VOXEL

The Future of Safety Tech – An AI Focus

Mike Stangl
Director, Sales

Agenda

- The State of Workplace Safety
- Traditional Safety Tech Options
- The Future of Workplace Safety
- Questions and Discussion

Workplace Safety: The Current State

VOXEL

OSHA Statistics

3.4 fatalities/100,000 employees

Avg. lost time injury cost $40K

80% of workplace Incidents caused by risky behaviors

NEP program announced Focused on targeting traditional warehouses

OSHA

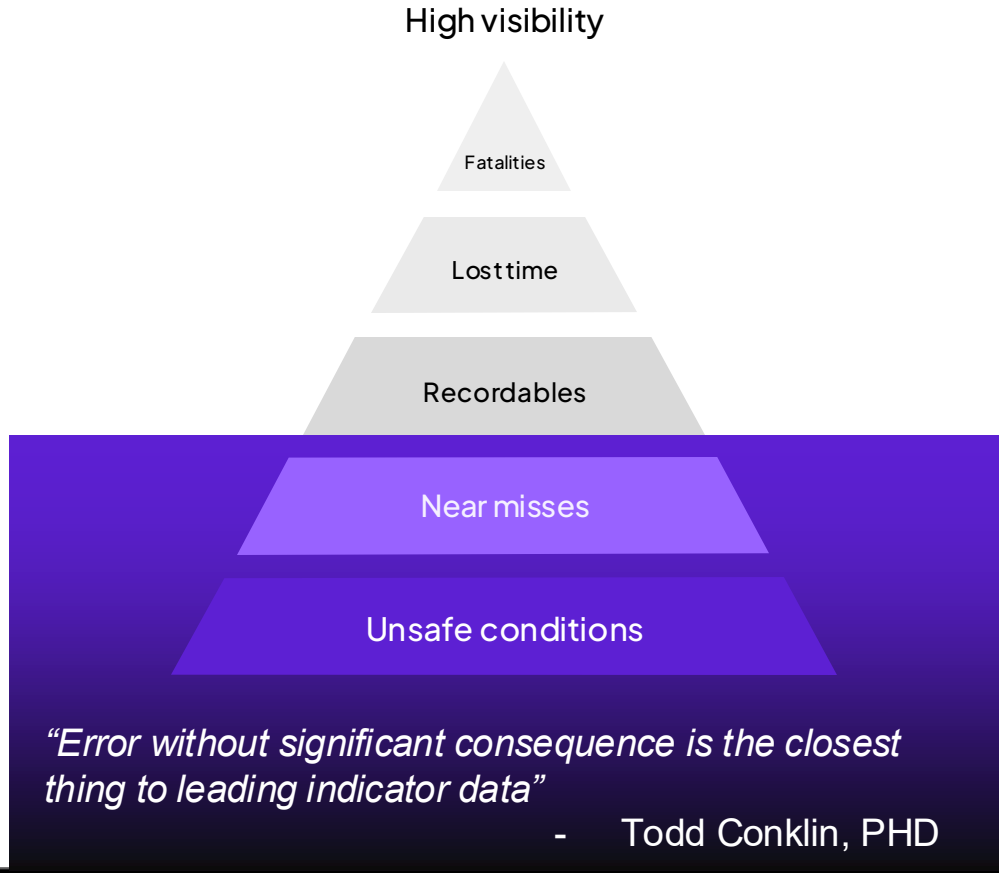
Safety is often reactive because visibility is limited

Standard safety programs are not proactive

Lack of risk awareness, fear of retaliation, and competing priorities all contribute to reactiveness

Near misses slip under the radar

Identifying risks and correcting behaviors early can eliminate accidents



“Error without significant consequence is the closest thing to leading indicator data”

\- Todd Conklin, PHD

Traditional Safety Tech Options

VOXEL

Traditional Safety Tech Examples

WEARABLES

Data generators | Predictive | Focused Use Case | Costly | Hardware | Somewhat measurable impact | Inefficient

VR TRAINING

Basic training | Adv. Environments | Costly per unit | Difficult to measure impact | Inefficient

