



# Safer & more efficient ports powered by AI

Feb 2023

hao.zheng@robok.ai



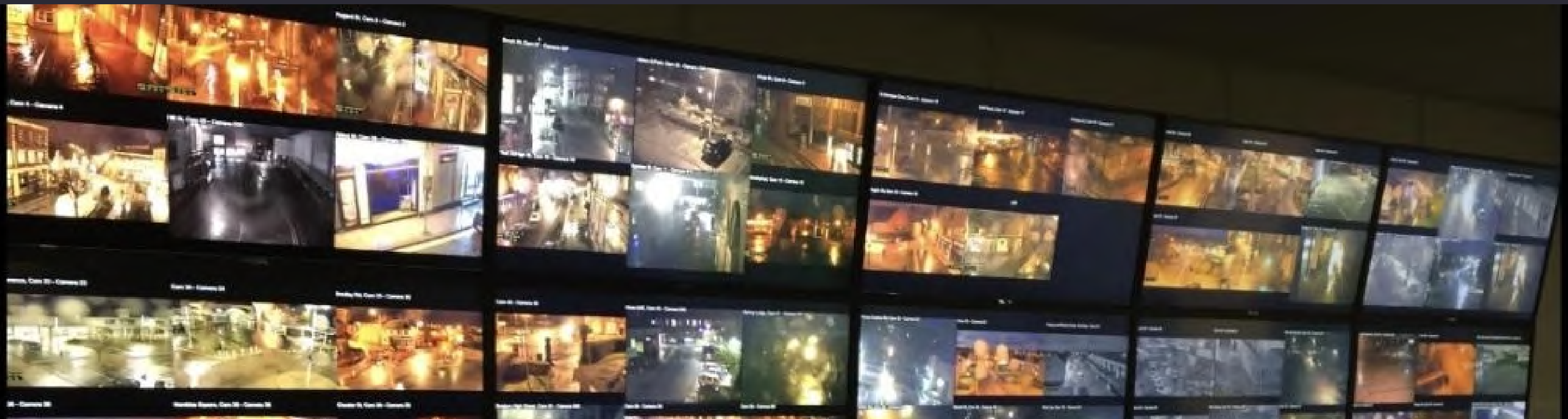


# Live videos are everywhere, but no one likes to watch them 24/7

>1 billion  
cameras installed globally

<1% of surveillance  
video is watched live

>10% CAGR for  
CCTV cameras

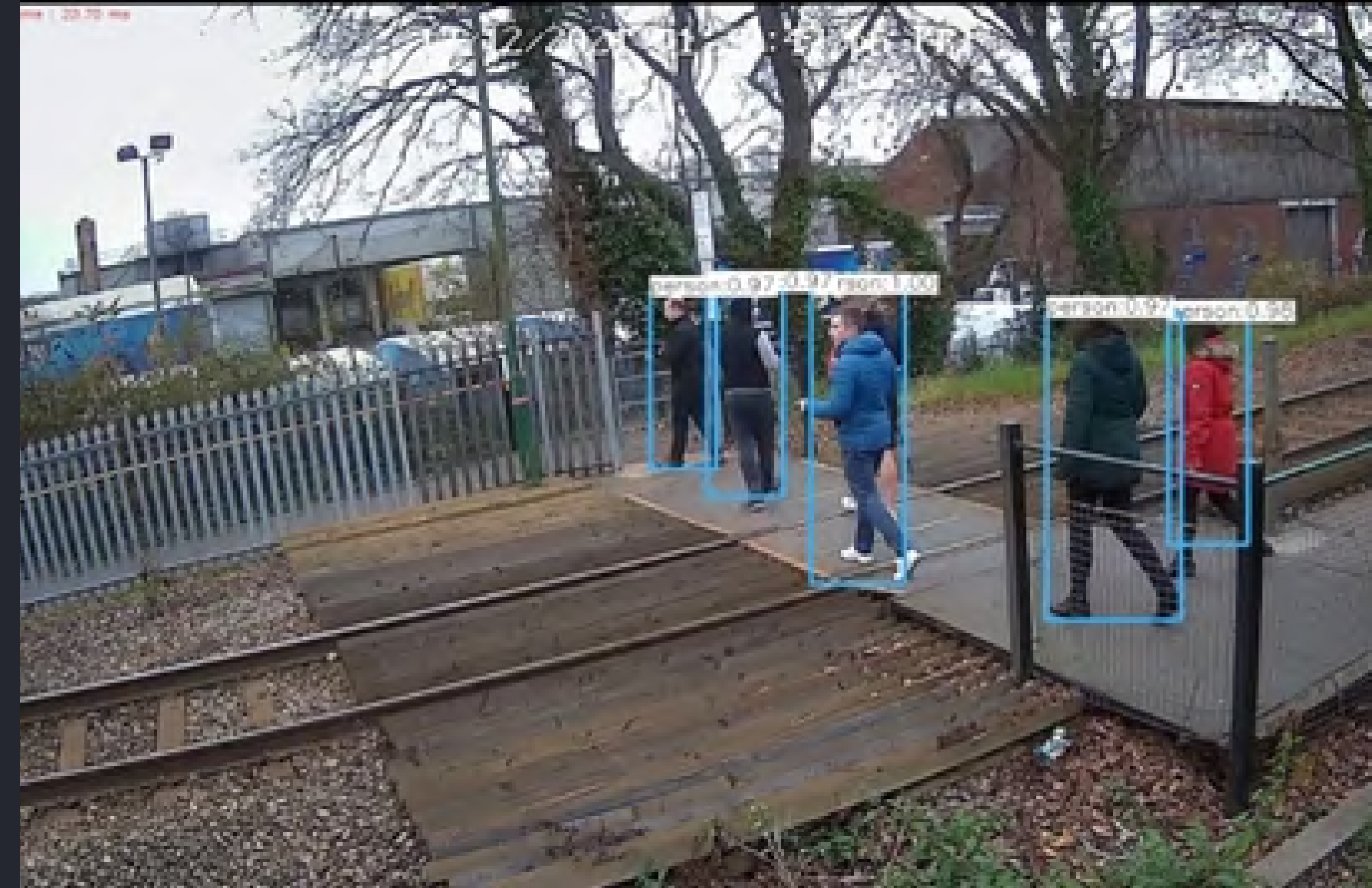


Extracting insights,  
learning the unknowns  
from your existing visual data



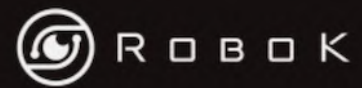


Computer Vision and Artificial Intelligence are about understanding the scenes autonomously





