



How Wearable Safety Tech & AI are Reducing Incidents and Claims in Industry Today!

Presenter: Tom West, SPHR, SHRM-SCP, COSS

Date: May 9, 2024

- **Welcome & housekeeping**
- **A word about SFIA**
- **Speaker introduction**
- **Presentation**
- **Q&A**

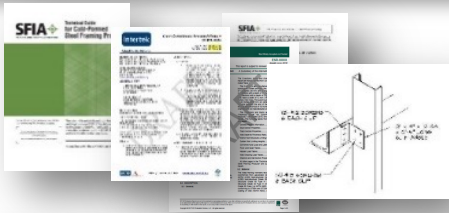
Agenda

Welcome & Housekeeping

- Thank you for attending our webinar today!
- Mics are muted. Please ask any questions in the chat or Questions windows.
- A PDF of the presentation and a Certificate of Attendance will be available in your Steel Framing Learning Portal account after the webinar.

Major Programs and Services: Tools, Information and Support

Technical Tools / Services



Marketing / Promotion



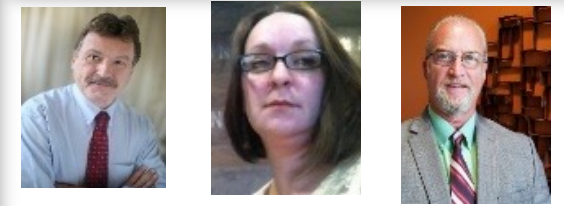
Business Planning

	Structural Tons Reported				Total
	Q1'19	Q2'19	Q3'19	Q4'19	
East	51,100	52,368	-	-	103,468
North Central	18,368	20,529	-	-	38,897
South Central	27,605	28,445	-	-	56,050
West	34,441	35,854	-	-	70,295
Total					

	NonStructural Tons Reported				Total
	Q1'19	Q2'19	Q3'19	Q4'19	
East	64,593	65,000	-	-	130,593
North Central	21,539	23,172	-	-	44,711
South Central	22,240	24,899	-	-	47,139
West	24,017	27,806	-	-	51,823
Total	132,389	141,877	0	0	274,266



SFIA Staff



Architectural Services



Educational Programs



Sustainability



Research and Innovation



Advocacy



Certification



Introducing our Speaker!



Tom West, SPHR, SHRM-SCP, COSS

Tom is Vice President at MākuSafe, as well as being a SHRM & HRCI Senior Certified Human Resources Professional, and a Certified Occupational Safety Specialist. Over the years, Tom has held executive leadership roles with many companies providing learning & development tools, technology, and services. Tom also served as a College Management Professor for nearly 30 years. Tom is an Avetta Fellow and a professional member of the National Speakers Association, in addition to being an active member in the AIHA, National Safety Council, ASSP, and VPPPA.



Live Webinar

May 9, 2024



How Wearable Safety Tech & AI Are Reducing Incidents And Claims In Industry Today!



Join us: Thursday May 9 at 2pm ET

Tom West, SPHR, SHRM-SCP, COSS

Vice President, MākuSafe Wearable Technology

FREE Registration

<https://www.pathlms.com/sfia/courses/67052/webinars/43864>



How Wearable Safety Tech And AI Are Reducing Incidents and Claims In Industry Today!

Thursday, May 9, 2024 | 2pm ET



Tom West, SPHR, SHRM-SCP, COSS
Vice President, MākuSafe

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MākuSafe - The Leader In Workforce Wearables

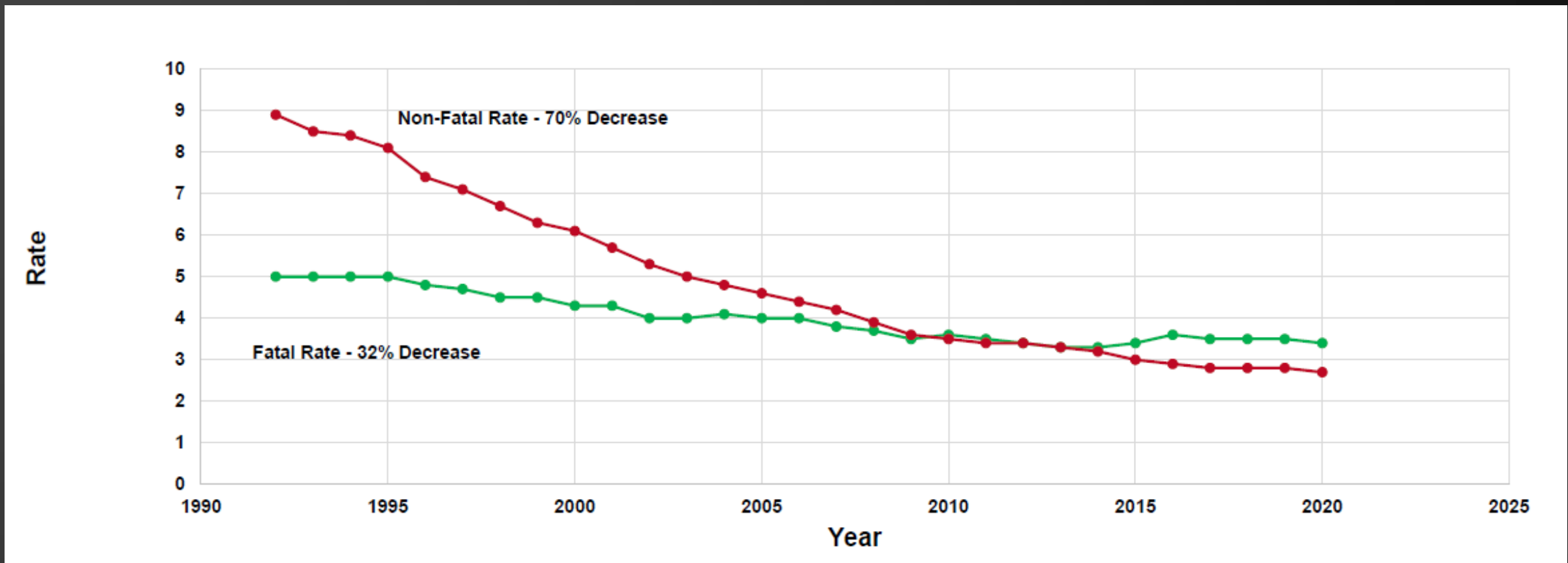




MākU SAFE

SMART. SAFE. MākU SAFE.





How do you...

- better understand where risk exists?
- become more proactive & preventative?
- develop participation, engagement, and build culture?
- become more strategic?
- relate safety to the C-Suite and Production/Operations?
- make sure you know about things you know happen, but nobody reports?
- ESG? DE&I? TWH? Oh, my.
- optimize your safety management process?
- not waste time and resources, and stay practical?
- use tech to get measurable results fast, without making life more difficult?

Wearable Safety Tech: Enabling Safety Management 2.0 & HOP

Providing EHS Leading
Indicators

Reducing Incidents &
Claims

And Improving Safety
Culture!



Tech with the right approach, can be human-centric, and enable success!





Wearables can be a powerful tool for identifying hazards and risk





In every work environment there are

clues...



**...leading indicators & near-misses
that we collect automatically,
analyze and use...**



Light Levels

High Temp

High TVOC

High Sound dBA

Tripping

...to predict & prevent injuries & claims.

