are not jumping over barricades to access other areas and following the proper procedures.



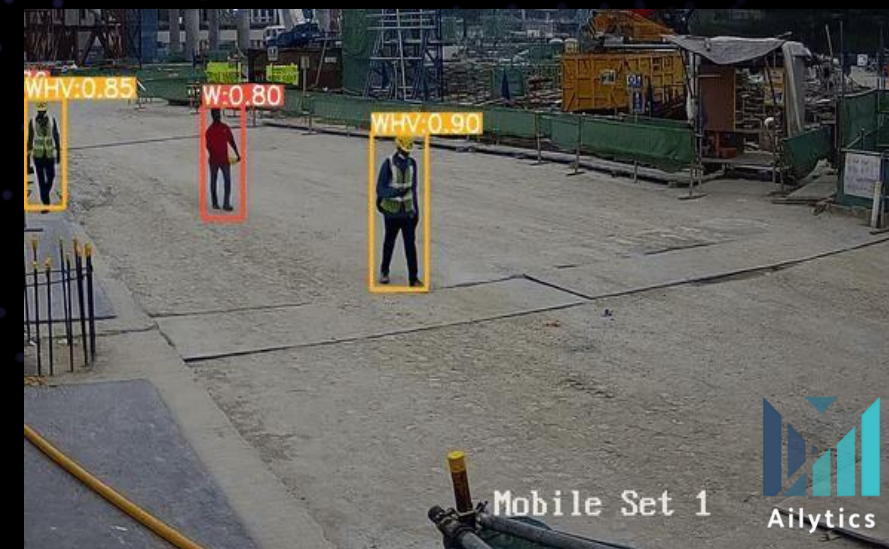
Heavy Machinery

Ensure that workers are staying clear of heavy machinery in operation.



Under Lifted Loads

Get awareness of workers under loads to ensure that non required personnel are not standing under lifted loads unnecessarily.



PPE

Ensure that workers are wearing appropriate PPE (Helmet, Vest) during operations.

20+ Pre-built AI Use Cases



Loitering

Detect people that are loitering at restricted areas.



Unattended Objects

Get notified of objects that are left unattended or left behind.



Smoke and Fire

Early warning detection of smoke and fire.



Overcrowding

Detection of overcrowded spaces.

20+ Pre-built AI Use Cases



Vest Color

Leverage on vest color to determine worker traits, or restricted access to various zones.



Danger Area

Ensure that people do not enter or stay in restricted areas for prolonged periods.



Face Mask

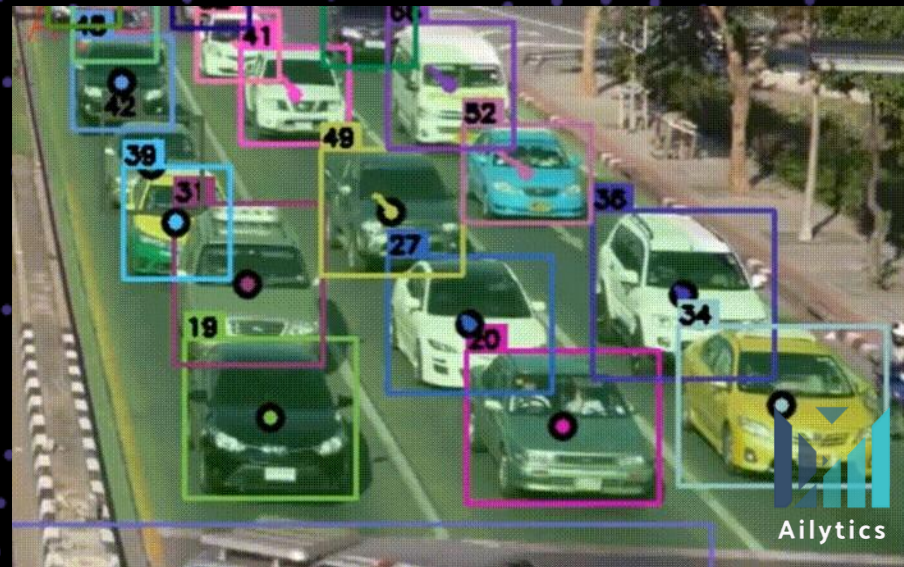
Ensure that all personnel are wearing face masks at required areas.



Congregation

Understand if workers are congregating close to one another for prolonged periods.

20+ Pre-built AI Use Cases



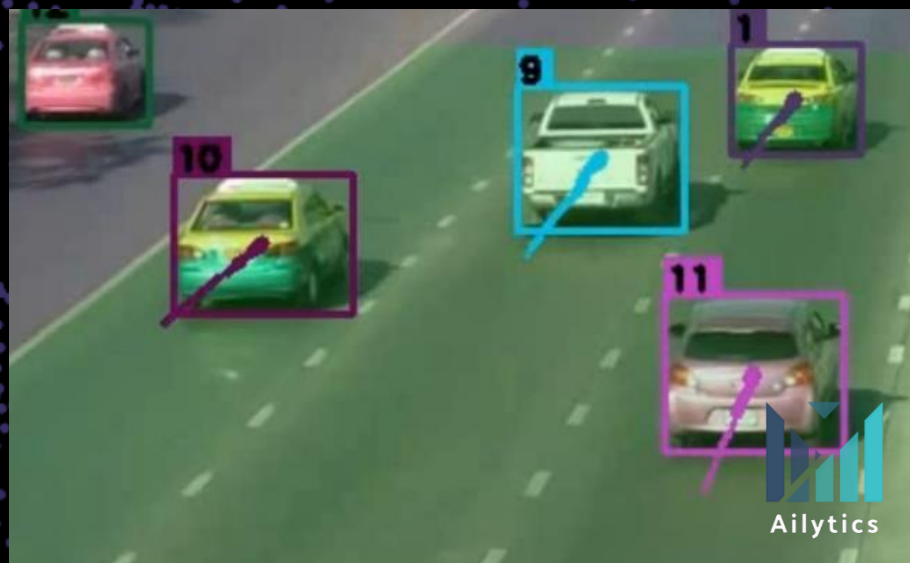
Traffic Jam

Monitor if traffic jams are occurring due to ongoing works.