# Proactive insights delivered in real-time



Admin

## Safety & Security

PPE Compliance

Near Miss

Unsafe Entry

Dwelling

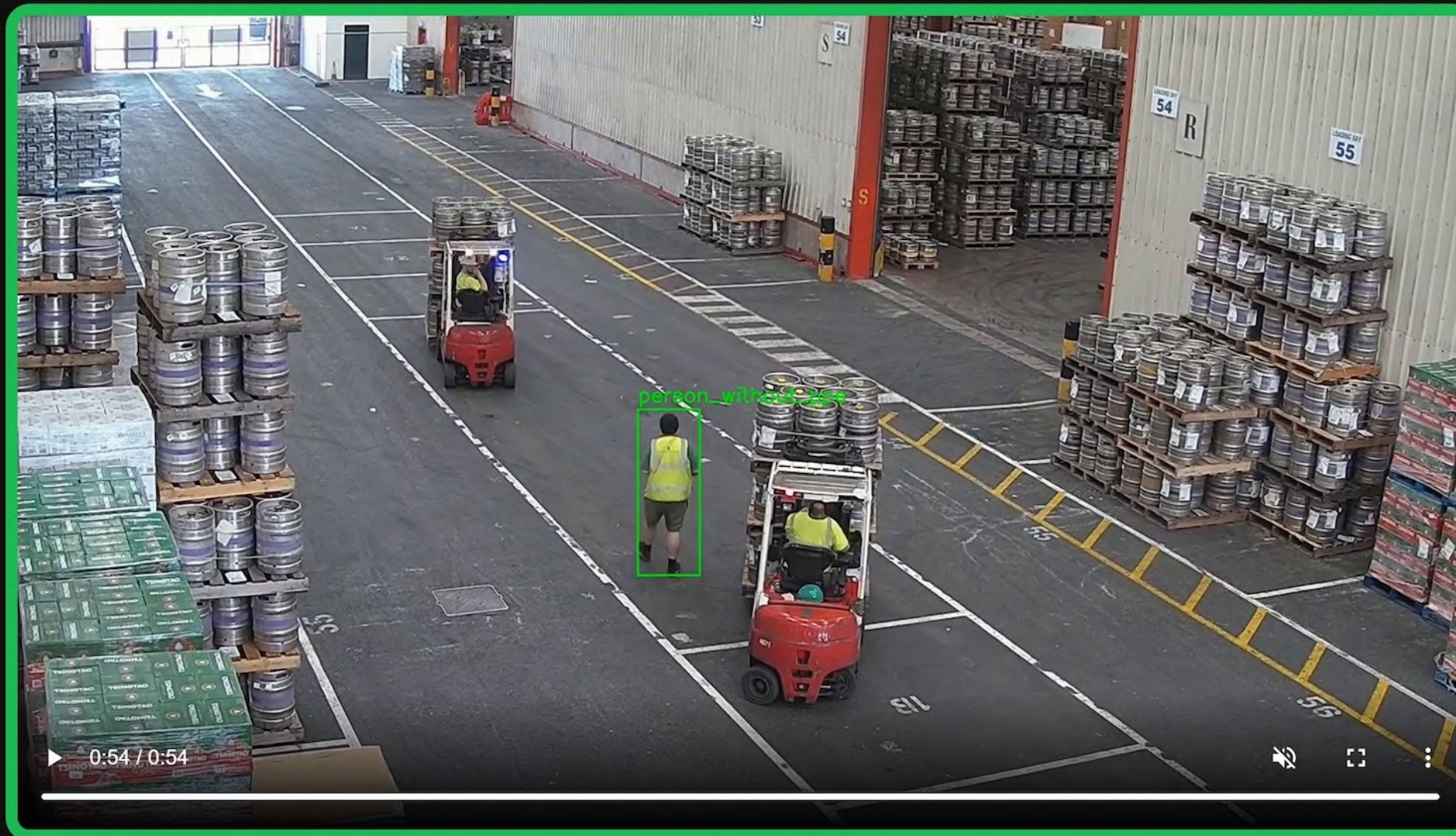
Theft

## Efficiency

Demographic Analysis

## Analytics

Trends



PPE Violations

3

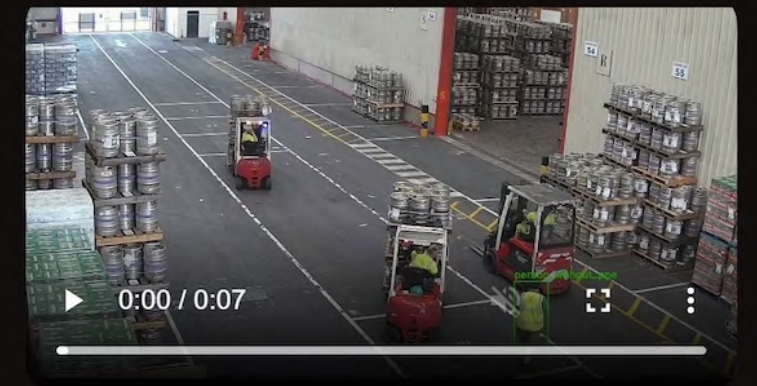


Alerts 3

#PPE-03 16 : 19 , Fri Feb 03 2023

PPE Violation

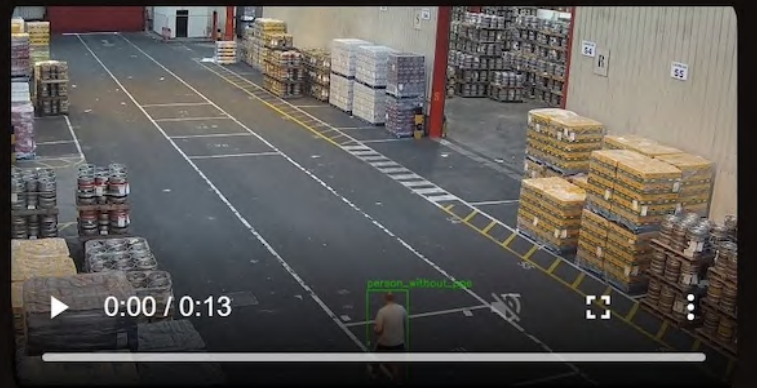
Hard Hat