- Reduction in Accidents

Claim Frequency - Down 50%

Total Claims - Down 50%

Claims severity - Down 90%

ROI estimated at over 1000% +

- Increased Transparency & Communication, Culture Building

Increase in “Good Catches / Near-Misses” & reported observations from front lines.

- Uncover Unknowns

Harness data and sensor technology to discover insights previously unavailable.

- Simplify EHS Documentation

Immediately shows EHS value.

- Safety & Health Management System

Effectiveness, Efficiency & Productivity Impact



Benefits Realized!





Workers check out and return wearables from kiosks



Workers check out and return wearables from kiosks

MākuSmart
Cloud

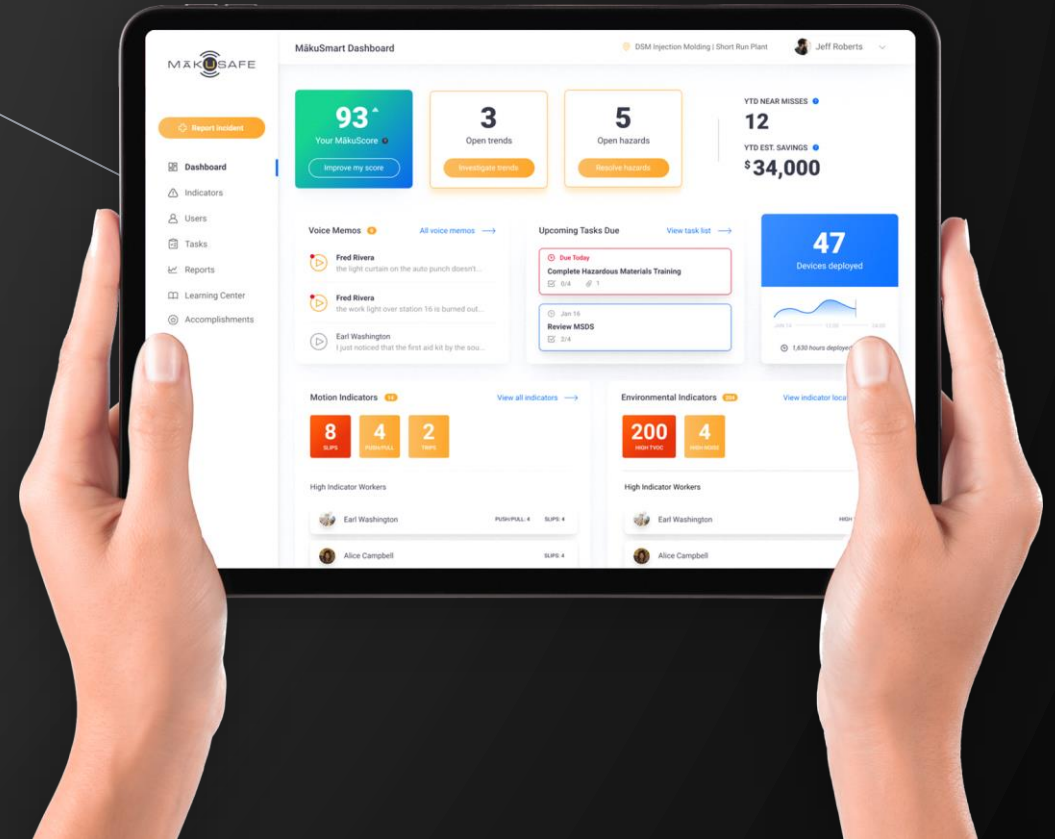
MākuSmart Web & Mobile Application



Wearable



Base Station







Connected Safety Ecosystem





The MākuSafe Ally™ gathers & transmits data in real-time to the MākuSmart Cloud.

Motion Detection




-  Slips, Trips, and Falls
-  Repetitive Motions
-  Worker Physicality
-  Forceful Exertion

Battery

-  22 Hour Battery
-  Multiple Shifts







MyVoice™


-  Audio Messaging
-  Voice-to-text
-  Push-to-talk



Spatial Awareness

- Location Identification 
- Worker-to-worker Proximity 
- Access Control & Factory 4.0 
- Contact Tracing 

Environmental Sensors

- Ambient Light 
- Air Quality (TVOC & CO2) 
- Noise / Sound Dosage 
- Air Pressure 
- Humidity 
- Temperature 

A Sensor-Packed Data-Gathering Ally™



MākuSafe Does Not:

- Collect anything personal (No PII)
- Monitor any biometrics
- Deliver any negative feedback to the worker; haptic, visual, or auditory
- Assume the worker is the problem, or knows what to do to correct it
- Continuously track the individual



Frontline communication via Voice Memos

Real-Time Alerts

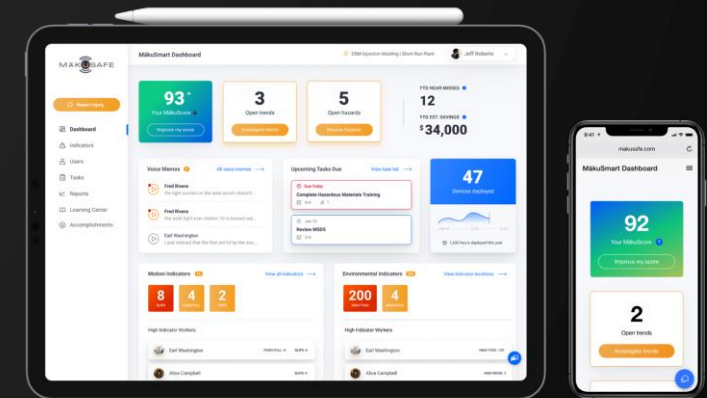
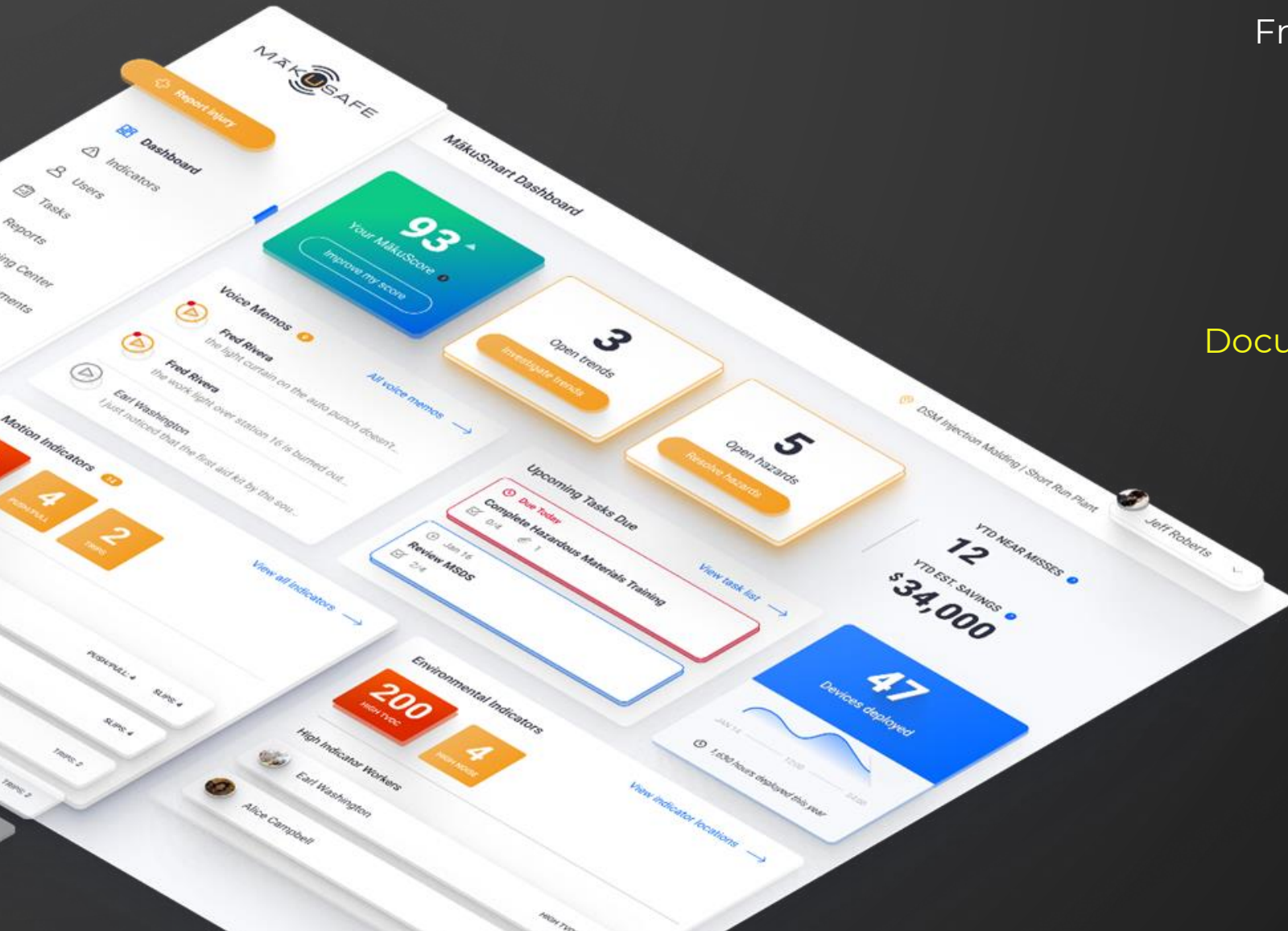
Location Conditions