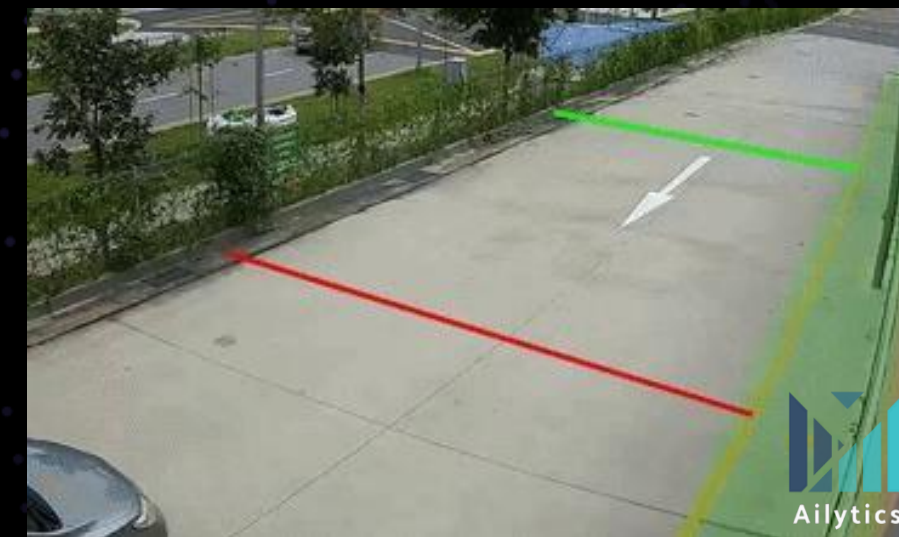
Illegal Parking

Know which vehicles are parked illegally at restricted zones.



Speeding

Monitor vehicles that are going over the speed limit.



Wrong Direction

Monitor if drivers are following directional traffic rules.