#PPE-02 16 : 8 , Fri Feb 03 2023

PPE Violation

High Vis, Hard Hat



#PPE-01 16 : 8 , Fri Feb 03 2023

PPE Violation

Hard Hat





# Proactive insights delivered in real-time



A Admin

## Safety & Security

PPE Compliance

Near Miss

Unsafe Entry

Dwelling

Theft

## Efficiency

Demographic Analysis

## Analytics

Trends



Near Miss

2



Alerts 2



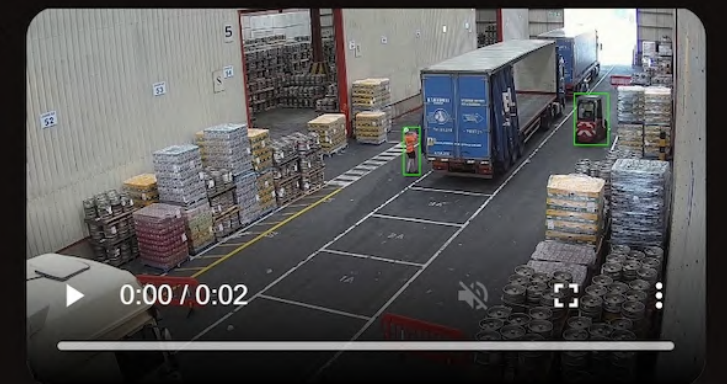
#NMiss-02 17:19, Fri Feb 03 2023