AI-Driven Trends

AI-Driven Motion & Physicality Analysis

Document Incidents, Injuries, Tasks & Hazards

Reporting & Analytics



Support for Multiple Devices

T.R.U.E. Leading Indicators of Hazards & Risk

T – Timely

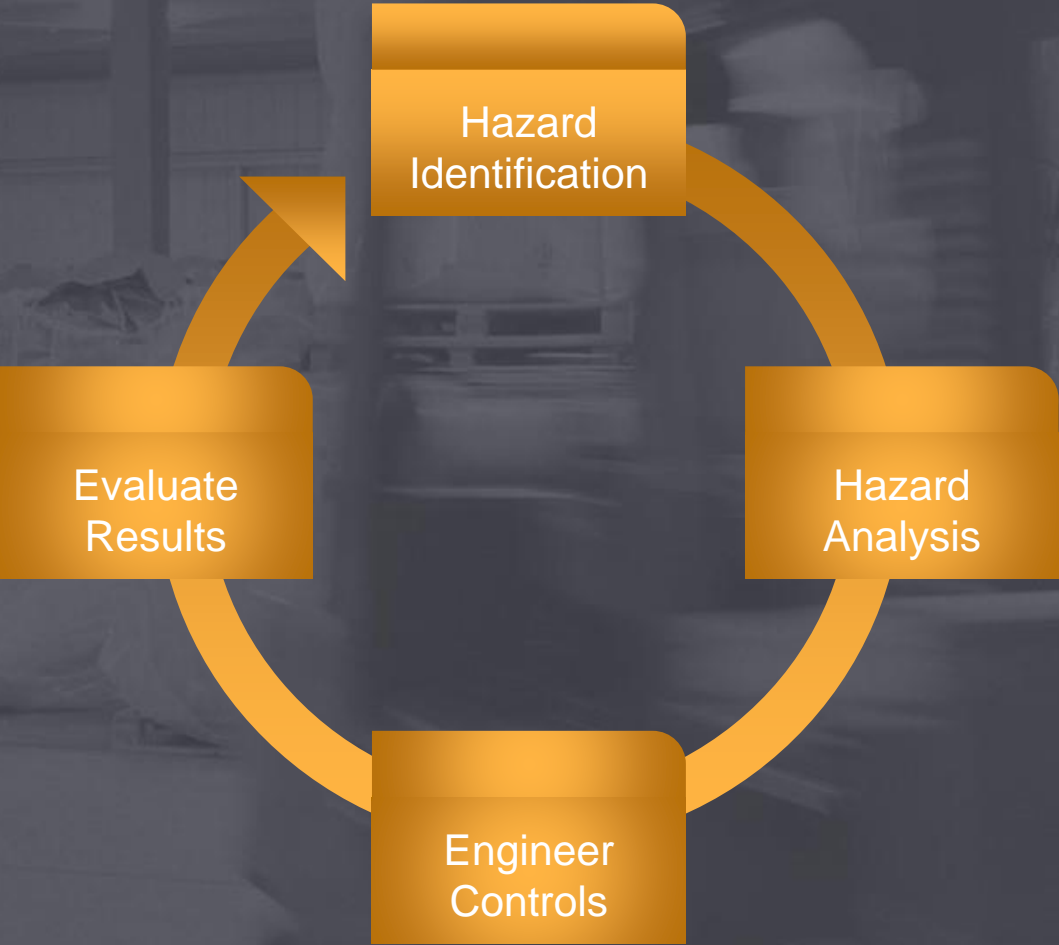
R – Relevant

U – Unique & Useful

E – Easy & Economical

This facility
has been
accident
free for
1 hours

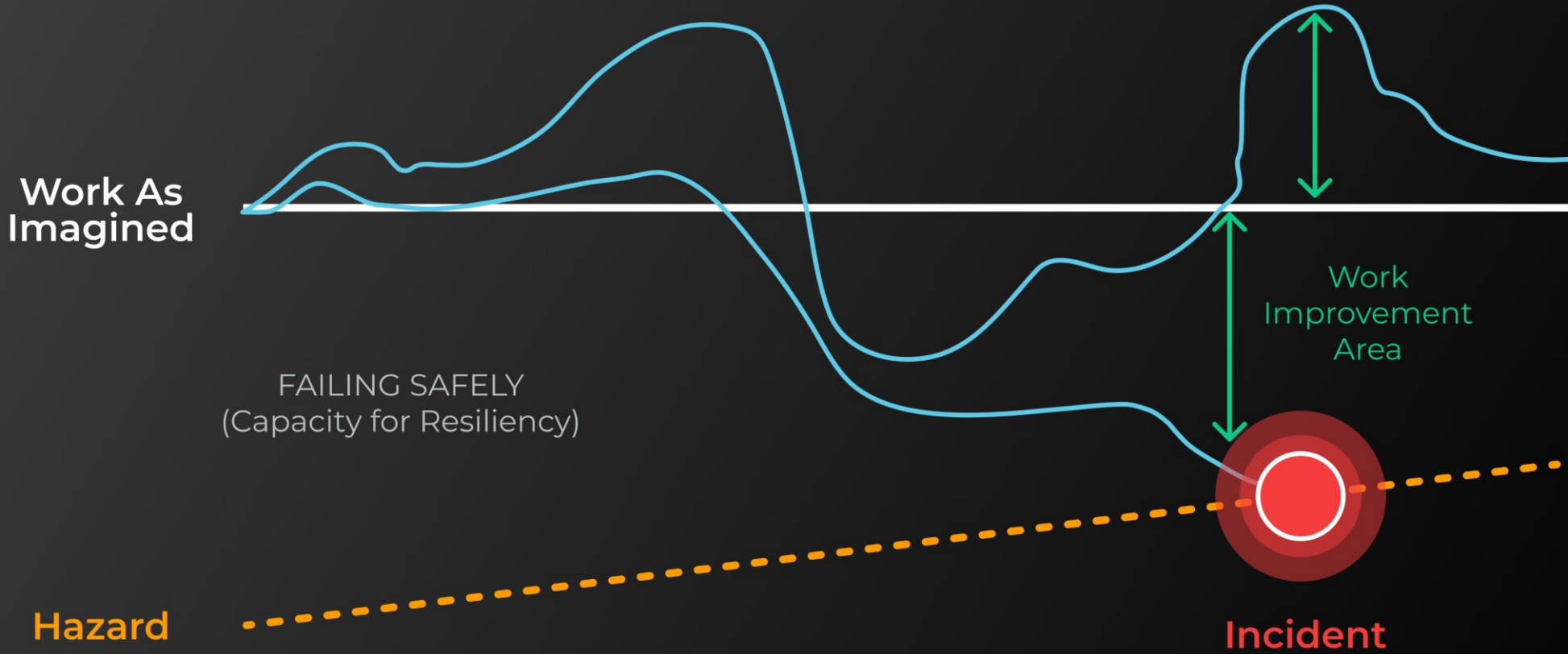
Safety Management Process

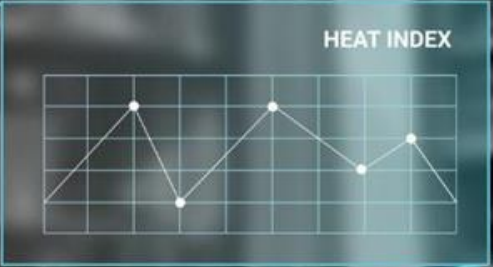


Culture, Engagement, Mindset
Humble Curiosity, Positive Recognition



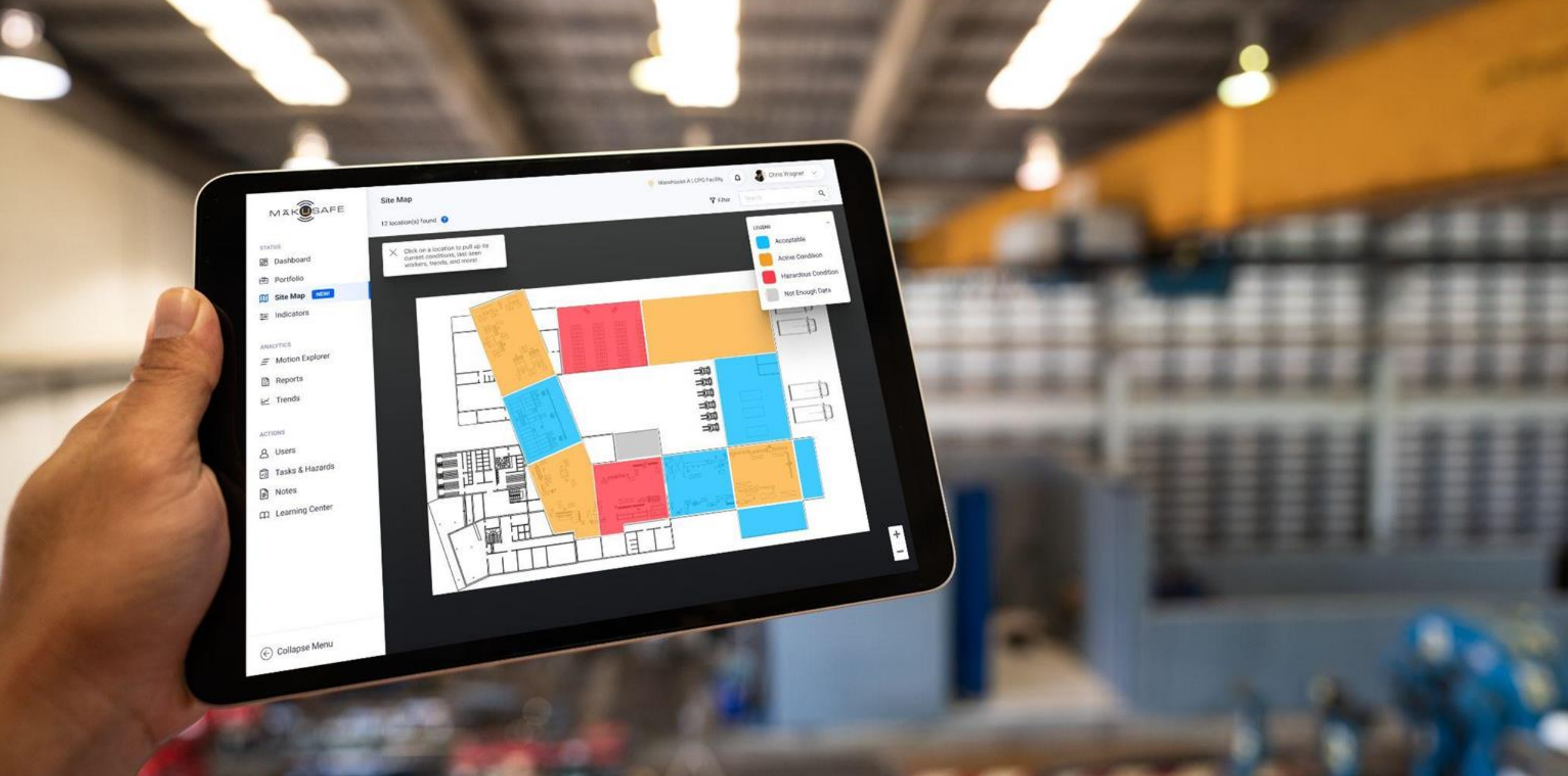
Human and organizational performance (HOP)
is a risk focused OPERATING PHILOSOPHY
which recognizes that to ERROR is human
and that an organization's
PROCESSES AND SYSTEMS greatly influence
employee actions and choices,
and consequently, their likelihood of success.





Environmentals - Heat & Noise Exposure, Air Quality, Light Levels






Location Services & Environmental Hazards



- Client Case Study
- Long standing construction client
- Deploying across numerous large data center projects
- Multi employer job sites
- ESG & Safety management program reporting to customer helps win projects
- Achieved and maintained 0.0% TRIR on sites where MākuSafe is being used
- 31 months



WEITZ CASE STUDY



YOUR VIRTUAL SAFETY TEAM: MAKUSAFE + DATA CENTERS

LEADING WITH SAFETY IN MISSION CRITICAL

The Weitz Company has always put safety at the forefront of our projects. With Mission Critical and data centers becoming a bigger focus of our efforts, MakuSafe was an great way to implement new technology and help protect workers. MakuSafe is a data analytics company located in West Des Moines, Iowa. They specialize in equipping workers with wearable safety devices that record data to help safety managers predict and correct potential hazardous issues on the job site.

MakuSafe prides themselves as an award-winning safety, data & analytics solution aimed at improving worker health, safety, and productivity while reducing incidents and mitigating workplace hazards and risk exposures. This innovative wearable technology provides immediate access to real-time EHS data with predictive value.

THE BENEFITS OF PREVENTATIVE TECHNOLOGY
The vast majority of near misses on the job site do not get reported. These small indicators can be huge signs of a potential hazard to come. When you can approach your job site from a proactive stance, you can begin to see a culture be formed.