AiVehicularAccess - Track vehicle movements for **security**

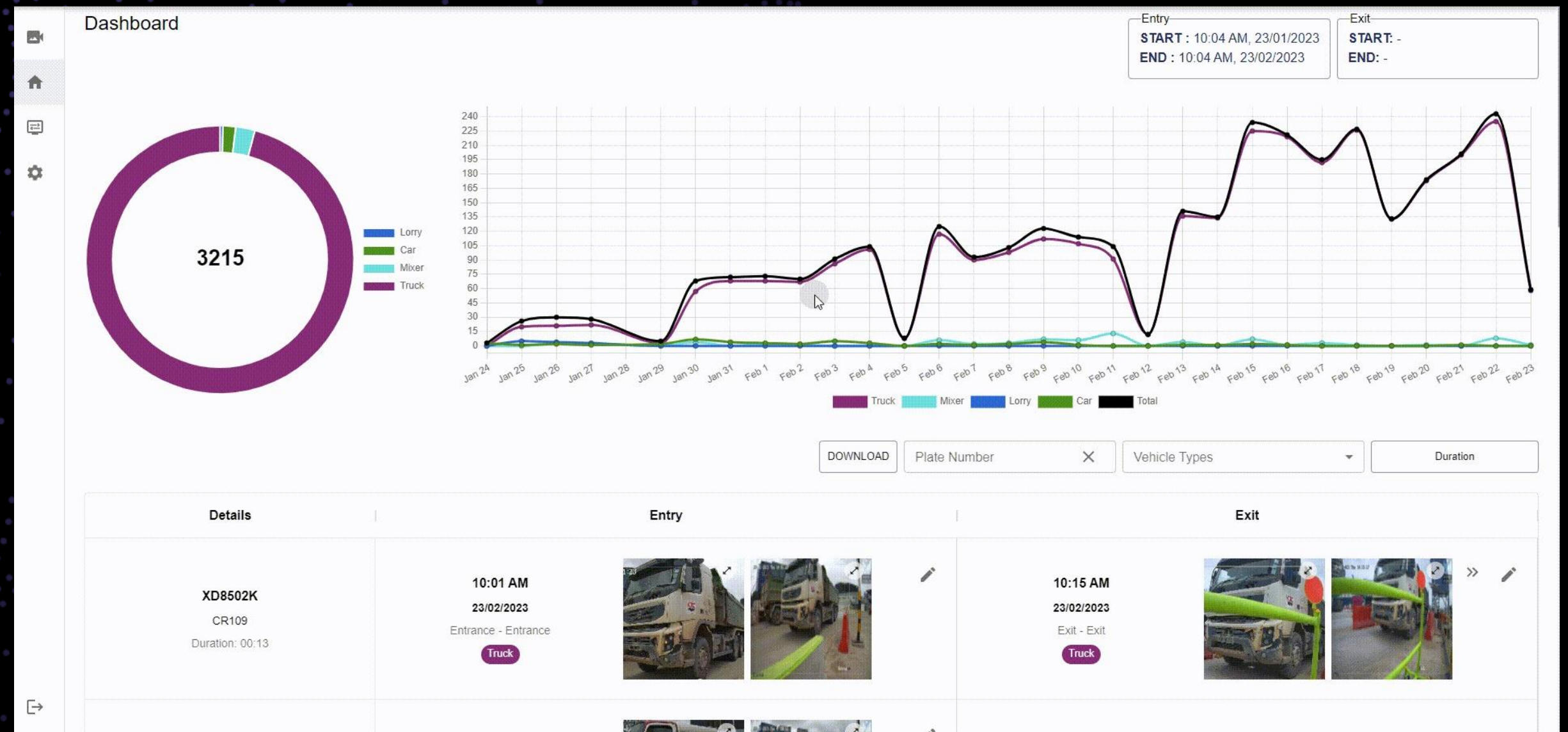
License Plate Recognition

Time Stamps and Logging

Snapshot of Vehicles

Vehicle Type **Categorization**

Duration at Site



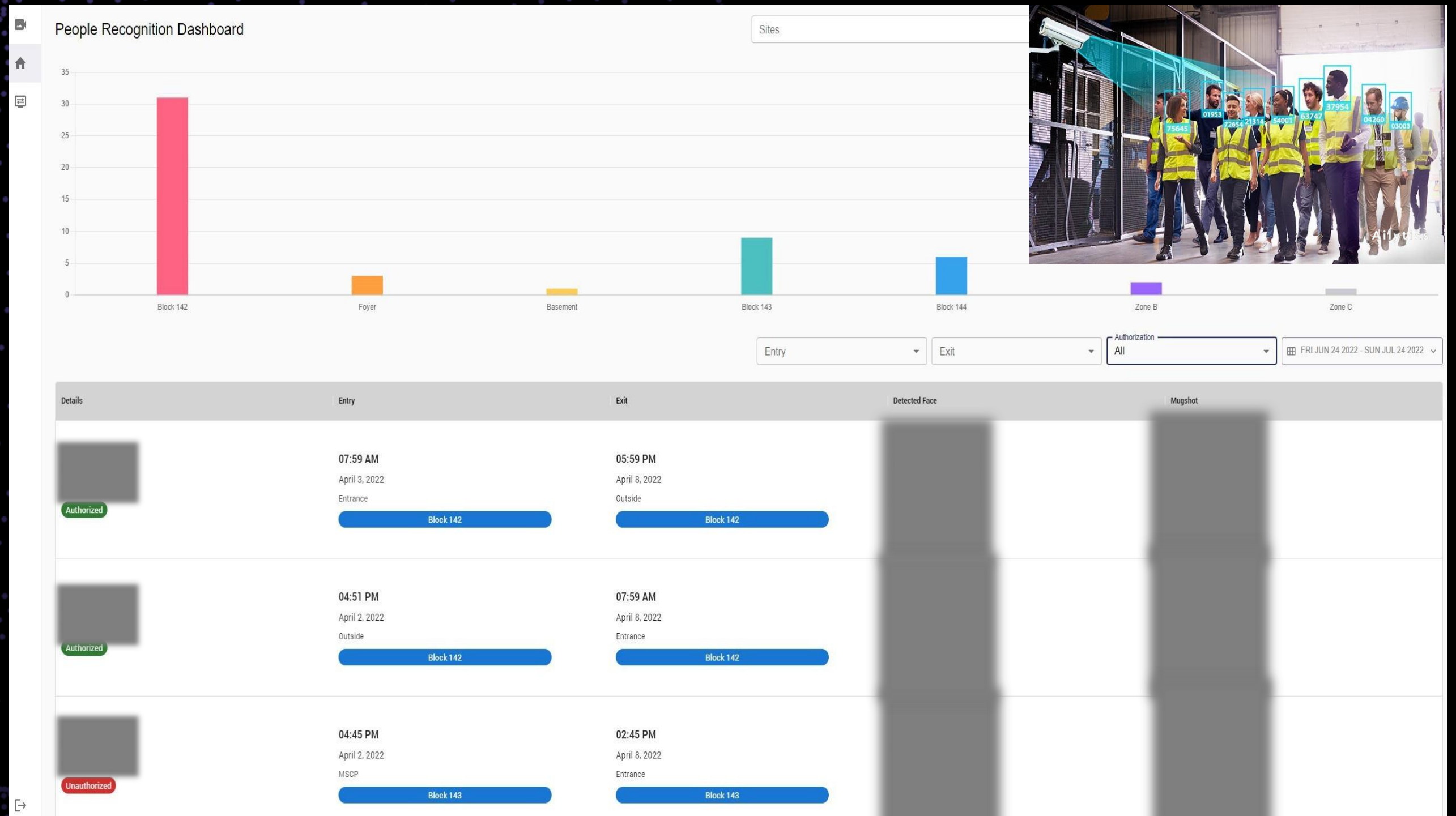
AiPeopleRecognition – Track people movements and unauthorized personnel

