

Sustainable Terminal Automation

A Step-by-Step Approach

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WHO ARE WE?



- Founded in 1954, Illinois (USA)
- Over 11 subsidiaries
- Focus: Material handling, supply chains, terminal automation, sports & entertainment

- Subsidiary of Lanco Group
- Founding company
- Focus: Heavy-duty cranes (RTGs), terminal automation

- Subsidiary of Mi-Jack Products
- Founded in 2017, Karlsruhe
- Focus: Sensor-based safety solutions





WHAT DO WE DO?

1. Installing Hardware

MI-TRACK
D-GNSS-RTK & Radio/ UWB

2. Applying Software

ACCUTRACK
Workforce and Equipment Protection

ACCUVIEW
Digital Twin

ACCUSTACK
Inventory Management

ACCUFLEET
Fleet Management

VEHICLEVIEW
Inventory In-Cab Navigation

QUESTIONS THAT WILL BE ANSWERED TODAY

- What is considered as terminal automation?
- Which processes are actually worth automating?
- How do you get started with automation?
- How can automation projects be successfully implemented and scaled over time?



MANUAL

MANUAL OPERATION

SEMI-AUTO

LAST METER
MANUAL DRIVEN¹ | PARTIAL
AUTOMATION²

FULL-AUTO

LAST METER³ | FULL
SUPERVISED³ | AUTOMATION

AccuVIEW
DIGITAL TWIN



AccuTRACK
WORKFORCE & EQUIPMENT PROTECTION



AccuSTACK
INVENTORY MANAGEMENT SYSTEM



VEHICLEVIEW
IN-CAB NAVIGATION & WORK CONTROL ORDER



AccuFLEET
FLEET MANAGEMENT SYSTEM



WHICH PROCESSES ARE WORTH AUTOMATING?

Good candidates for automation

- ✓ Repetitive (Daily, Weekly)
- ✓ Rule-Based
- ✓ Prone to Human Errors
- ✓ Safety-Critical

Avoid automating

- ✗ Complex exception handling
- ✗ Processes that change constantly
- ✗ Activities requiring human judgment



HOW DO YOU GET STARTED?

Start with the problem, not the technology

- ✗ Wrong approach: We need auto-stops and auto- slow downs of our cranes.
- ✓ Right approach: We need to reduce incidents and improve efficiency.