On our current data center projects, we have teamed up with our trade partners to deploy all devices and are mining data looking for trends that can prevent injuries. We aren't reacting to an injury report - we're preventing the injury from happening. The National Safety Council reports that the average cost for a slip or trip that requires time away from the job costs a company an average of \$48,000.

HOW IT WORKS
With four different types of data collected, these small armbands collect environmental conditions, forceful motions, sound, and location information.

CONTRIBUTORS

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0.0

TRIR in the last 31+ months for Mission Critical

Wearable Anatomy



THE WEITZ COMPANY // MAKUSAFE

1

Last 30 Days | Last 7 Days | Yesterday

Filter Search

RANK	USER	PHYSICALITY	WORK ROLE	LAST 30 DAYS
1	JR Jaime Rodriguez	CRITICAL	Packer	[Progress bar]
2	RB Robert Brown	VERY HIGH	Packer	[Progress bar]
3	GJ Gracie Jones	VERY HIGH	Loader	[Progress bar]
4	AR Alejandro Riviera	HIGH	Welder	[Progress bar]
5	JM Jose Martinez	HIGH	Welder	[Progress bar]
6	JR Jaime Rodriguez	HIGH	Packer	[Progress bar]
7	RB Robert Brown	CAUTION	Packer	[Progress bar]
8	GJ Gracie Jones	CAUTION	Loader	[Progress bar]
9	AR Alejandro Riviera	CAUTION	Welder	[Progress bar]
10	JM Jose Martinez	ACCEPTABLE	Welder	[Progress bar]

Visualize worker's expended effort and potential impact on them for the day

MacBook Pro

- Client Case Study done through their insurer
- Trucking & transportation
- Reduced strain & exertion injuries by 56% in year one.
- They realized \$450,000 in WC savings per site



CSB CASE STUDY



CASE STUDY

WEARABLE TECHNOLOGY AS A SOLUTION FOR WORKPLACE SAFETY

As a leading member of [The Work Group](#), Cerner Strong is a leader in identifying innovative and creative ways to bring cutting-edge solutions to the insurance industry. Cerner Strong recommends Makusafe, a B2B marketplace participant, as a prime technology partner for this pilot. Cerner Strong continues to explore wearable technologies with established and emerging companies and will recommend the best fit for our clients.

CONNECTIONS & RESULTS

MAKUSAFE

1 Superstar
10/10/2022

17 Jan 2023
10/10/2022

SINCE IMPLEMENTING A LIFTING MECHANICS PROGRAM AND USING WEARABLE TECHNOLOGY, THIS COMPANY REDUCED WC LOSSES BY \$450K IN 2022.



Ian Lawrence

DEC 12, 2023 4:55 PM



0:00 / 0:06



The electrical panel on the vacuum sealer is hanging open and there's exposed wires in there. I think maintenance needs to get down here and get that closed up before somebody shocks themselves

Archive

Create Hazard



- Client Case Study done with NSC
- Nationwide Logistics Organization
- Reduced lost time injuries by 74% in year one
- Continuous stream of feedback from the front lines
- Positive cultural impact documented



**WORK TO ZERO
NSC CASE STUDY**

WORKtoZERO Safety Technology Case Study

Data Analytics and Wearables

What's the Risk?
According to the [National Safety Council](#), musculoskeletal disorders (MSDs) are the most common workplace injury, affecting nearly one quarter of the global population. They often result from workplace tasks that involve actions like repetitive movements, awkward or static postures, and forceful exertions. Examples of MSDs include:

- Strains and Sprains
- Muscle Rupture
- Tendinitis
- Carpal Tunnel Syndrome
- Herniated Discs
- Hernia

To reduce injuries and better understand the leading indicators of MSDs, NFI Industries began piloting the MakuSafe system, which combines wearable technology with data analytics to deduce the intensity of a worker's effort expended, arrive at conclusions about the level of potential impact on them for each day, and provide other data-driven insights (e.g. movement type, incident time, and location).

Impacts
NFI is currently piloting 120 MakuSafe wearables across three locations, primarily focused on workers performing material-handling tasks (e.g. loading and unloading). Data insights provided by MakuSafe, combined with customized lifting training and behavior-based safety tactics, have allowed safety leaders to **successfully offer support and coaching** to at-risk employees. In fact, quarterly injury results found a **74% reduction in injuries** at the pilot sites.

Culturally, employee survey results show that **safety is in the top quartile in terms of favorability**, further exemplified by the workers' willingness to utilize the units voluntarily.

Lessons
As NFI continues expanding their use of the MakuSafe system, they provided several **lessons learned** when it comes to adopting technology:

- Introduction of a behavior based safety process allowed NFI to improve the culture around technology and safety organization-wide
- Maintain transparency and trust with employees. Explain the goals of the technology, how it works, how data will be used, etc.
- Continuously gather formal/informal feedback from employees and managers using the technology
- Engage with your IT department for issues around configuration, security, and compatibility
- Understand the capabilities, mechanisms, and shortcomings of the technology, avoid being sold by bells and whistles

Employer



NFI
Based in Camden, New Jersey, NFI is a third-party logistics provider that offers domestic and international supply chain solutions. NFI employs an estimated 16,800 associates nationwide.

Technology



MakuSafe
Based in Des Moines, Iowa, MakuSafe is a Safety, Data & Analytics solution. The MakuSafe system combines a safety management software platform with wearable technology, providing real-time EHS data with predictive value.