Facial Recognition

Zone-Based Authorization

Real-time People Count in Zones

Audit Trail Of Movements



AiProductivity - Understanding Progress

Stage **Completion**

Floor **Cycle Times**

Time-lapse

Manhour Tracking

Vehicle **Utilization**



Progress
Concrete: 0%
Formwork: 2%
Rebar: 88%



Mechanics Operation Time
Machines Detected: 5

Truck
Truck Count: 2
Avg Idle (Truck): 00:00
Avg Operating (Truck): 00:00

Excavator
Excavator Count: 3
Avg Idle (Excavator): 00:00
Avg Operating (Excavator): 00:00

Crane
Crane Count: 1
Avg Idle (Crane): 00:00
Avg Operating (Crane): 00:00

1. Excavator Idle: 00:01
1. Excavator Operating: 00:00

2. Crane Idle: 00:00
2. Crane Operating: 00:00

3. Excavator Idle: 00:00
3. Excavator Operating: 00:00

4. Excavator Idle: 00:00
4. Excavator Operating: 00:00

5. Truck Idle: 00:00
5. Truck Operating: 00:00

Manufacturing Safety

- Forklift speeding/blind spots
- Restricted Zones
- Human Ergonomics
- PPE
- Foreign Objects
- Smoke and Fire



Actionable Insights

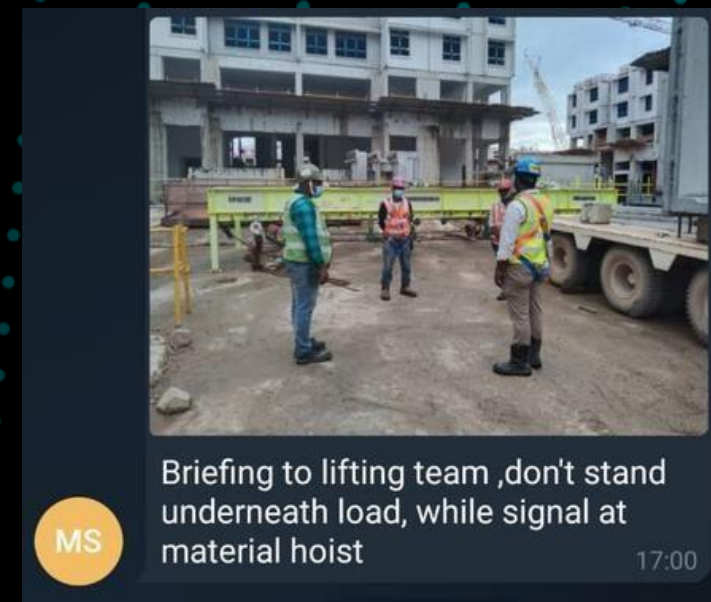
Leverage on Actionable Insights to take Preventive Measures