VEHICLE TELEMATICS

Can integrate | Can be reactive | Costly per vehicle | Often mfg. specific | Hardware heavy | Maintenance | Single use case | Measurable impact

SURVEILLANCE

Data Generator | Configurable | Decreasing costs | Largely reactive | Difficult to measure impact | Inefficient | Reactive

The Future of Workplace Safety: Computer Vision AI

VOXEL

What is Artificial Intelligence? The Basics...

ar·ti·fi·cial in·tel·li·gence

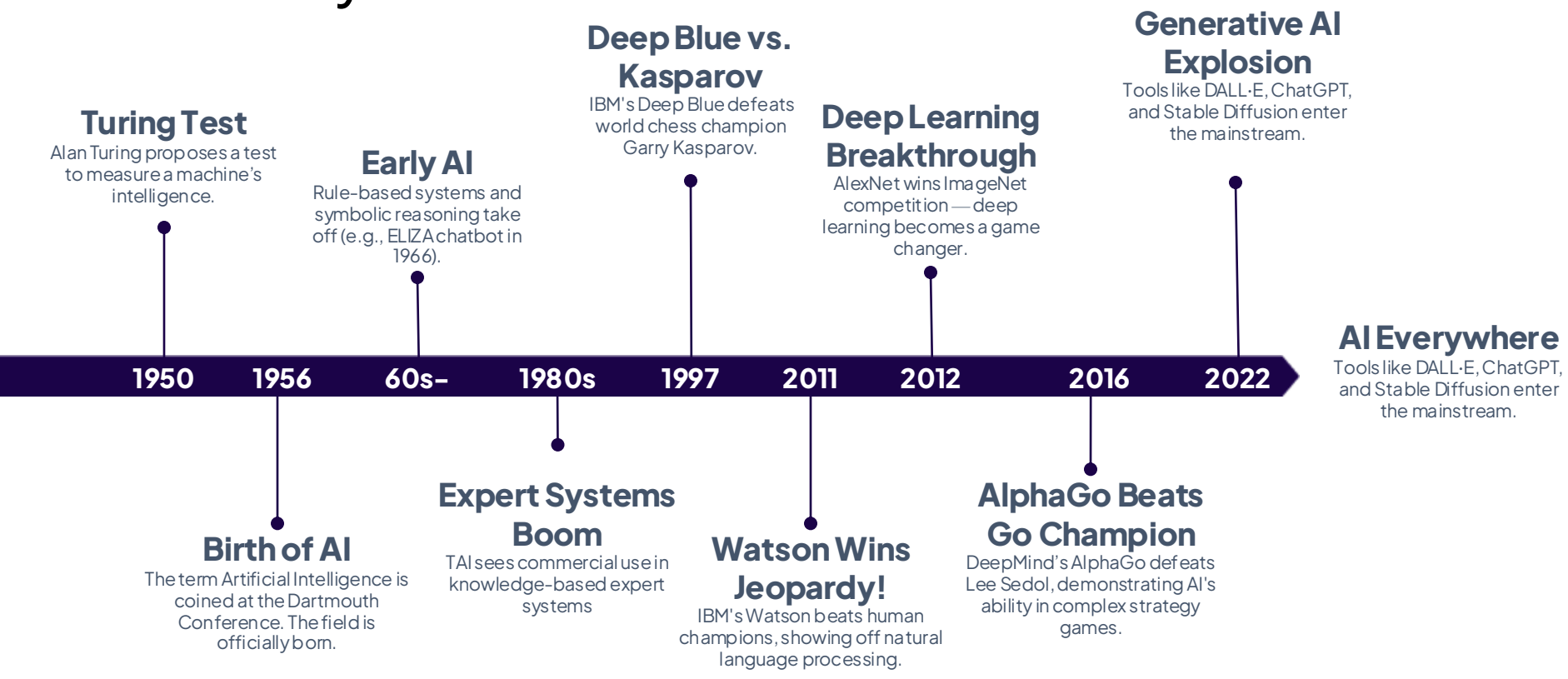
/ˈärdəˌfiSH(ə)l ənˈteləj(ə)ns/

noun

the theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

> ***"Artificial Intelligence is the science of making machines do things that would require intelligence if done by humans."***
>
> ***– Marvin Minsky***