**Front Line
Conversations**

Build Culture, Engagement, and Mindfulness

Shifting Safety Culture



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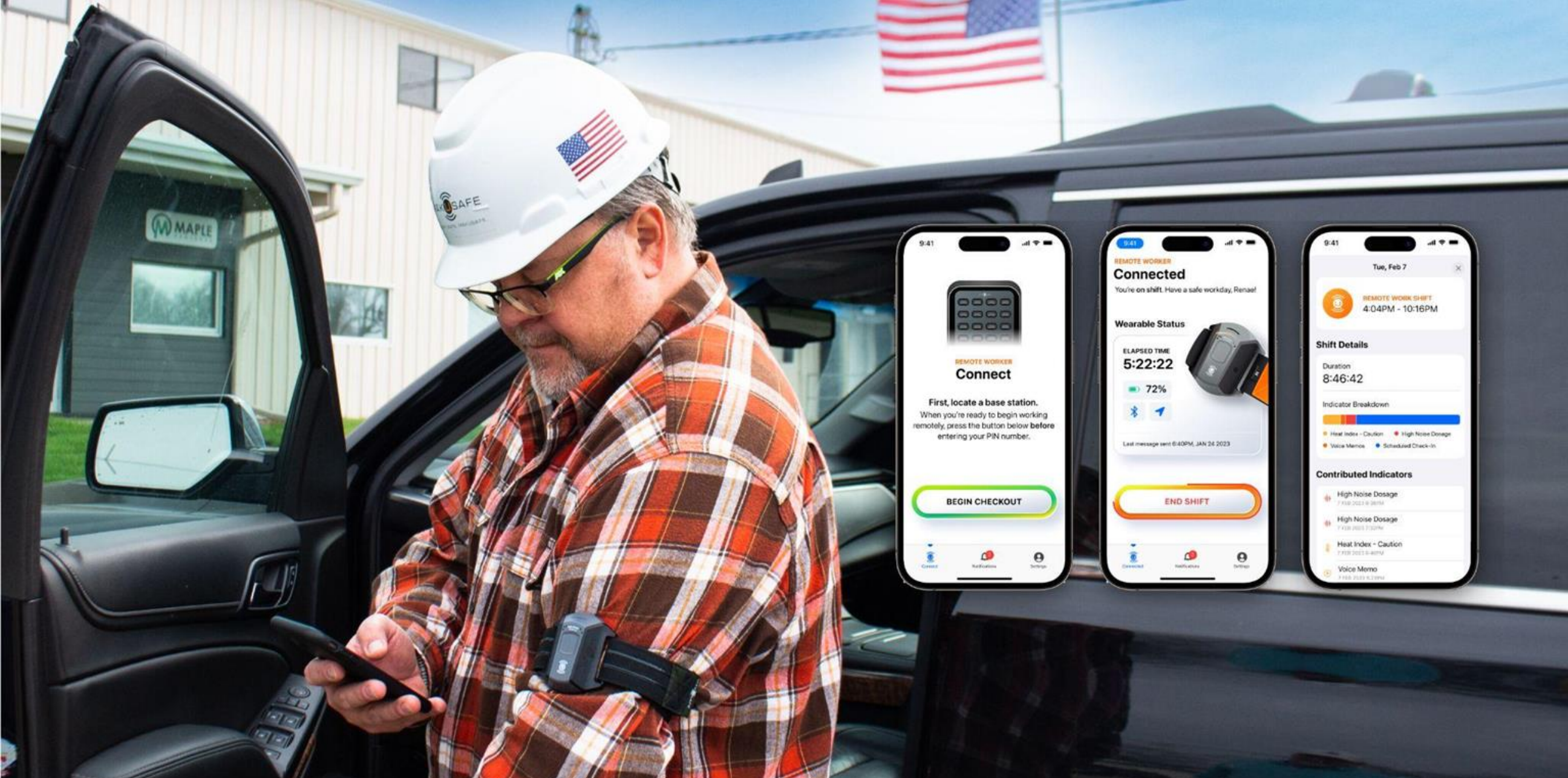
Shifting Safety Culture



- 0 +

Stronger Cultures + Safety Mindfulness + Worker Engagement =

14X Safer Workplaces with 70% Incident Reduction
Higher Quality & Higher Productivity