Alert



Awareness

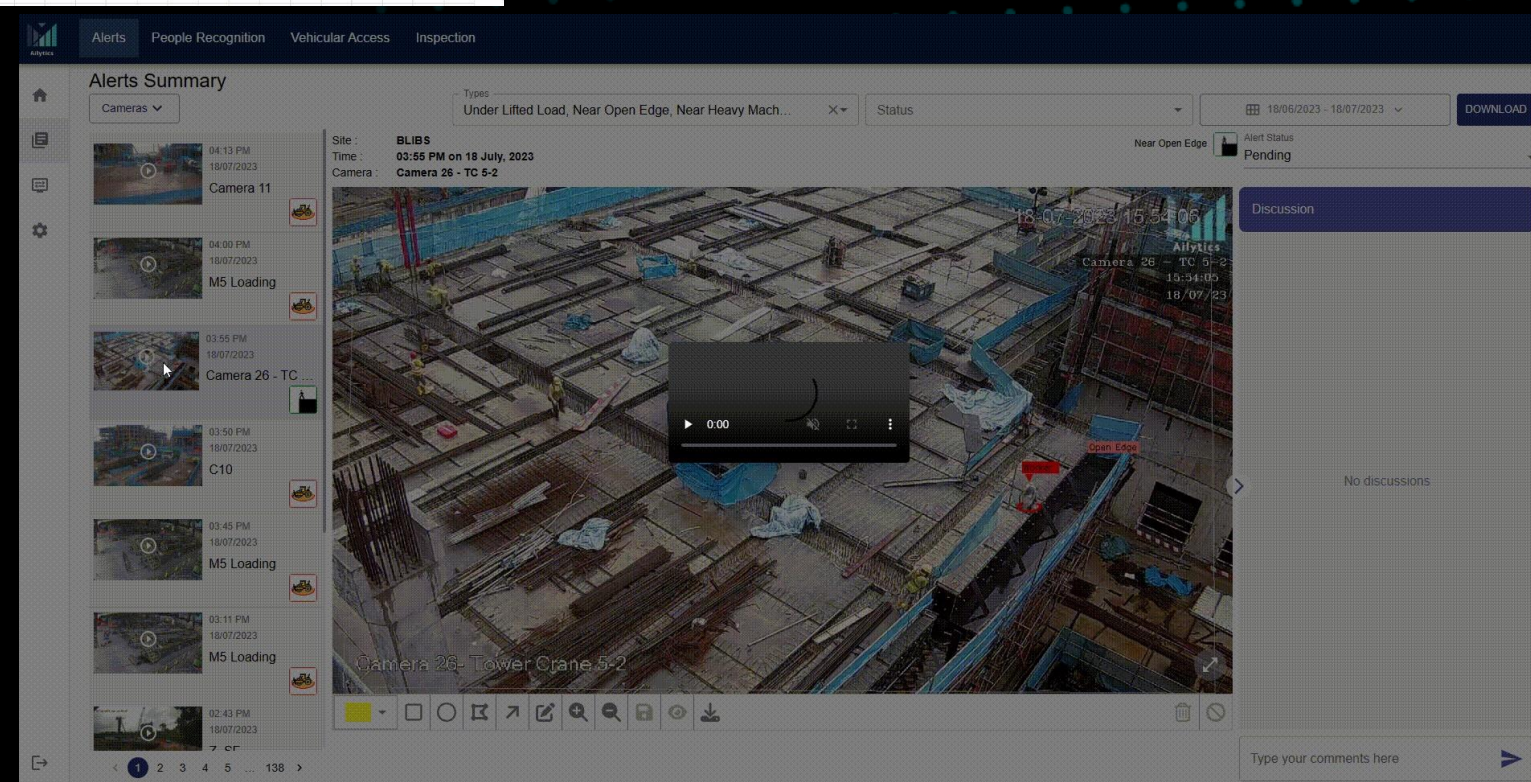