Near Miss



#NMiss-01 17:19, Fri Feb 03 2023

Near Miss





# Proactive insights delivered in real-time



A Admin

## Safety & Security

PPE Compliance

Near Miss

Unsafe Entry

Dwelling

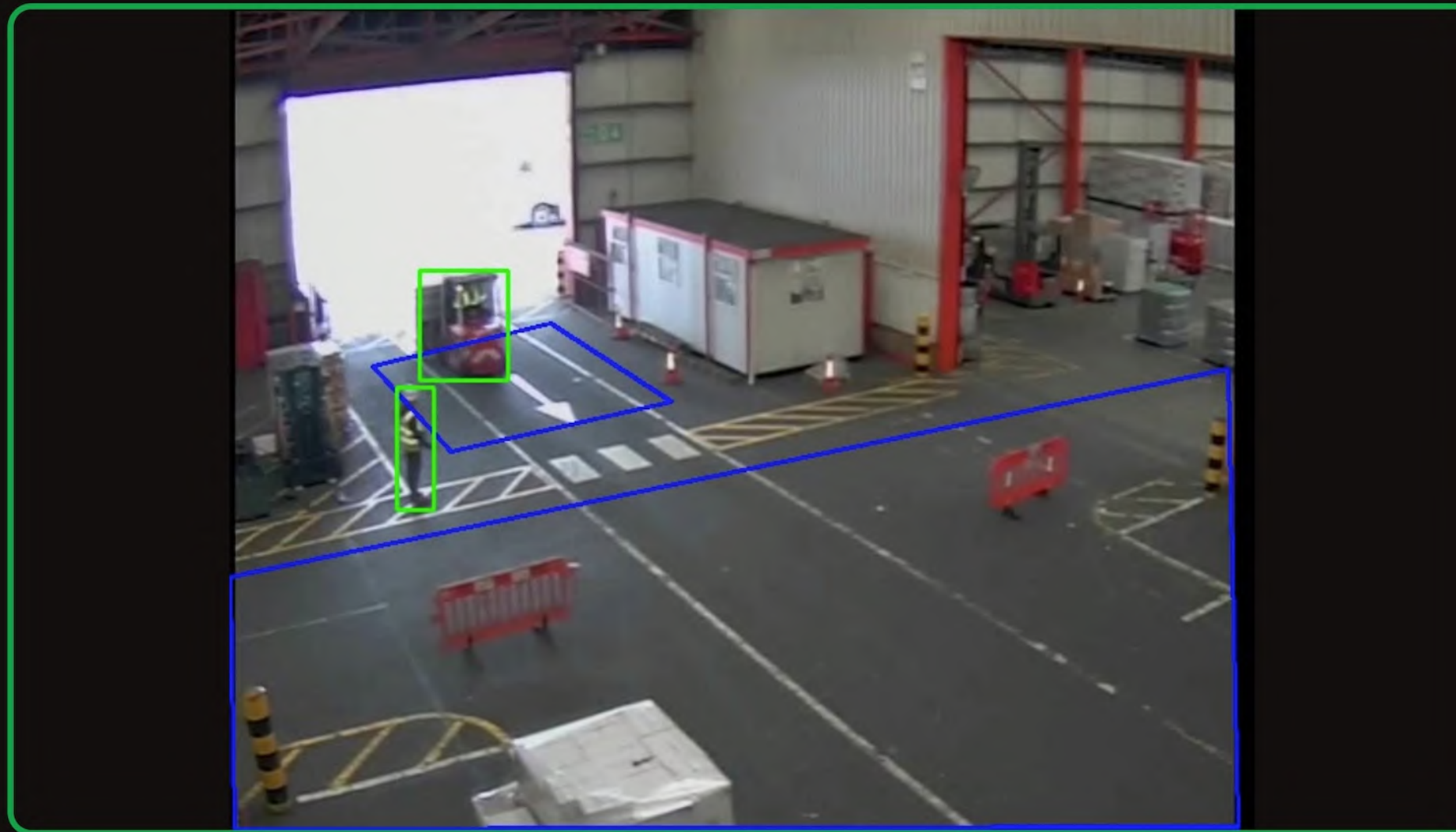
Theft

## Efficiency

Demographic Analysis

## Analytics

Trends

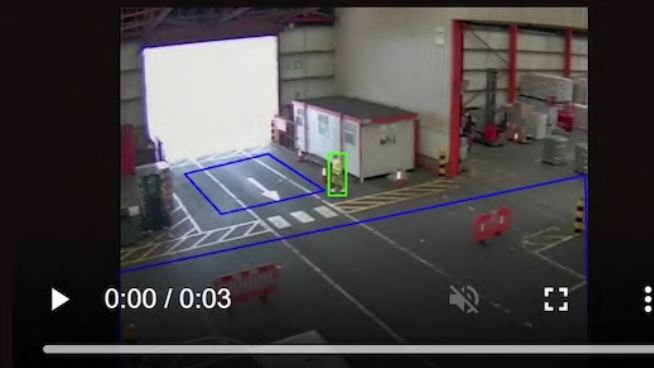


Unsafe Entry  
2

Alerts 2

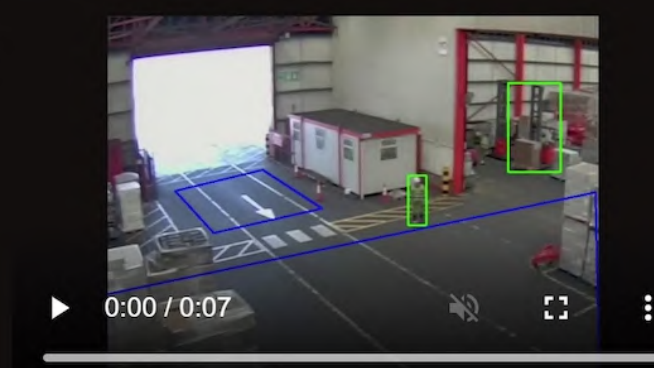