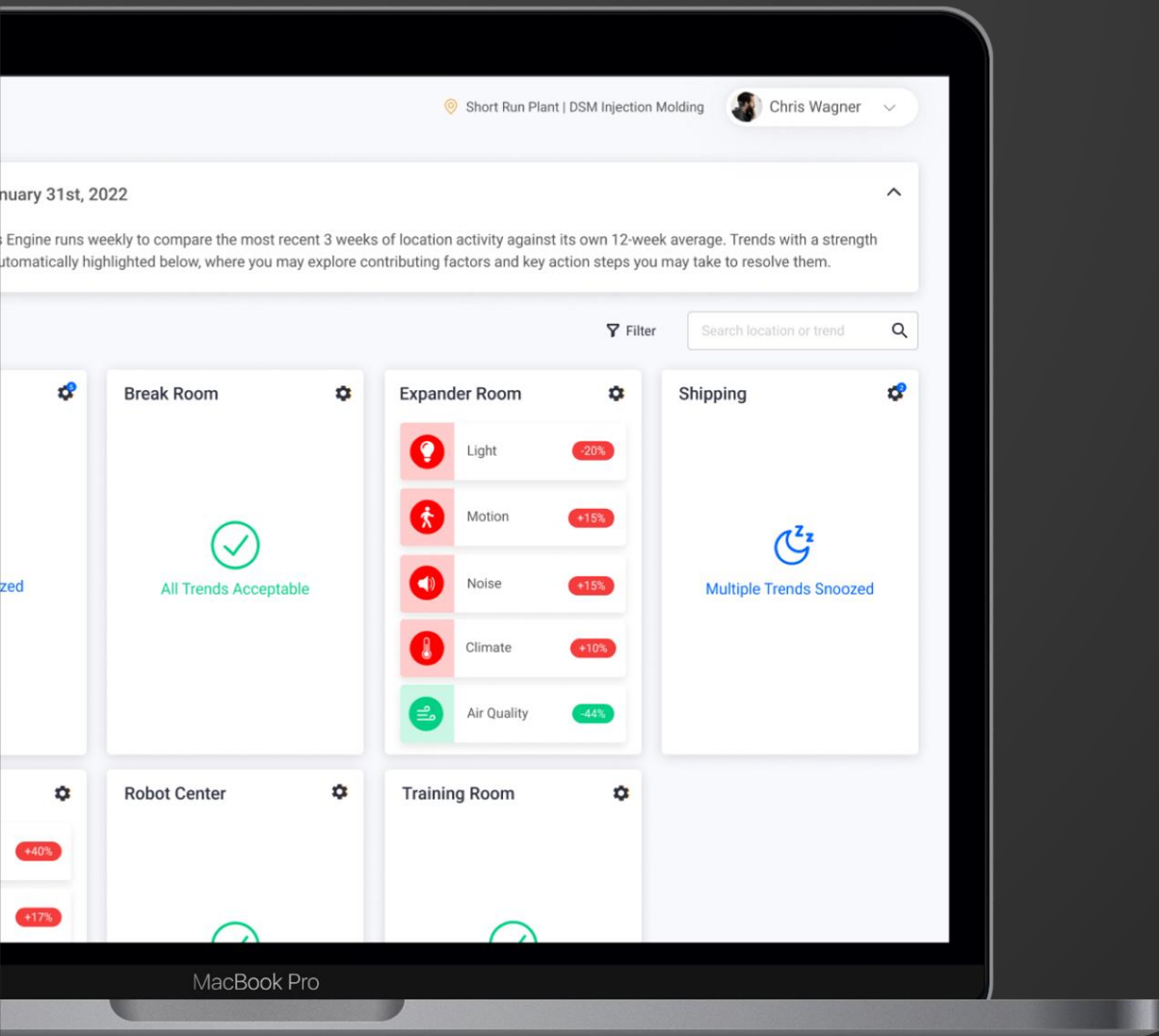
Remote Worker



MākuSafe RāngeView

Worker Proximity
Contact Tracing
Connected Workforce

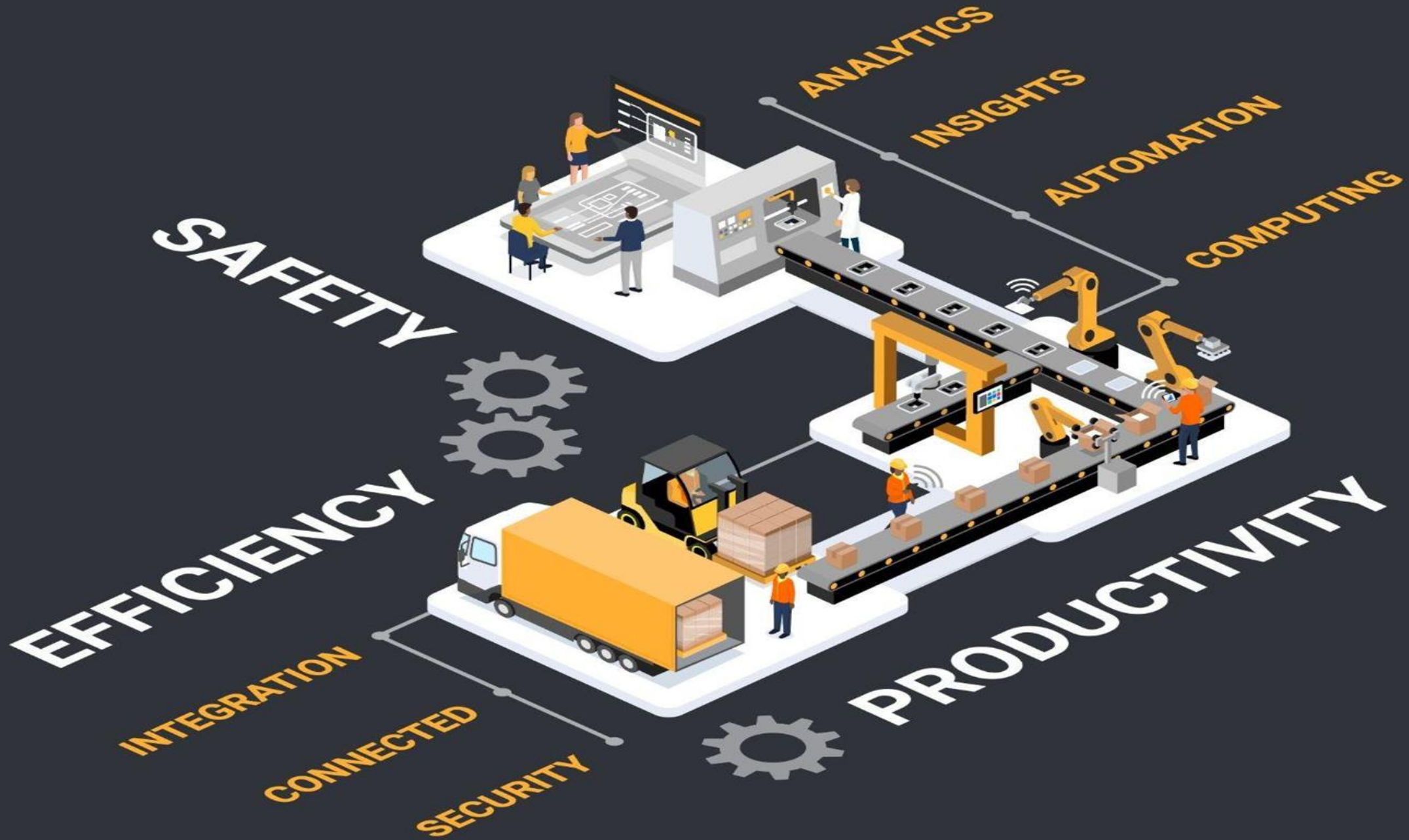


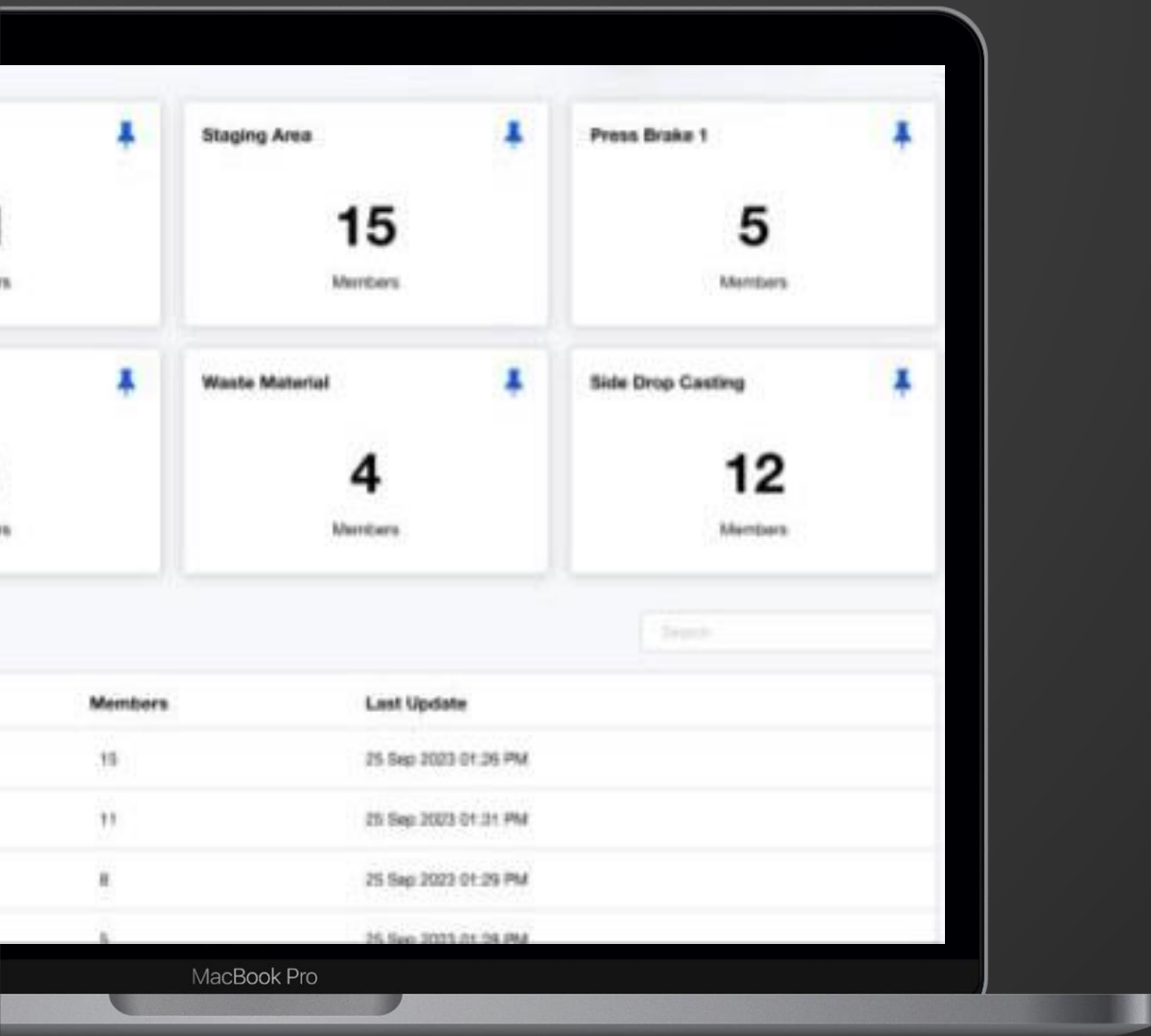


DANGER

BE CAREFUL
WHEN BELT
IS IN MOTION.







