

TRANSFORMING THROUGH CONNECTED SAFETY

April 2021



- About Blackline Safety
- Lone worker safety practice & challenges
- Need for policy
- Connected safety
- Elevate with data analytics
- Questions

ABOUT BLACKLINE SAFETY

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PUBLIC COMPANY (TSXV: BLN)



SERVICE PROVIDER

MONITORING PARTNER

PROTECTING 60,000+



SAFETY SOLUTIONS FOR MULTIPLE ENVIRONMENTS — CASE STUDIES

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"We wanted something that was going to give us a signal that we'd be able to pick up hundreds of miles away. If a driver went down, we had no way of really knowing that he'd gone down. Obviously if he goes down, it's serious. You need to be responding very quickly"





"Over the years we've evaluated a number of different systems, and Blackline Safety is the only one I think could realistically save a life"

"What separated Blackline Safety from the competition was the nomotion sensor"





Worker's G7c connected safety wearable connects him to Blackline Safety Operations Center after he suffers cardiac arrest, enabling SOC to dispatch emergency services.

"If we didn't have the Blackline device and the AED, I don't think [our employee] would be alive today."

June 2019 News Release



"Everyone wears Blackline Safety devices — it's just part of the uniform"

EWA's employees work beyond sight and sound of others in several scenarios. "Should an employee fall down in our basement, I know immediately about the situation"



CONNECT. MONITOR. RESPOND.

Lone Worker Safety – Practice & Challenges



- Safety+Health magazine profiled lone workers in their August 2015 issue
- Someone beyond sight and sound of others who can provide help
- Some personnel occasionally work alone, others are frequently or exclusively alone
- > What risks do they face?



NO GENERAL LONE WORKER REGULATION

SHIPYARD INDUSTRY

§3395. Heat Illness Prevention

(e) High-heat procedures. The employer shall implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

- (1) Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.
 - (C) Regular communication with <u>sole employee</u> such as by radio or cellular phone, or
 - (D) Other effective means of observation.

(f) Emergency Response Procedures. The Employer shall \$29 implement effective emergency response procedures including:

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(1) Ensuring that effective communication by voice, hat observation, or electronic means is maintained so that 29 employees at the work site can contact a supervisor or emergency medical services when necessary. An hn electronic device, such as a cell phone or text lific messaging device, may be used for this purpose only terior if reception in the area is reliable. If an electronic device will not furnish reliable communication in D the work area, the employer will ensure a means cal of summoning emergency medical services.





More lone workers than ever

- > Organizations looking for ways to cut costs
- Lean Six Sigma programs aim to reduce waste – big contributor to increase of lone workers
- > Facility and process automation

Increased risk

- More likely to be accosted when working alone
- Increased severity in case of injury because of lack of immediate response

Cost of manual monitoring programs

- > Lost productivity due to check-ins:
- > Supervisor/call center cost:
- > Buddy system lost productivity:

\$125/month/employee \$175/month/employee \$480/month/buddy pair

Check-in period: 2 hours Shift duration: 8 hours

Number of check-ins: 5 (4 check-ins, 1 check-out)

Time lost during check-in: 1 minute Monthly check-ins: 100 (20 days * 5 check-ins)

Lost time per month: 100 minutes

Value of an employee work to business (not wage): \$75/hour

Lost productivity per month: **\$125/month** per employee

Direct and indirect fatality costs

- > Direct costs of a fatality: **\$1.4 million (NSC)**
 - > Civil penalties
 - > Fines
 - > Property damage
 - > Medical expenses

> Indirect costs:

\$2.1 million (NSC)

- > Workplace disruption
- > Lost productivity
- > Insurance premiums
- > Legal fees
- > Training & recruitment

Sample Scenario

- Company with \$100M in revenue
- \$5M bottom line profit (5% profit margin)

Revenue required to break even on direct costs:

- \$1.4M / 5% = \$28M
- Another \$42M needed to cover indirect costs

Total: \$70M revenue to break even

1. Begin with a hazard assessment

- > Identify any hazards
- > Assess risks
- > Control the risks
- > Communicate the risks to employees
- > Monitor that controls remain in place
- > Create a lone worker monitoring program

2. Document an effective policy covering

- > Who are your lone workers?
- > What work do they perform and where?
- > When do personnel work alone?
- > **How** will you monitor their safety?
- > Why are you initiating a program now? (change management / employee engagement)
- > To be compliant, what should workers do, and when?
- > **How** would your business assess compliance?

