WORK TO ZERO

An Innovative Approach to Saving Lives at Work

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JUNE 2022
National Safety Month
an nsc initiative
GET ENGAGED!

1. Introduce yourself
   Please use the Chat
   Name, company
   Your interest in technology
   Share your experiences
   How can WTZ support you

2. Ask us questions
   Please use the Q&A tab
Eliminating fatality risk in the workplace with emerging technology
Improved H&S performance + increased operational efficiency
Objective 1:
In what situations are workers dying?

Objective 2:
What technology could eliminate the risk?
What are the most hazardous situations with greatest potential for fatalities?

- Work at Heights 23%
- Workplace Violence 13%
- Repair and Maintenance 12%
- Construction and Installation 12%

What are the most dangerous situations you all are dealing with in your workplace?
What is contributing?

Worker fatigue
Leadership or cultural failure
Lack of proper training
Technologies Currently in Use
Most commonly used tech?

Digital gas monitors
VR and digital training
Permit to work tech
Proximity sensors
Drones
Lone worker monitoring
Looking at using?

- Heat stress wearables
- Fatigue monitoring and wearables
- Downed worker devices
- Video behavior analytics
Considerations and Barriers in Innovating
What's important when innovating?

Effectiveness
Relevance
Ease of use
Lifetime cost
What are some barriers to adoption?

- Not adaptable
- Lack of success stories
- Resistant workforce
- Limited knowledge
What is your organization’s biggest challenge to innovating?

A. Our ability to identify the right technology
B. Our organization’s mindset and readiness
C. Our ability to build the business case for innovation based on ROI
D. Our cyber security competencies and concerns about data privacy
Challenges to Innovation

- 30% Our ability to identify the right technologies
- 25% Our organization’s mindset and readiness toward technologies
- 22% Our competency to adopt new technologies for safety innovations
- 17% Our ability to build the business case
- 12% Our competency to handle the unforeseen tech issues/hidden risks

N=696
Welcome to Industry 4.0
Digital Transformation is Here to Stay

• How can we overcome barriers to innovation and use technology to save lives at work?
• Is there a process employers can use to make innovation more accessible?
Making Innovation Accessible
Safety Innovation Journey

- Understand your fatality risks
- Explore technology solutions
- Determine your readiness
- Make the business case
- Pilot safety technology
Web tool coming soon!

Prioritizing the use of technology controls based on risk exposure

Industry spotlights
Explore technology solutions

Safety Innovation Journey

Recorded Webinars

An Introduction to Drones for Workplace Safety

Underwater Drones

Safety Technology Case Study

Employer Nutrien

Maintain Safety

Safety Technology

Technology

Underwater Drones

- Reduces the risk of drowning and other related injuries
- Generates security and safety
- Increases safety and efficiency
- Minimizes the risk of injury
- Increases safety and efficiency
- Minimizes the risk of injury
- Increases safety and efficiency
- Minimizes the risk of injury
## Priority Technologies

<table>
<thead>
<tr>
<th>2020 - 2021</th>
<th>2022 - 2023</th>
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<tbody>
<tr>
<td>VR/AR</td>
<td>Camera analytics</td>
</tr>
<tr>
<td>Drones</td>
<td>EHS Software and mobile apps</td>
</tr>
<tr>
<td>Proximity sensors</td>
<td>Data and artificial intelligence</td>
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<tr>
<td>Fatigue wearables and monitoring</td>
<td>Robotics</td>
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In 2021, the FAA reported nearly ________ drones registered in the U.S. alone.

• 250,000
• 400,000
• 650,000
• 900,000
Safety Technology: Is your organization ready?

DIGITAL READINESS
Phases of Digital Readiness for Embracing Safety Technologies

**Observing**
- Passively exploring safety technology
  - Collect stakeholder feedback
  - Gather information on digital solutions and top hazards

**Experimenting**
- Evaluating proof of concept for safety technology
  - Implement digital solutions
  - Establish a roadmap for safety innovation

**Adopting**
- Investing in safety technology
  - Employers’ actions
    - Identify digital champions
    - Obtain more input and modify processes

**Integrating**
- Using technology to maximize the value for safety
  - Employers’ actions
    - Evaluate the integrity of data and digital outputs
    - Consider incorporating digital solutions more broadly

**Transforming**
- Driving new safety innovations
  - Employers’ actions
    - Continuously improve by aligning digital mindsets, skill sets, and tool sets
    - Commit resources for maintenance and innovation

Identify where you are and progress to the next phase
What percentage of employers surveyed reported to be in the **Observing** phase?