#UNSE-02 17 : 21 , Fri Feb 03 2023

Unsafe Entry



#UNSE-01 17 : 21 , Fri Feb 03 2023

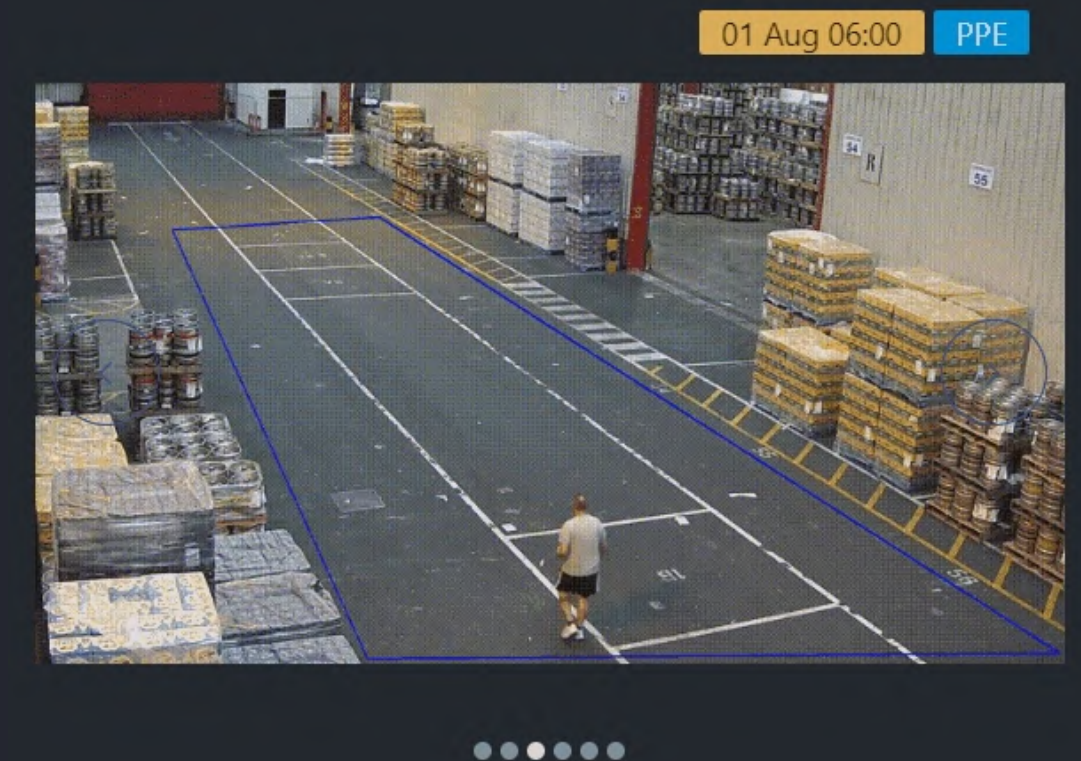
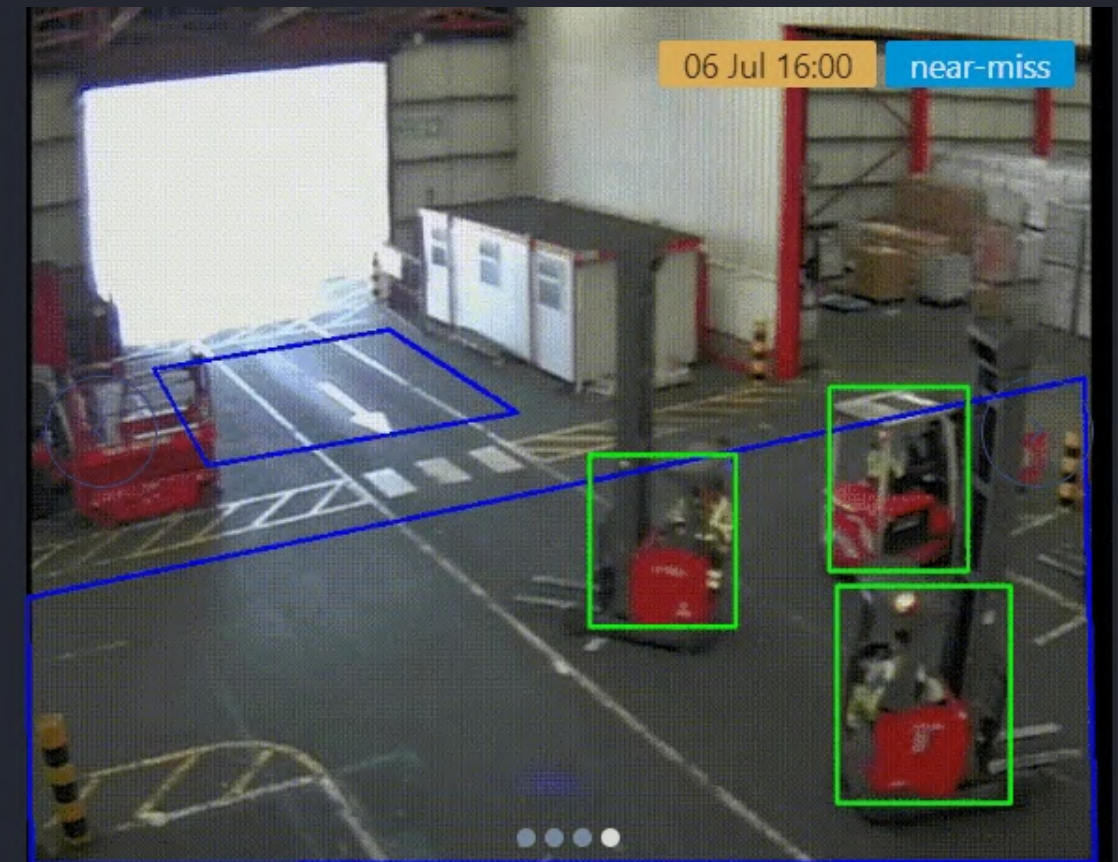
Unsafe Entry





# Privacy-preserving, scalable AI solutions

- Proprietary efficient computer vision software with robust tracking
- Federated learning for privacy and performance
- Continuously improving with huge amount of sector-specific data