Connected Safety



Many gaps

- > Cell phones
- > Vehicle GPS
- > Two-way radios
- > Manual check-in system
- > Cameras throughout facility

CONNECTED WORKER - SAFETY AT THE CORE

- > Wireless wearable technology
- Gas / atmospheric / VOC sensors that understand the environment around an employee
- > Location technologies
- > Software tools and data storage
- > Data analytics and reporting
- > Communication methods



LOCATION TECHNOLOGY GPS and beacons

WEARABLE DEVICE

- Worn like a traditional gas monitor
- Includes gas sensors, fall detectors, no-motion detection, check-in

CONNECTIVITY Cellular, satellite, Wi-Fi, mesh networks, Bluetooth to smartphones

ONLINE SOFTWARE

Cloud-hosted software, notifies individuals, stores configurations, reporting & data analytics

LIVE MONITORING

Control room, supervisors or thirdparty monitoring center options for response management

LONE WORKERS

Keep an eye on employees working beyond sight and sound of others

GAS DETECTION

Location-enable gas readings to empower data analytics, respond to incidents in real-time

DATA ANALYTICS

Leverage 'big data' created by every gas detector, quickly sift through the data

AREA MONITORING

Continuous monitoring of tank farms, processes, spill sites and during plant maintenance

EVACUATIONS

Evacuation individuals, teams or sites through notifications, actively account for everyone along the way

TEAM COMMUNICATION

Convergence enables a gas detector to be used like a two-way radio

EMERGENCY RESPONSE

Control room, supervisors or central monitoring center manages every alert

LEAK SURVEY

Leverage 'big data' created by every gas detector, quickly sift through the data

COMPLIANCE

Automating regulator gas detection compliance, equipment use compliance

REAL-TIME TURNAROUNDS

Maintenance projects benefit from safety and productivity-based awareness and data analytics

INDUSTRIAL HYGIENE

Help IH team manage a worldclass program to protect employee health into the future

CONFINED SPACE ENTRY

Keep track of who enters confined spaces, which ones, for how long and know what gases were encountered

LONE WORKER CHECKS

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CHALLENGE – Manual employee checks prone to error

HOW TO AUTOMATE? WEARABLES PROVIDE:

- Fall detection
- No-motion (man down) detection
- Missed check-in detection

EVACUATION MANAGEMENT

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CHALLENGE - Difficult to evacuate sites and account for every worker along the way

ACTIVE EVACUATION MANAGEMENT

- Mass employee notifications
- Select individuals, teams, areas or full sites
- Map everyone's location as they muster
- Contact anyone lagging behind
- Dispatch help knowing the situation

RADIO CALLING

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CHALLENGE – Employees wear, and business pay, for TWO devices

OPTIMIZATION AND PRODUCTIVITY

- Push-to-talk integrated into Intrinsically Safe wearable
- Employees use lone worker/gas detection wearable like a two-way radio
- Businesses benefit from 100 channels of communication
- Cellular communications work beyond a single site

GAS DETECTION AND RESPONSE

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CHALLENGE – Gas detection should alert others, not just the employee

AUTOMATION

- Real-time alerts
- Connects worker to a live monitoring team through voice call or messaging
- Streams gas readings to online software
- Location-enabled data drives business insights
- Modularity eliminates downtime if failed sensor

CONFINED SPACE AND LEAK CHECK

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CHALLENGE – Difficult to know what's happening in the field

AUTOMATED CSE INSIGHTS

- Who enters which confined spaces?
- How long are personnel in confined spaces?
- What hazards were encountered?

LEAK CHECK

- Where do leaks occur?
- Map non-alarm gas exposures from everyone over time
- Dispatch employees to perform leak checks

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Elevate With Analytics

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REAL-TIME TURNAROUNDS

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umber of STEL Gas Alerts **4** Number of High Gas Alerts

20

Number of Low Gas Alerts 344

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CHALLENGE – Maintenance projects lose out by not leveraging location & safety technologies

AUTOMATION

- Connected personal gas detection
- Realtime emergency response tools
- Location technology & floor plans
- Documented confined space entries
- Analytics shows productivity
- Located-based integration with project management software

DATA ANALYTICS

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CHALLENGE – Missing information about lone worker and gas detection programs

AUTOMATION

- Devices stream data to cloud-hosted software
- Analytics helps users drill into their data
- All data location-enabled for mapping
- Review data by employee, team, time, event type and location
- New reports created based on feedback

BLACKLINE LIVE DEMO

THANK YOU

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