- 10%
- 15%
- 30%
- 45%
Implementing safety technology for high-risk tasks can lead to:

- Decreased workplace injuries and fatalities
- Lower total medical costs
- Reduction in claims and fines
Make the Business Case for Safety Innovation

With the rapid progression of safety innovation, new technologies can help save lives and money. Need help building the business case?

Define business goals
Explore safety technologies
Assess digital readiness
Consider the ROI for safety
Build a business case for innovation

Visit ns.org/TechROI to access new investment calculators.
Calculate the return on your investment

Which technology are you interested in learning more about?

- Proximity Monitoring Wearables

How many vehicles or pieces of equipment will require proximity beacons? 5

How many employees will require proximity monitoring wearables per shift? 25

Do you have a nightshift? Yes

What is your industry? Mining

How many employees are there in your organization? 50 - 100

Email Address

Get Your Report

We will email you the results of this calculator.
Create a Business Case to Adopt Safety Technology

You could save $4.16 per $1 invested!

Potential Savings over 5 years: $40,627

Estimate your return on investment when adopting Proximity Monitoring Wearables

<table>
<thead>
<tr>
<th>Year</th>
<th>Savings</th>
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<tbody>
<tr>
<td>1</td>
<td>$832</td>
</tr>
<tr>
<td>2</td>
<td>$10,570</td>
</tr>
<tr>
<td>3</td>
<td>$20,455</td>
</tr>
<tr>
<td>4</td>
<td>$30,478</td>
</tr>
<tr>
<td>5</td>
<td>$40,627</td>
</tr>
</tbody>
</table>

![Graph showing savings over 5 years]
Operating *business as usual* could cost $121,646 over 5 years.
INVEST TO SAVE LIVES

Initial Costs
$8,750.00

Operating Costs
$1,875.00
Pilot and Implementation Roadmap
Safety Technology
Pilot and Implementation Roadmap

As this is not a linear journey, you may need to revisit the roadmap throughout the process.

1. Plan
   - Define values and business goals
   - Consider management of change (MoC) to assess business impact
   - Ensure organizational readiness

2. Prepare
   - Build a coalition of digital champions representing all employment levels and revisit readiness
   - Determine data structure and reporting alignment
   - Revisit MoC

3. Evaluate
   - Examine the ROI of technology
   - Review case studies
   - Design/select possible technology solutions

4. Innovate
   - Rollout technology
   - Evaluate data integrity and performance
   - Enact continuous improvement and monitoring

Learn more about the path to safety innovation in our new report.
ns.org/TechRoadmap
Accelerating Technology
Advancing Adoption
Safety Innovation Journey

1. Understand your fatality risks
2. Explore technology solutions
3. Determine your readiness
4. Make the business case
5. Pilot safety technology
Best Practices and Principles

- Learning agility is key
- Solve for risk-based challenges
- Effective change management
- Commit to human-centered continuous improvement
Gear Up to Innovate

**MINDSET.** Refers to a human-centered vision toward innovation

**SKILLSET.** Includes the key competencies or knowledge needed

**TOOLSET.** Includes key structural requirements for innovation
Which of the following key areas needs most attention in your organization?

A. Mindset  
B. Skillset  
C. Toolset  
D. All of the above
Check out recorded webinars

Making the business case for safety innovation

NSC Employer Investment Calculator
SAFETY TECHNOLOGY
NSC Congress & Expo

September 19 - 21
Safety Technology Pavilion
3 WTZ technical sessions

New releases:
Workplace Violence report
Safety Innovation Challenge case study

WTZ Summit & Expo

Save the Date!
February 2\textsuperscript{nd} - 3\textsuperscript{rd}, 2023
Long Beach, CA
Let’s Discuss!

What does the innovation journey look like in your organization?

What issues are you dealing with that WTZ could help with?

What is important to you when you’re thinking about innovating?