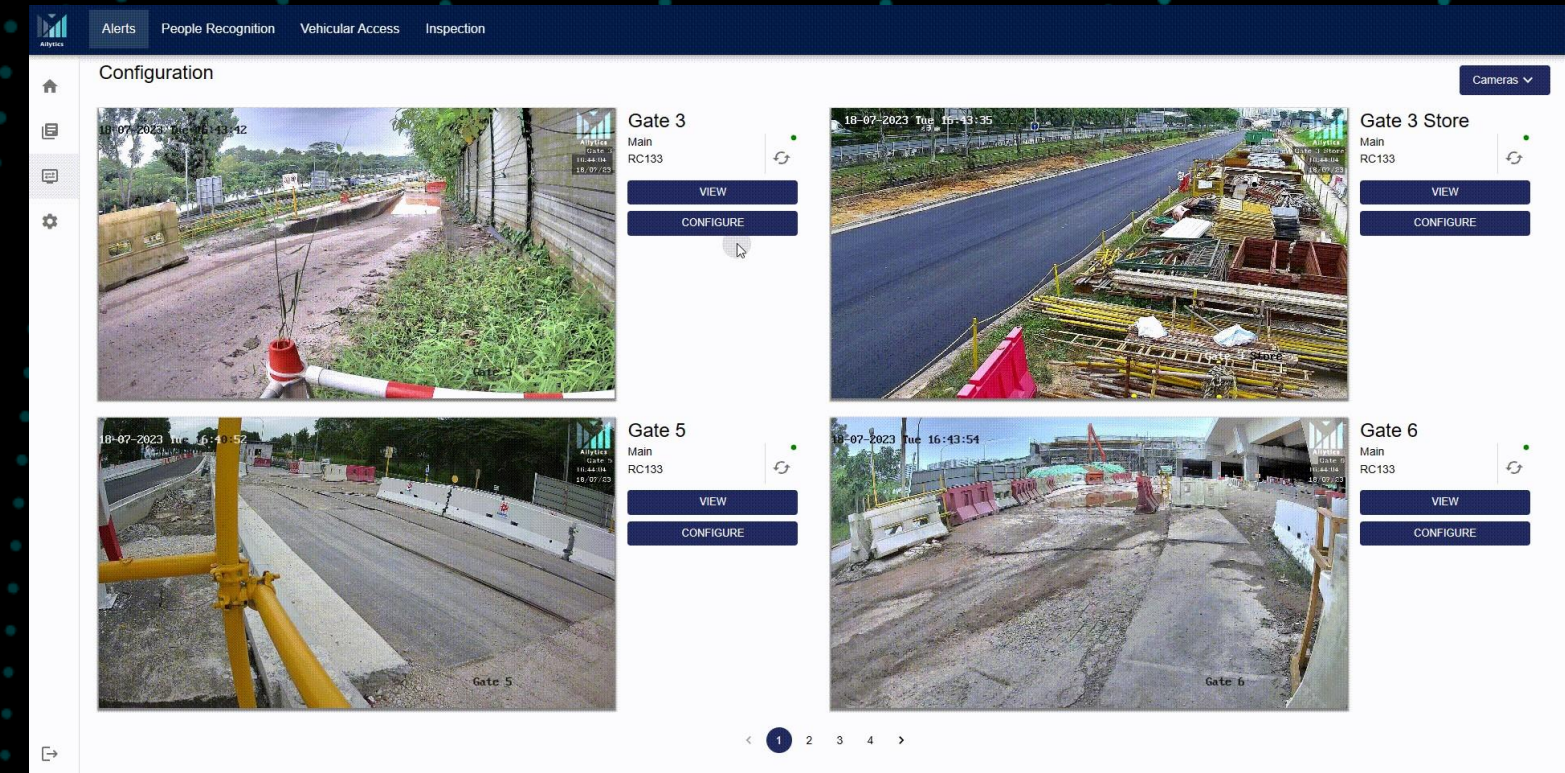
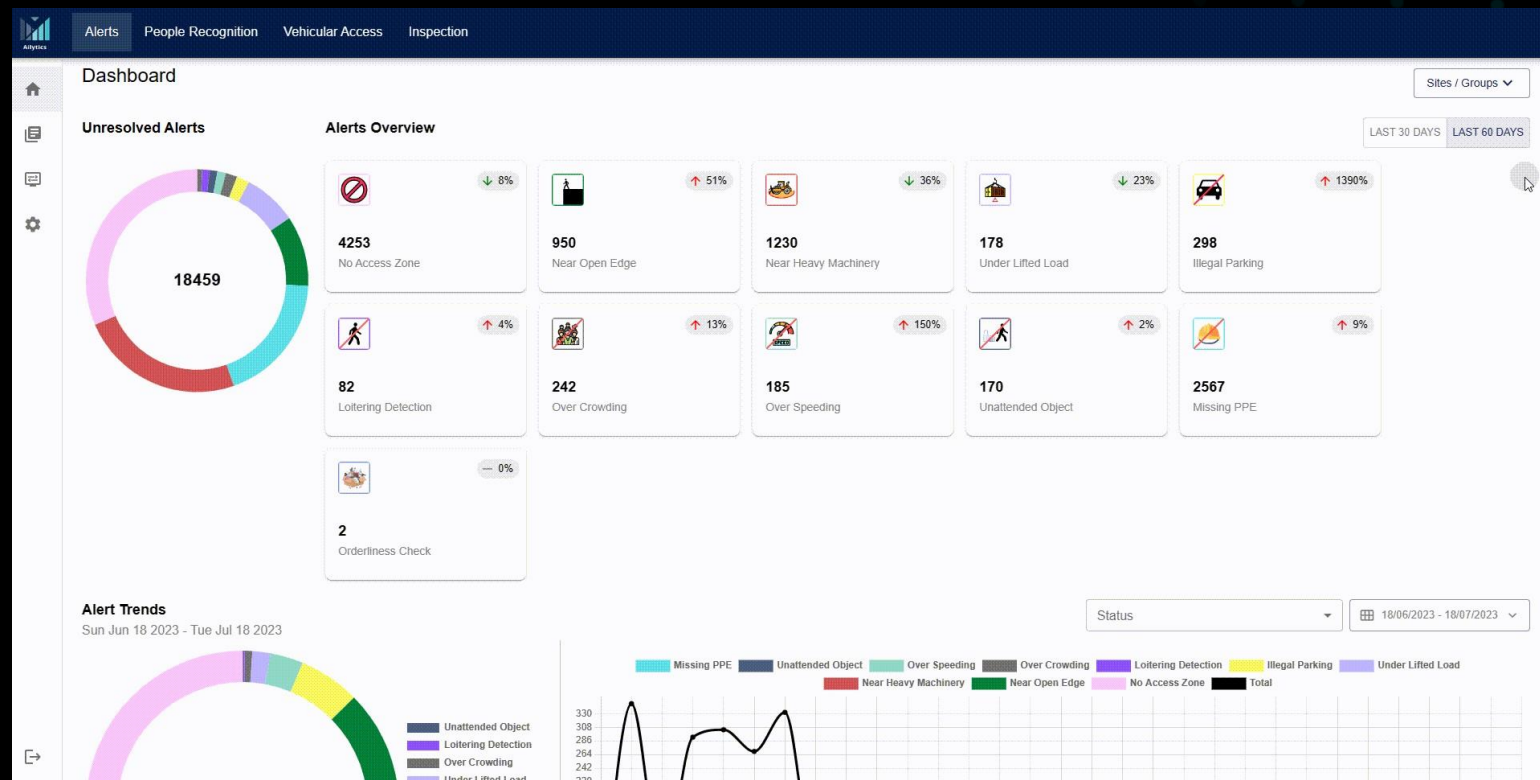