The History of AI



Types of AI & Practical Applications

1

Machine & Deep Learning

2

Robotics

3

GenAI & Natural Language Processing

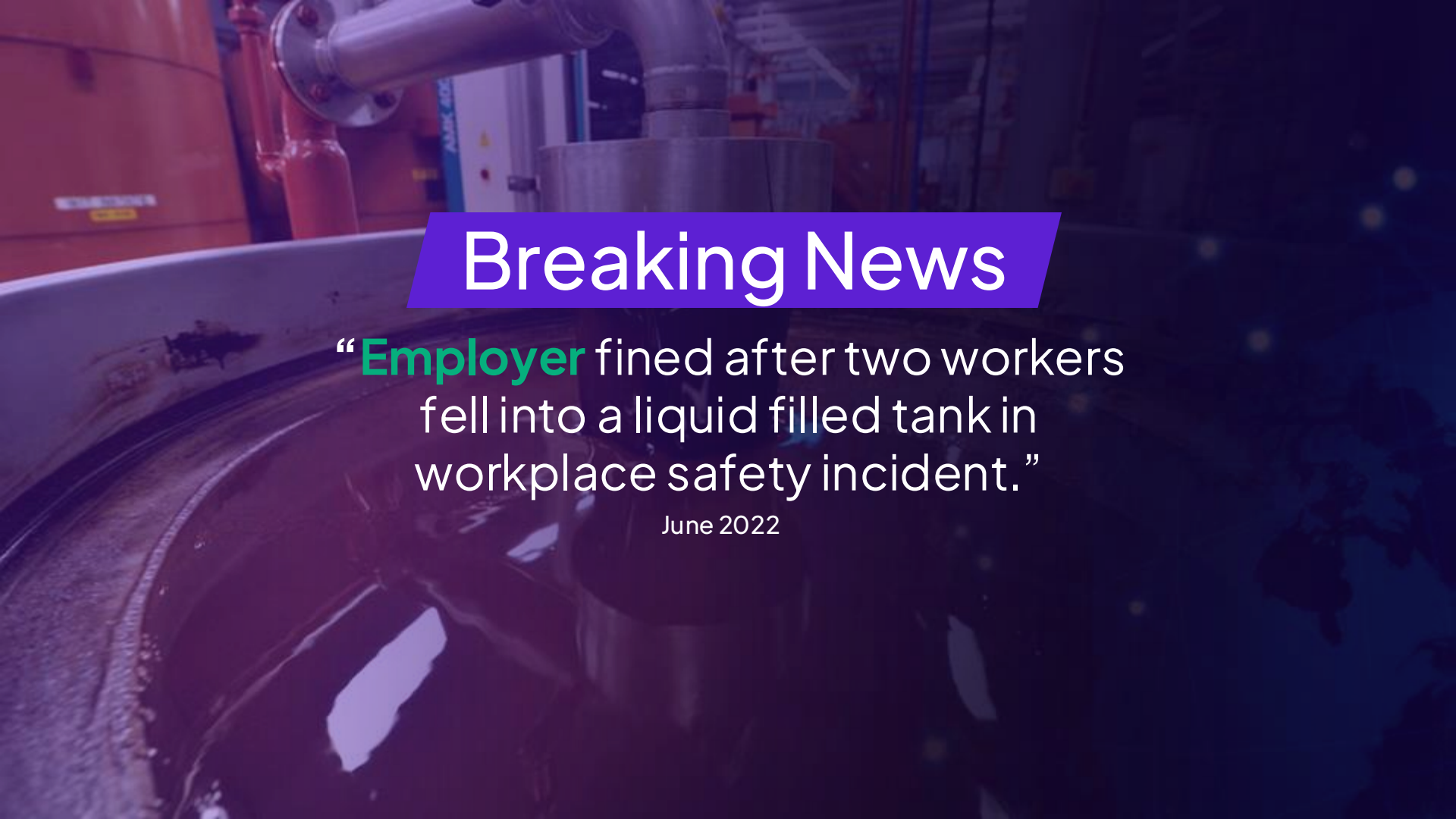
4

Computer Vision

NIOSH Science Blog
The Role of Artificial Intelligence in the Future of Work

> “Computers can be trained to learn patterns in images or video, enabling a form of AI described as computer vision.