Total	Entry	PPE	Near-Miss
<b>2017</b>	<b>1935</b>	<b>13</b>	<b>69</b>

JUN 07 to SEP 21

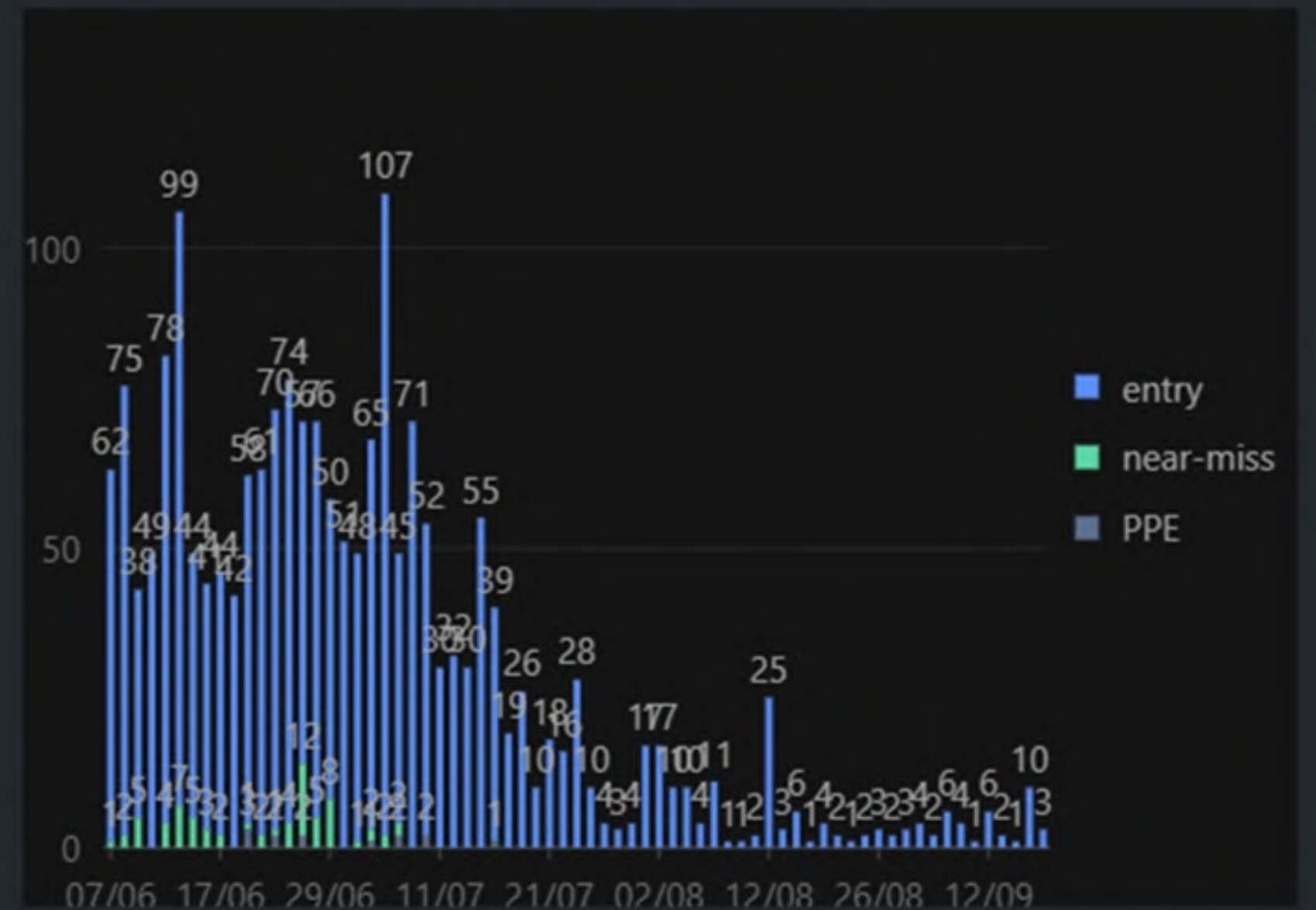
[Summary](#) [Evidence](#)

[Download](#) [Share](#)

## The results

- From 100 potential breaches a day to 3 in 3 months
- Data-driven decisions for future operational planning

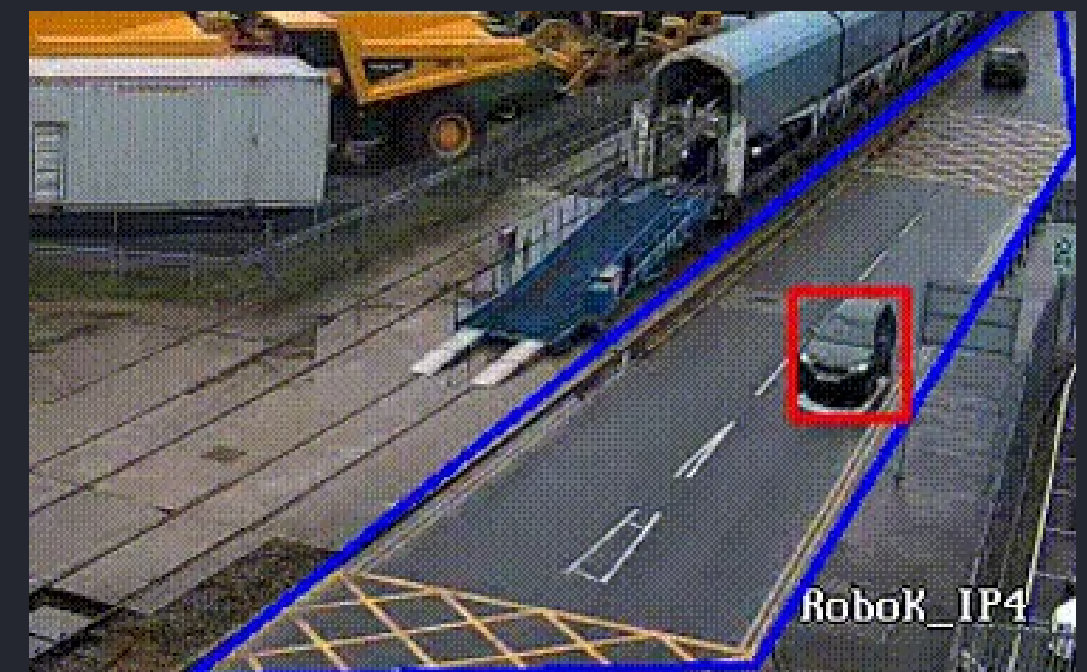
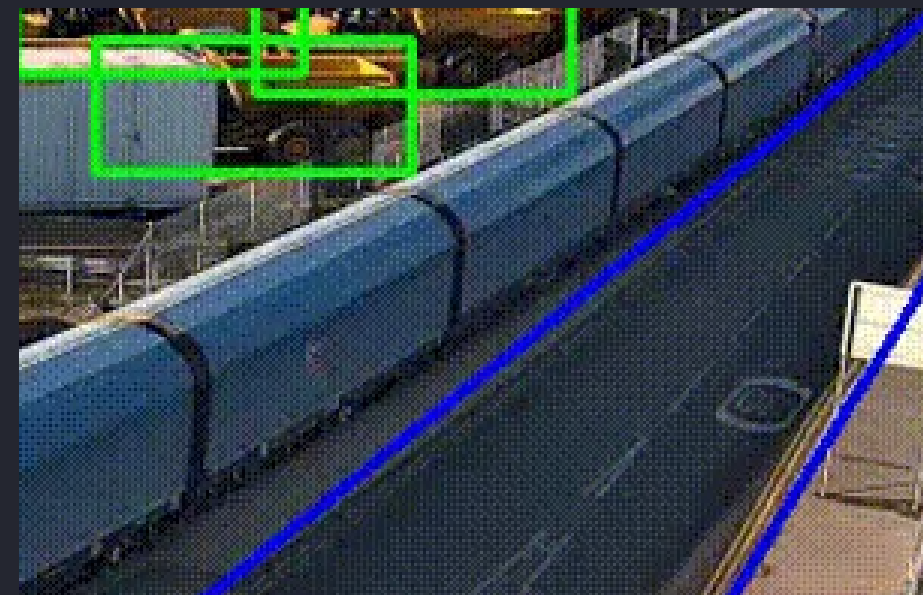
Number of Incidents