Action



Analyze Trends

Understand if your action plans are **Effective** and **Sustainable**

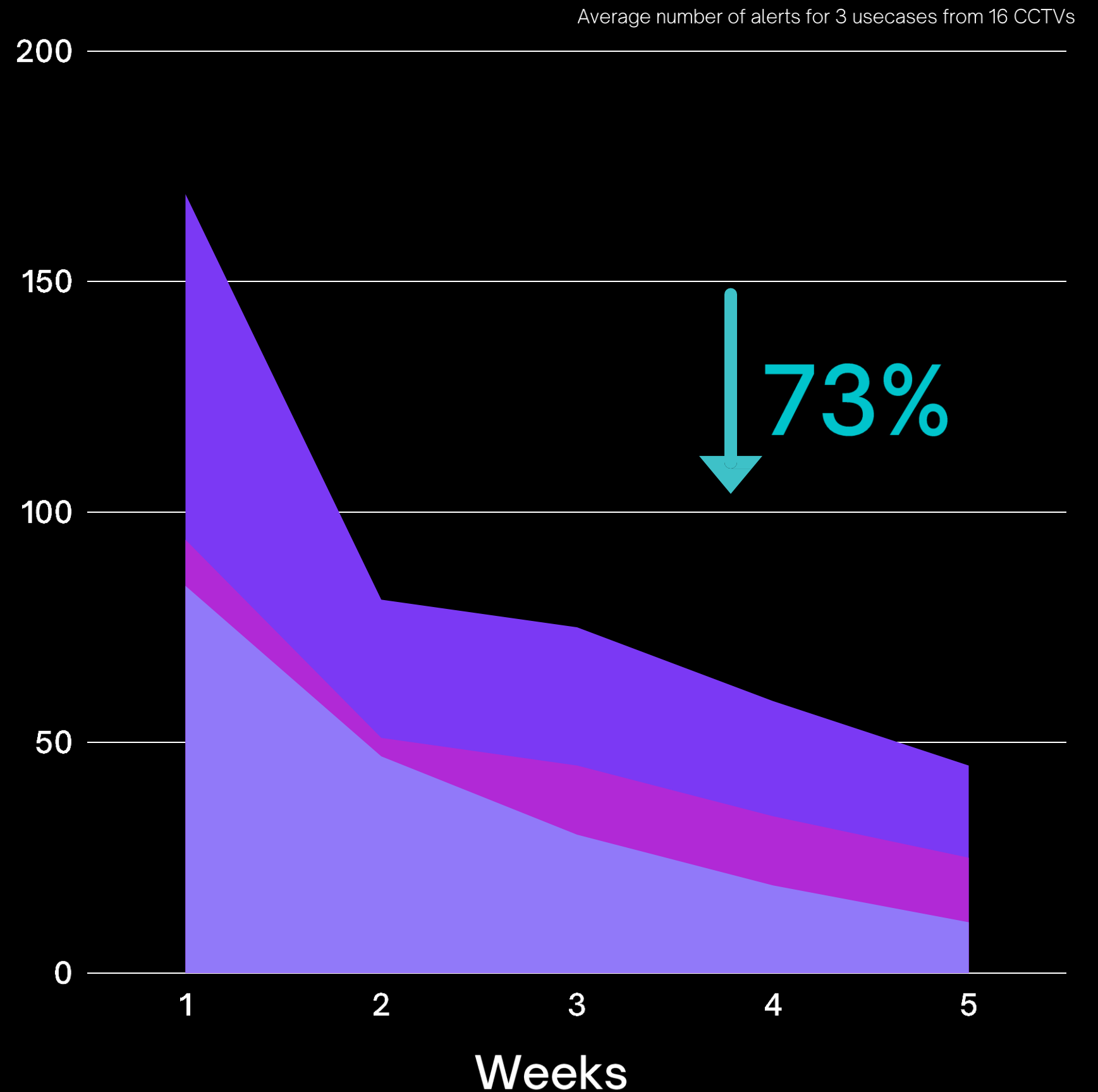


Clear improvement within **weeks**

Actionable Insights for Preventive Measures

- Identify **undesirable** situations
- Increase **awareness** for workers
- Implement **action plans**
- Assess sub-contractor **performance**
- Improve overall **culture** from the ground up

Alerts



Competitive Advantage

Ability to detect **complex scenarios** while being **cost-efficient** and **easily deployable**



Dataset

Over 1M labelled dataset for various construction objects and scenarios collected over 3 years

Critical to the accuracy of any AI detection



Smart Perspective

Ability to interpret a 3D scene from any IP Camera without sensors

More realistic and accurate detection



Harsh Environment

Optimized for the dynamic construction environment

Small Objects
Shaking of CCTV view
Weather Conditions
Poor Video Connectivity
Minimal Internet Connectivity



Flexible Implementation

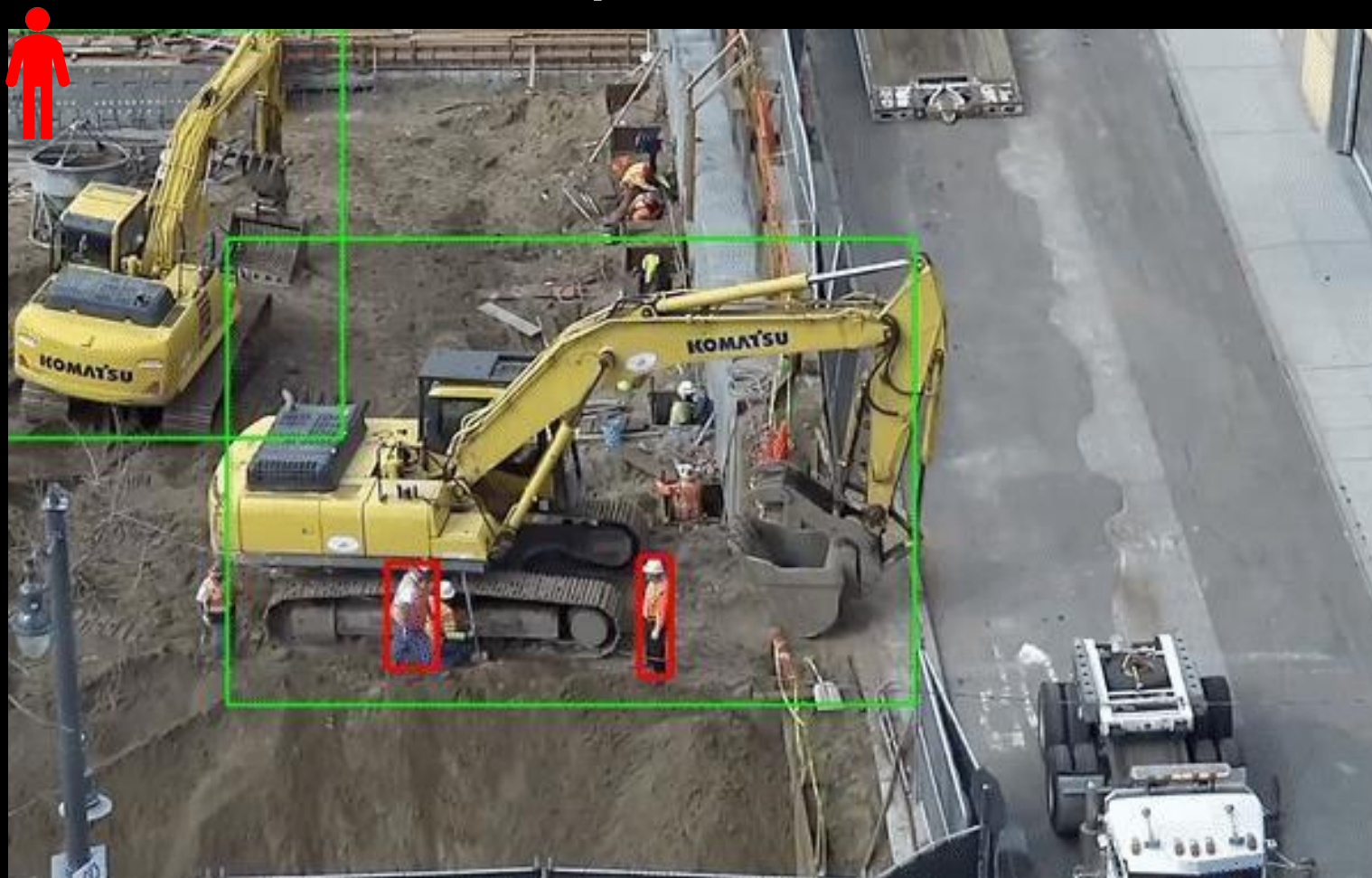
Many configurable parameters, timers and settings per use case and cameras