Jay Vietas, PhD, CIH, CSP



Breaking News

"Employer fined after two workers fell into a liquid filled tank in workplace safety incident."

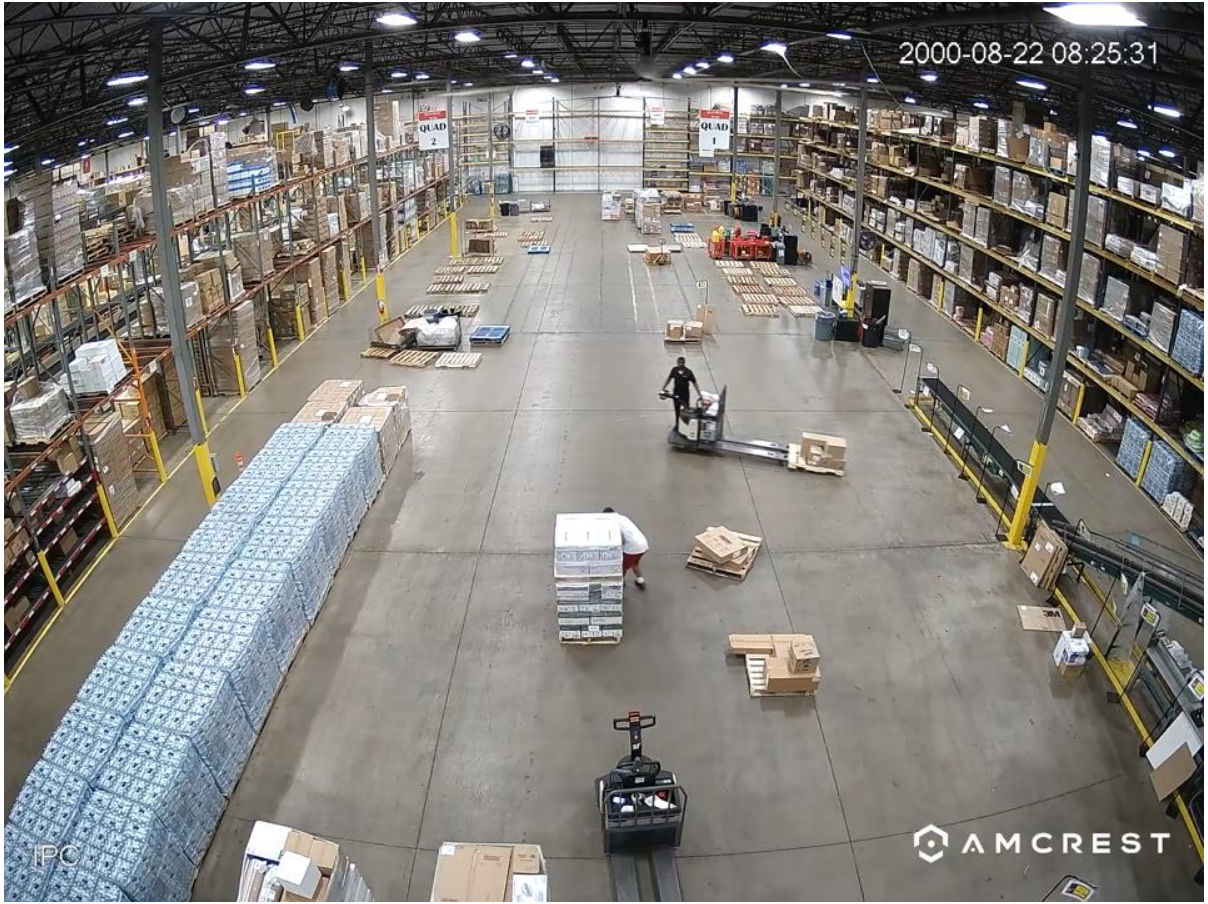
June 2022

VOXEL SAFETY MOMENT


Breaking News
“One dead after fatal forklift accident at major auto manufacturing site.”
March 21, 2025

VOXEL SAFETY MOMENT

Leading Indicator: Forklift to Pedestrian Near Miss



NIOSH Science Blog
The Role of Artificial Intelligence in the Future of Work

> “...it can provide information to workers and OSH professionals, which can improve training and assist in reducing the impact of hazards in the workplace.”