DATA:

- Who
- Where
- Time
- When
- Duration
- Credentials
- Integration

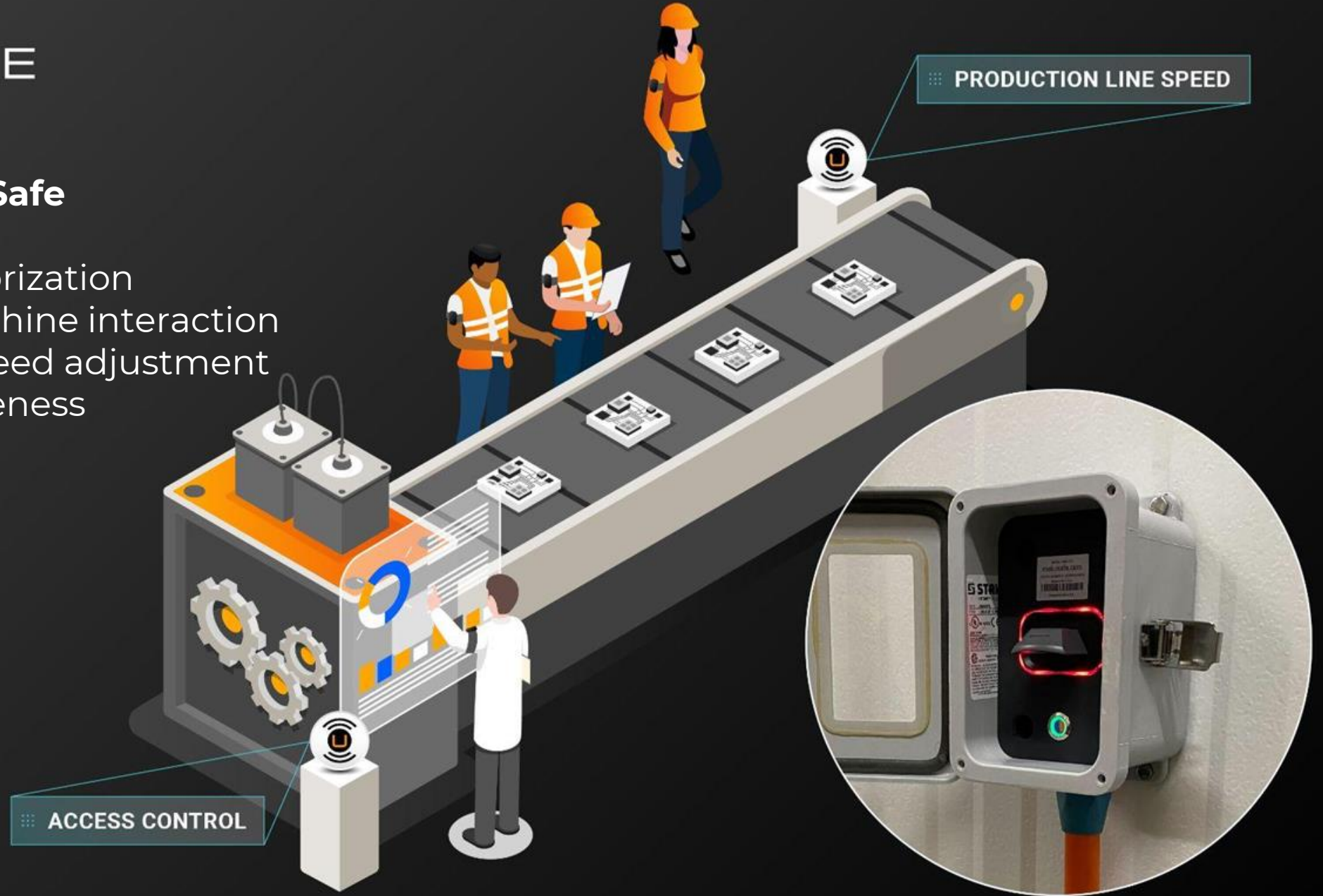
BENEFITS:

- Automation, Control
- Permit, Restrict
- Productivity
- Line Position Tracking
- Cost Accounting
- Safety



Interact - By MākuSafe

- Machine authorization
- Worker to machine interaction
- Automated speed adjustment
- Location awareness
- Access control
- Job costing



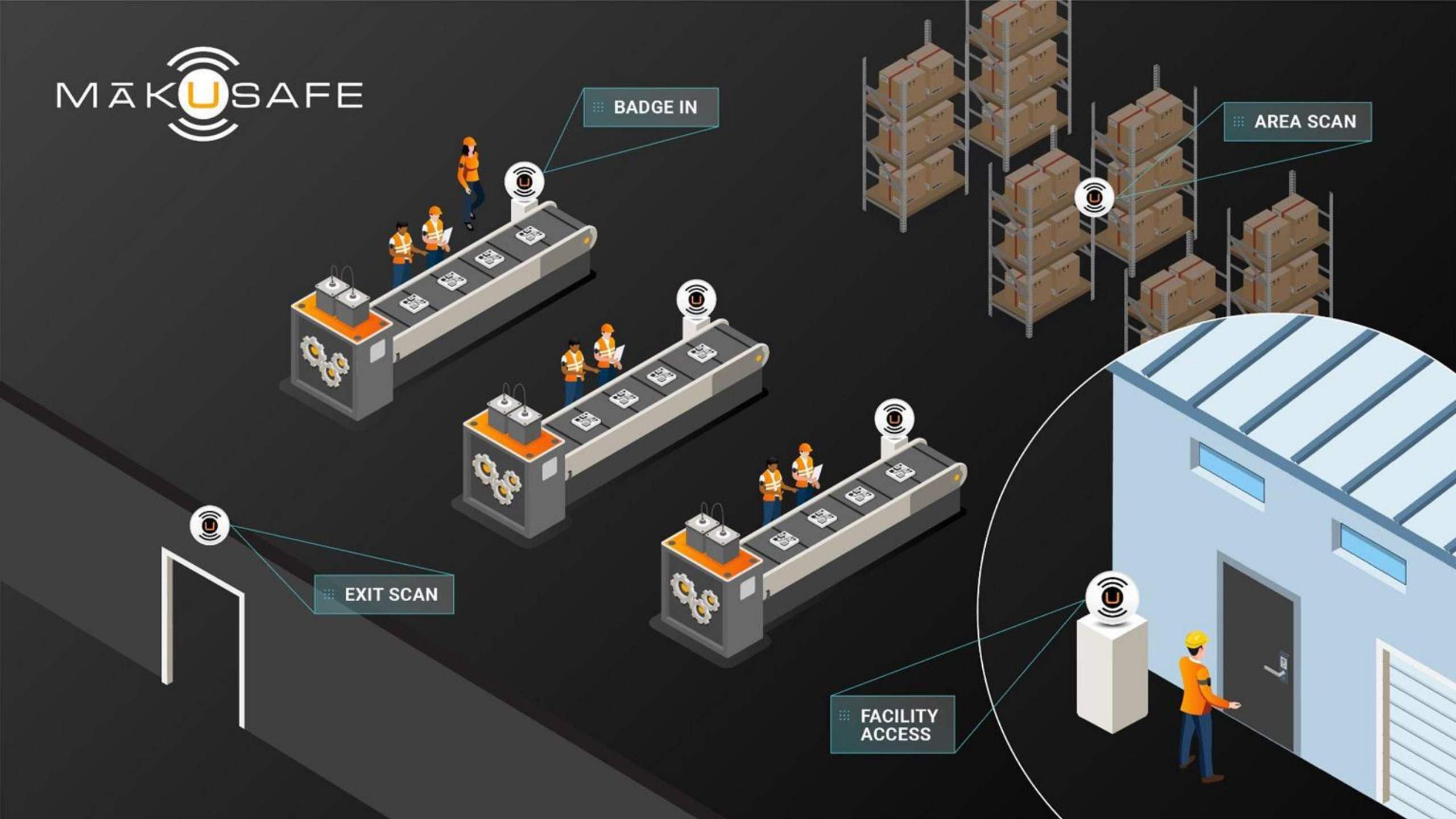


BADGE IN

AREA SCAN

EXIT SCAN

FACILITY ACCESS



MAKUSAFE



*Thank
you!*



**OVERVIEW
FLYER**



**PRODUCT
SUMMARY**



**MANUFACTURING
USE CASES**

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