Ability to customize use cases to your operational needs

Smart Perspective

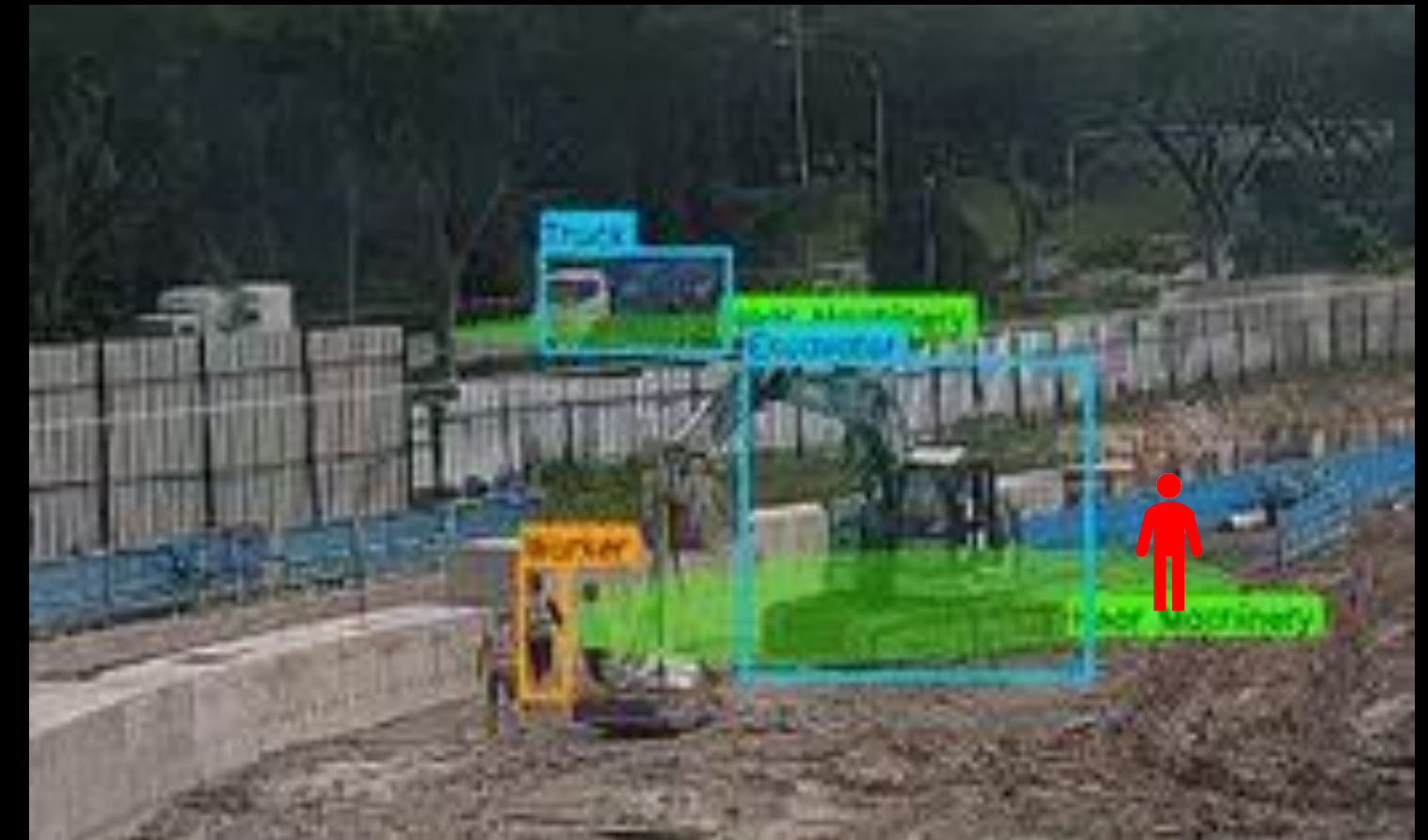
2D to 3D conversion to **understand depth** with **no sensors or multiple cameras** for more accurate alerts

Competitors



Worker (top left) is within the excavator's bounding box it will be considered near heavy machinery, but in reality he is not that close.

Ailytics



Radius around heavy machinery is automatically calculated according to angle and tilt of the ground