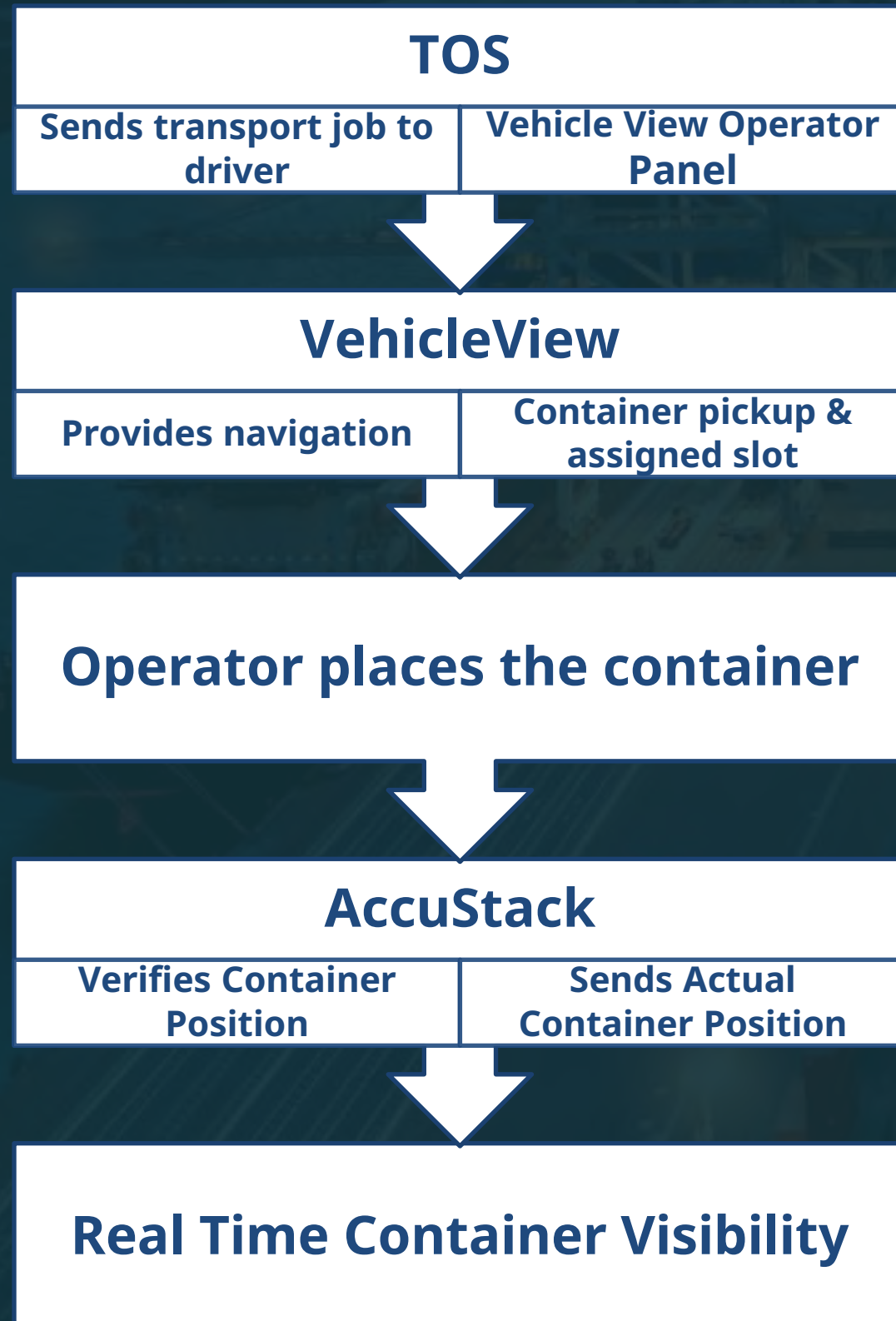
1. Analyse your current state

- Where are you currently in your automation journey?
- Which systems or technologies are already in place?

2. Identify your pain points

- Do you struggle to locate containers?
- Do you have limited visibility of your fleet and equipment?
- Have you experienced safety incidents or accidents?

DO YOU STRUGGLE TO LOCATE CONTAINERS?



DO YOU HAVE LIMITED VISIBILITY IN YOUR TERMINAL?



Real-Time Digital Twin

- Live visualization of the entire terminal



Container Tracking

- Know the exact location of every container



Vehicle Tracking

- Monitor all terminal equipment in real time



Personnel Tracking

- Improve workforce visibility and safety



Live Equipment Status

- See active, idle, and unavailable assets



Safety Zones & Geofencing

- Monitor restricted and hazardous areas



HAVE YOU EXPERIENCED SAFETY INCIDENTS?