Jay Vietas, PhD, CIH, CSP

Utilizes your existing security cameras to detect events in real-time

Ergonomics
Bending
Overreaching

PPE
Hard hat
Safety vest

Vehicle Safety
Speeding
No Stop
PIT-PIT Proximity
PIT-PED Proximity

Operations
Open Door Duration
Parking Duration
Blocked Exits/Aisles

Environment
Spills
No Ped Zones
Obstructions


VOXEL SAFETY MOMENT

VOXEL SAFETY MOMENT

VOXEL SAFETY MOMENT

VOXEL SAFETY MOMENT

www.voxelai.com

71

0 100

Voxel Score

No Stop At Intersection	14
No Ped Zone	48
Overreaching	72
Parking Duration	78
Hard Hat	84
Improper Bend	86
Safety Vest	93
Piggyback	95

Highlighted Incidents

View All

Improper Bend
GAS Mac Tear Down 845
3 hours ago

Overreaching
Receiving Breakdown
1 day ago

Near Miss
Receiving Dock
1 day ago

No Stop at Intersection
Loading Bay C
2 days ago

All Incidents

24%

648

Total Incidents - Last 30 Days

No Stop at Intersection

99%

159

Total Incidents - Last 30 Days

Improper Bend

83%

104

Assigned To Me

0 Resolved **0** Open

Assigned By Me

7 Resolved **2** Open

Bookmarked

1

Recent Activity

Chris Skipper assigned Kayvon Deldar a Improper Bend incident
23 minutes ago

Joe Southwick assigned Kayvon Deldar a Parking Duration incident