## More safety applications

- Near miss monitoring at quayside & berth
- Anomaly detection
- Unsafe parking & dwelling



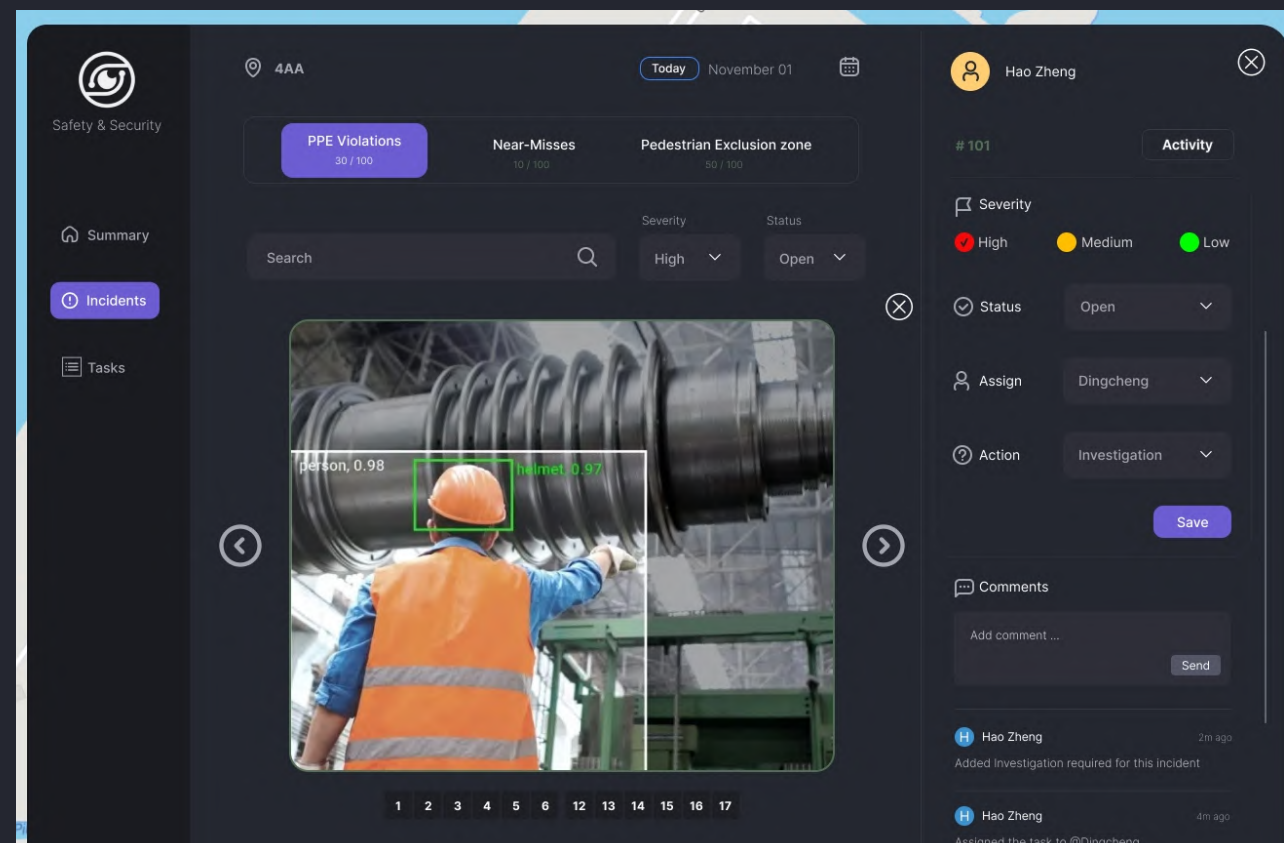




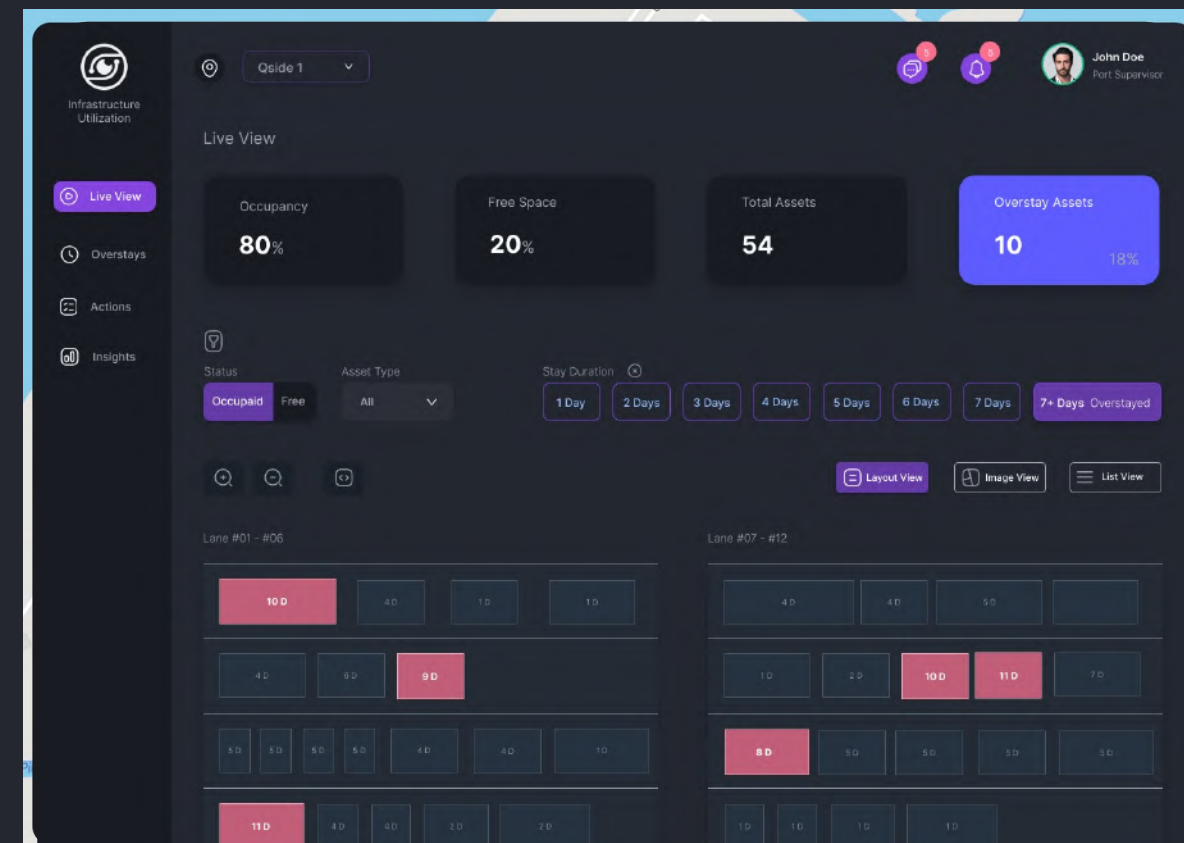
We are empowering safer & more efficient logistics workplaces



Insights Platform - React