In Manual Operations

Working area divided into safe (green) and unsafe (red) zones

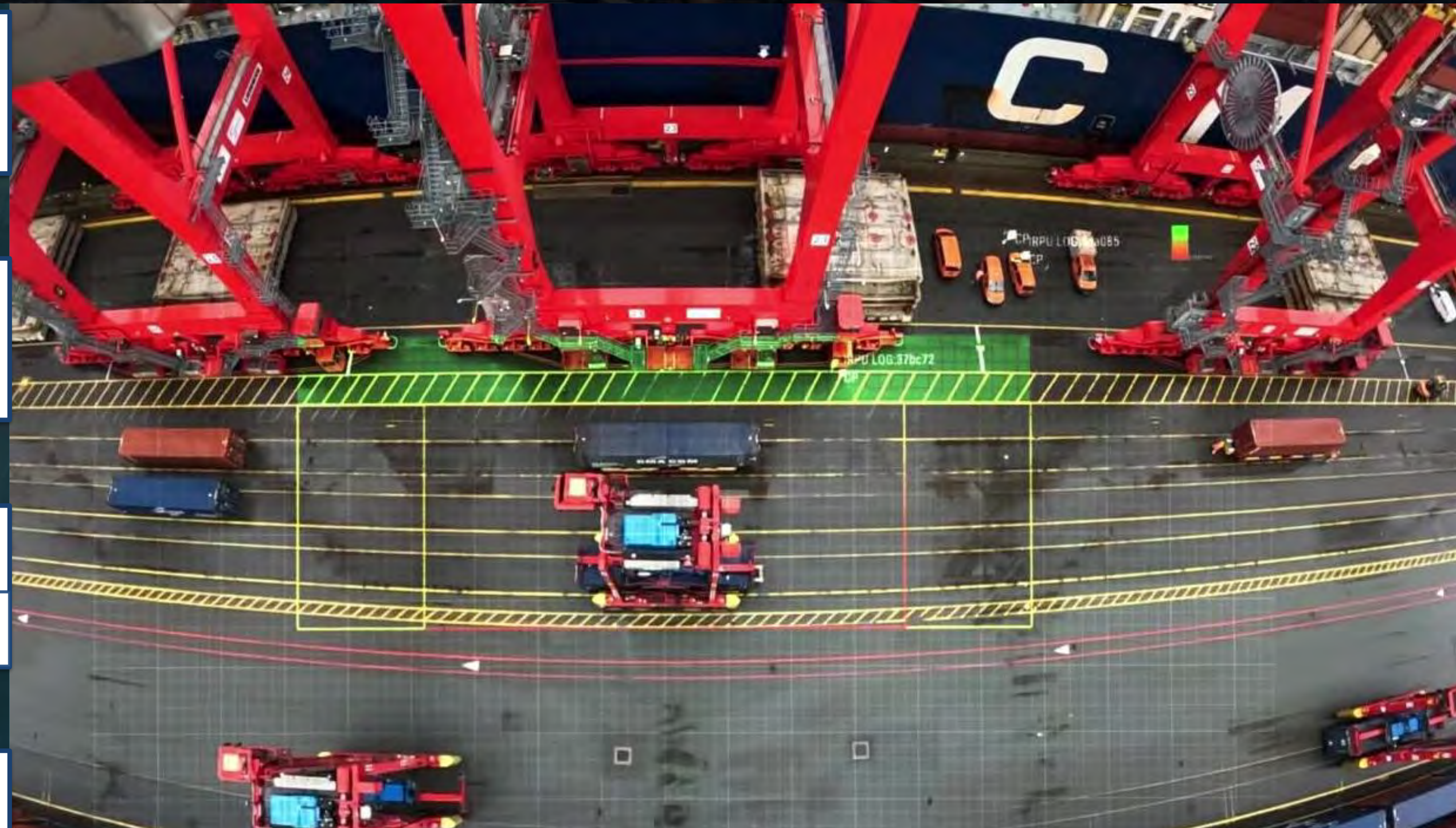
Personnel tracked in real time via helmet tags

Straddle carriers receive traffic light / LED zone indication

Red signal: No entry; personnel is currently doing pinning work

Green signal: Area clear - proceed

Safe simultaneous operation of cranes, straddle carriers, and personnel



HAVE YOU EXPERIENCED SAFETY INCIDENTS?