3 hours ago

Pat McHenry assigned Kayvon

VOXEL

www.voxelai.com

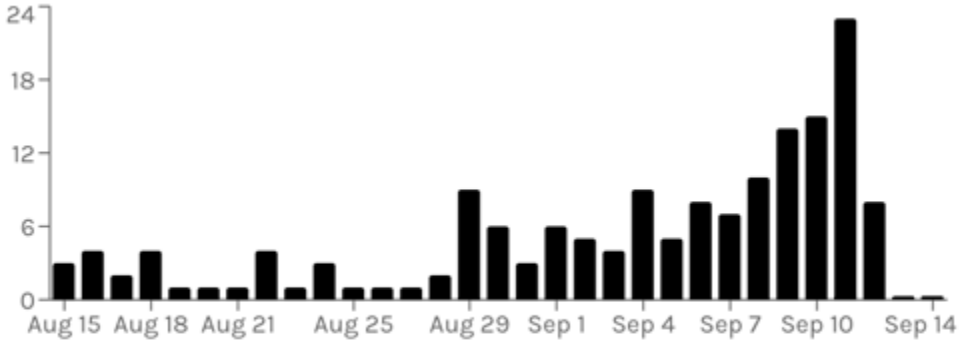
No Stop at Intersection

Aug 15 - Sep 14

Total Incident Trends | Incidents By Camera | Incidents By Time Period

161
Total Incidents

105% ↑
Incident Trends

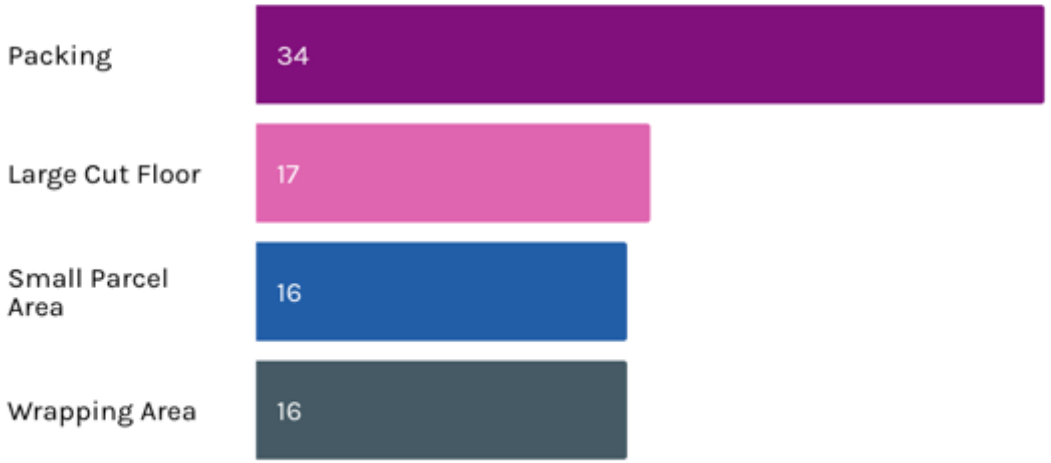


VOXEL

Improper Bend

Aug 15 - Sep 14

Total Incident Trends | **Incidents By Camera** | Incidents By Time Period



VOXEL

No Ped Zone

Aug 15 - Sep 14

Total Incident Trends | Incidents By Camera | Incidents By Time Period

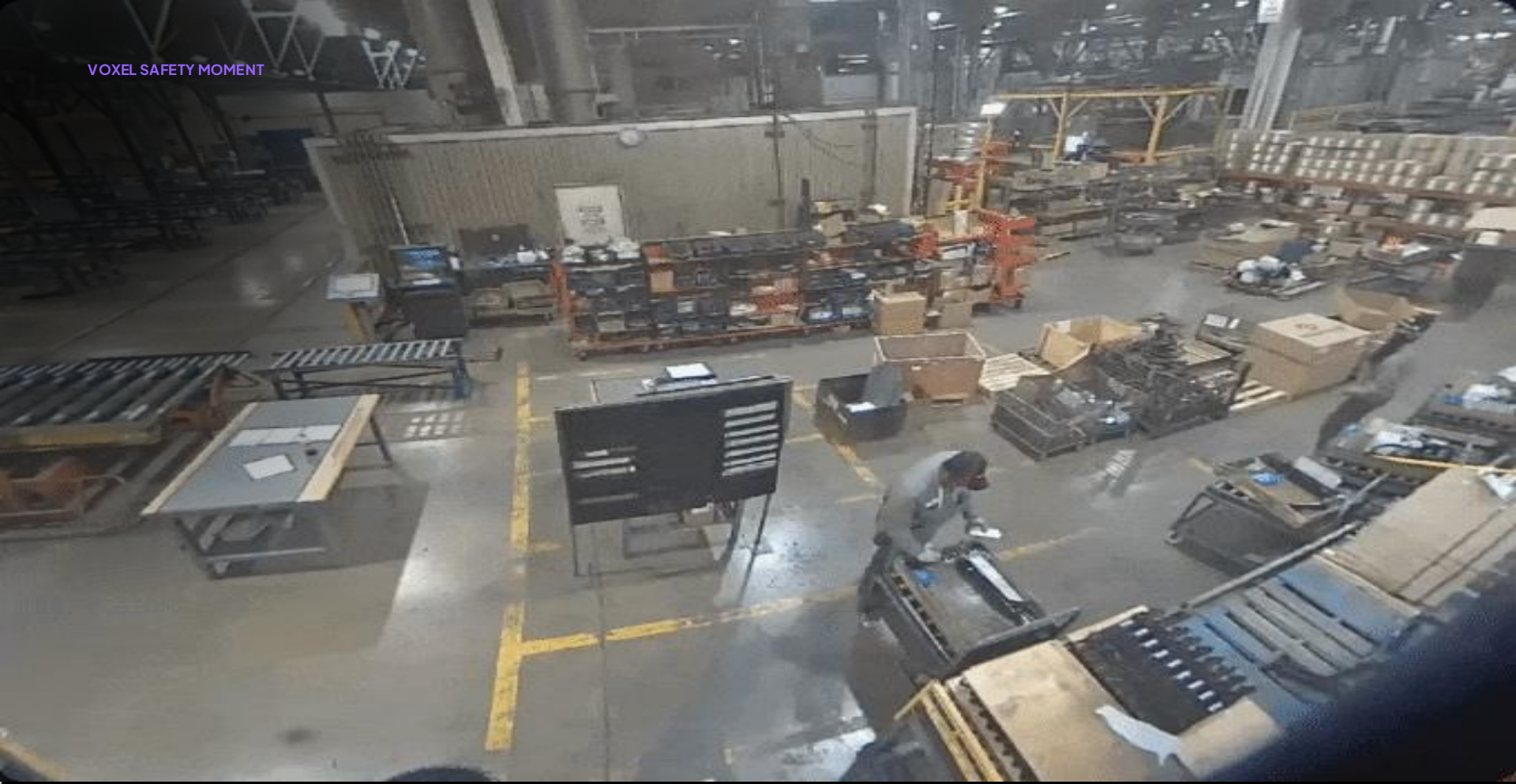
Peak Time Period

Tuesdays around 7PM PDT

VOXEL

VOXEL SAFETY MOMENT

VOXEL SAFETY MOMENT

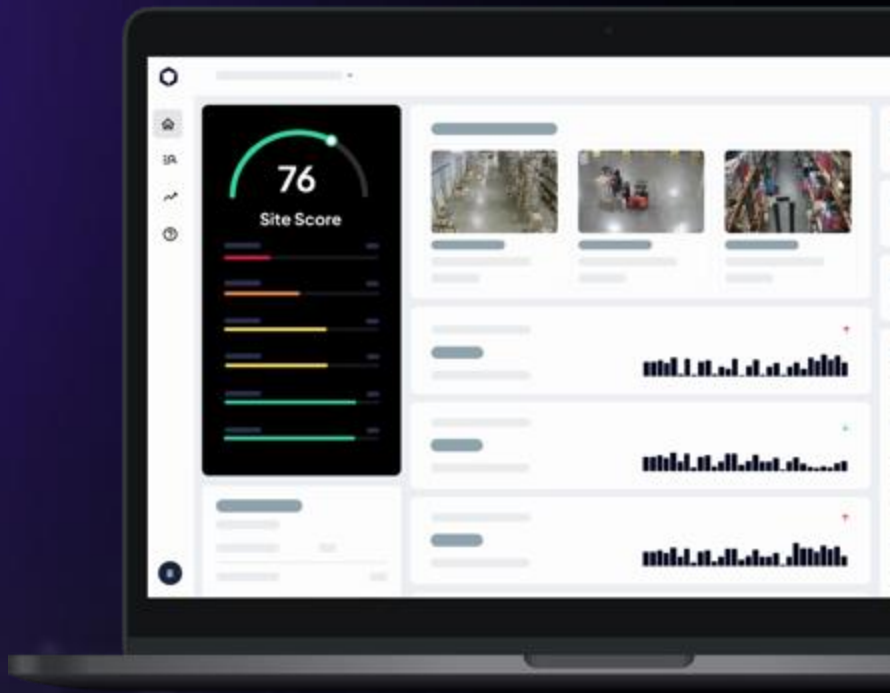


VOXEL SAFETY MOMENT

The Future of Site Safety

Computer vision for safety advantages

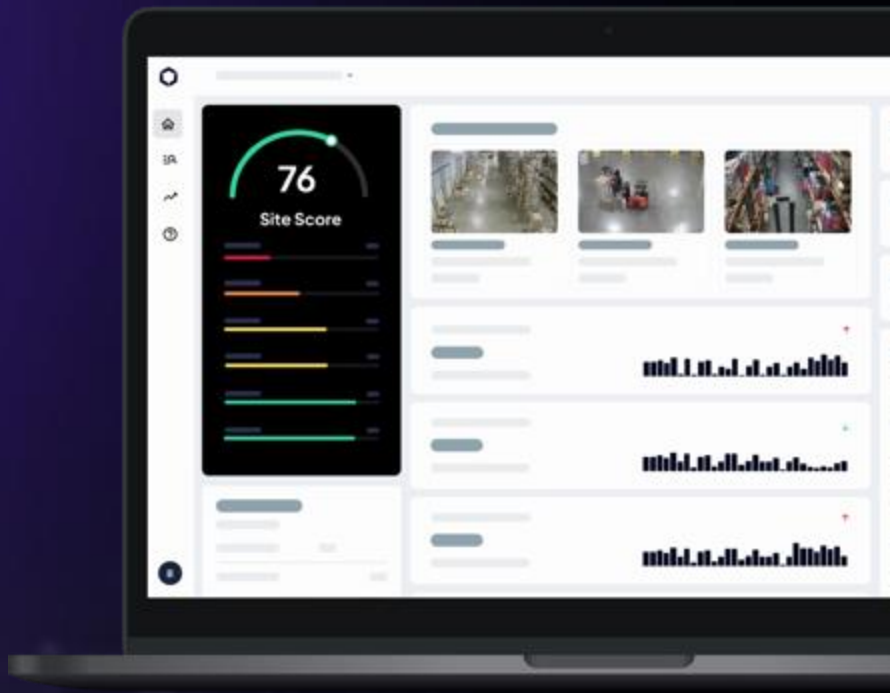
- Quick journey from data -> insights -> action
- Real time risk identification, SIF prevention
- Trend analysis, pre and post control
- Cost fixed to the number of cameras, rather than workers
- Development never stops, no physical upgrades needed



VOXEL

AI For Good…AI For Safety

- Positive reinforcement - leveraging AI to reward good behaviors