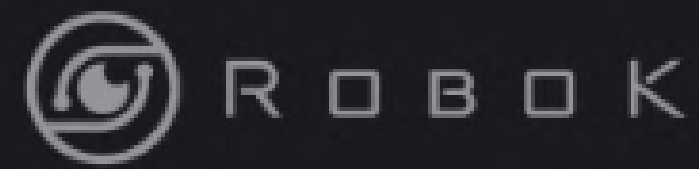


Insights Platform - Plan





# Thank you



☐ PPE Compliance

☐ Near Miss

☐ Unsafe Entry

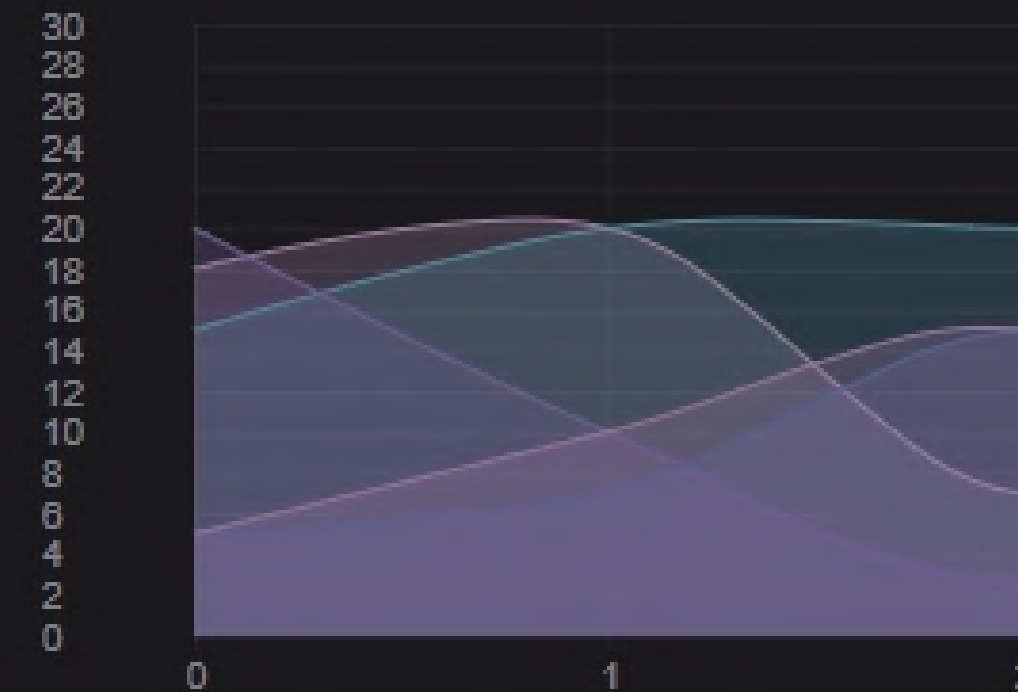
☐ Dwelling

☐ Theft

☐ Demographic Analysis

☑ Trends

## Incident Trend



● PPE Violation ● Near Miss