In Automated Operations

Defined safety zones around the vehicle and beneath the spreader

Multiple safety reaction levels

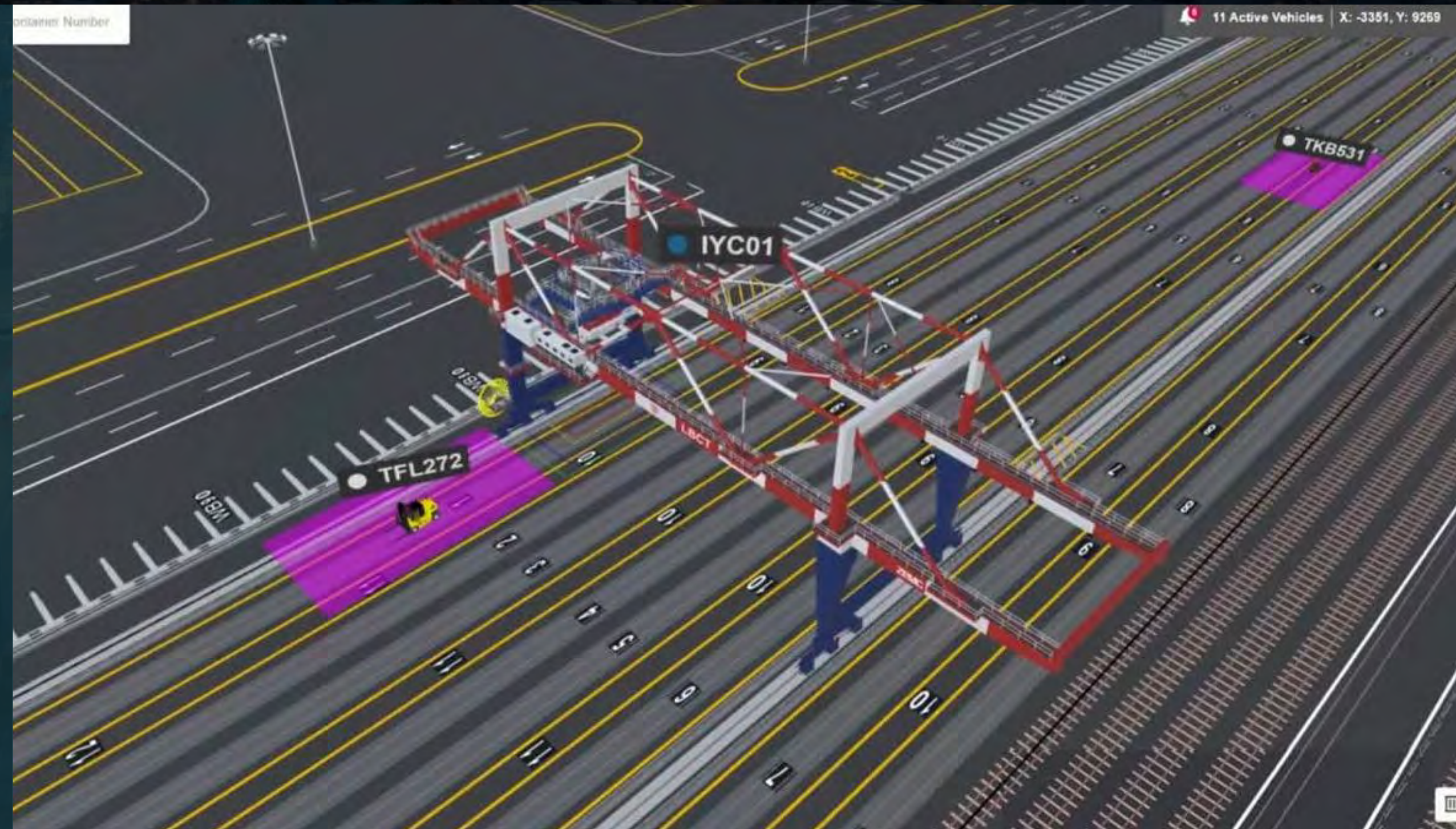
automatic slowdowns

automatic safety stops

controlled obstacle avoidance

Automatic crane response and active driver alerts for maximum safety

Prevents suspended loads above personnel and manual equipment





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THANK YOU FOR
LISTENING!