- Maintain focus - dial in on one or a few risks at a time
- Be creative - find ways to bring AI into your existing programs and culture
- Open communication - clearly explain to employees what the technology is and how it'll be used for coaching/improvements
- AI is just a tool - how you use it determines how effective it'll be



VOXEL

CASE STUDY

National Retail Distribution Center

Company Overview

Chain retailer carrying art & hobby supplies plus home decor; Eight distribution centers, 1300+ stores, 45,000 team members.

Goals

Build a safety culture while mitigating ergonomic and powered industrial truck risks

Risk Mitigation Methodologies

- Focused approach
- Data ingestion
- Proactive Coaching
  - Overreaching during palletizing
  - No stops at aisle ends
  - Cross training, temps, new hires
- Operational improvements
  - Workload management
  - Equipment utilization

12 Month Results

Dramatic reduction in injuries and savings achieved

- 205 fewer first aid cases - 85%
- Avoided 57 WC claims - 66%

Year one ROI: $3.13M

CASE STUDY: AMERICOLD

Americold uses Voxel's AI combined with positive reinforcement training to address a total recordable injury rate of 6.4 and direct losses of over **$1,125,000**

6.4 → 1.9 TRIR
▼ **70%** reduction in 12 months

288 → 0 days missed
▼ **100%** reduction in 12 months

ROI

- Recovered over $1,000,000 in direct losses
- Slashed energy costs $5,000 per month by monitoring refrigerator doors
- Prevented equipment damage, saving maintenance & replacement costs

BEHAVIOR	BEHAVIOR
Vehicle Speeding	85% ▼
Perimeter detection	92% ▼
Stopping at aisles and blind spots	72% ▼
Unblocked drivable zones & aisles	78% ▼
Proper Lifting	75% ▼
Piggy Backing	65% ▼
Open Doors	87% ▼

Additional Safety Tech Resources

- The Role of AI in the Future of Work - NIOSH
- AI and On The Job Safety - University of Illinois
- NSC Work to Zero - Safety Tech Guidance
- Wearables and AI - Forbes
- What is AI for Safety
- AI Safety Champions Portal
- Five Emerging Technologies in Ergo - ASSP
- NSC Statement on Biden Admin Exec Order on AI
- The Comp Compass - Reducing Workplace Injuries for New Employees with AI Tech
- AI and the Future of Work: Moving Forward Together - NSC
- HPR - A Strategic Approach to Property and Asset Protection

Let’s Connect.

Mike Stangl
Director, Sales
216.538.9621
mike@voxelai.com

VOXEL

Thank you.