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HOW CONNECTED SAFETY IS TRANSFORMING THE WORKPLACE

Total Safety's modern technology gives real-time, data-driven insights into safety on the ground, allowing for quick and informed decisions that protect your workers' lives.

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FEATURES

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Choosing the right gas detection for your worksite

The time to prepare facilities for extreme weather is now

As industrial times change, so do workers' personal needs

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Solvay's Brooks offers tips on digital self-inspection programs

AFPM tools promote knowledge sharing in FCC community

GPA Midstream celebrates 100 years, while looking ahead

PLUS...



SafeTek™
The future of
connected safety

See Page 13



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How Connected Safety Is Transforming The Workplace

For industrial companies around the globe, worker safety is dependent on always knowing where your workers are and what hazards they are facing, as well as leveraging that information to proactively improve safety protocols. All too often, companies lack visibility into their operations and workforce to properly mitigate risks.

Wearable connected technology has become commonplace in personal lives — from tracking an Uber's location on a phone to checking heart rates on wrist monitors — and it's changing industrial safety protocols as well. Environmental, health and safety (EHS) is also going through an evolution in incident detection, avoidance, reporting and management through the rise of connected safety in the workplace. In particular, connected gas detection devices can help avoid serious workplace incidents. With around “340 million occupational accidents and 160 million victims of work-related illnesses annually,” according to the International Labour Organization, things can be done better.

It's modern technology that gives real-time, data-driven insights into safety on the ground, allowing for quick and informed decisions to protect your workers' lives.

What is connected safety?

A connected safety solution is composed of a cloud-based software platform that connects to worker and workplace IoT safety-based devices to display data in real time.

It's Industrial IoT (IIoT) with a safety focus, with IIoT being a key competitive market differentiator and one of the main technologies underpinning what has come to be called “Industry 4.0.”

The benefits of the approach are being adopted quickly. In fact, a 2020 analyst report from Meticulous Research claims that the IIoT market will be worth \$263.4 billion by 2027. The IIoT refers to a network of interconnected devices used for designing, maintaining, monitoring, optimizing and analyzing the industrial operations to gain real-time insights and make more effective decisions.

In the context of gas detection, this means progressing from simple monitors with only personal alarms to a cloud-connected network of devices that can be a mix

of wearable gas detectors and area monitors. Data flows into smart, cloud-based software for analysis and reporting with the ability to communicate safety information back to devices by monitoring personnel. This results in a fully managed network of incident alerting, response and avoidance opportunities across your entire workforce and sites.

This data-driven approach is revolutionizing industrial EHS, leading to improvements in worker safety, workflow, safety process automation and compliance.

Meet the future of connected worker safety

Total Safety has been at the forefront of innovative safety technology development and implementation for over 25 years. This year, Total Safety introduced SafeTek™ to empower worksites with the technologies and equipment needed to keep workers protected and connected 24/7. SafeTek™ is operated by trained and certified technicians who are responsible for overseeing surveillance, communication and incoming data management, all from Total Safety's centralized Technology Center in Houston.

“Our customers are looking for ways to make their operations safer, more efficient and more productive, especially now, post-COVID-19 and with other market constraints,” said Vice President of SafeTek™ Worker Safety Technology Clint Palermo. “They have work to do, and they want to do that work safely, in a timely manner and with as little cost as possible. With SafeTek™, our team delivers a wide variety of fully connected gas detection products and services that will give them exactly that and more.”

SafeTek™ data-enabled solutions for connected workforce safety

SafeTek™ takes all of your connected IoT devices and turns them into a complete ecosystem of safety for any worksite or lone-worker situation.

SafeTek SmartMonitor™

SafeTek SmartMonitor™ includes Total

Safety's patented Centralized Confined Space Monitoring (CCSM) system and is designed to improve worker safety in up to 12 confined spaces per console, with real-time gas detection monitoring, digital cameras, supervision and data collection.

The portable version of the CCSM monitors up to three spaces on a tablet, without sacrificing any capabilities available with the full CCSM system. This is perfect for open, clean and inspect programs with short time durations and quick turnarounds.

The centralized control room for monitoring, management and deployment of connected technologies can be set up on a customer's site and supported from the Technology Center's centralized control room.

SafeTek Shield™

SafeTek Shield™ keeps workers safe with wearable cloud-connected devices for innovative real-time monitoring and GPS location detection. From gas monitoring to motion and fall recognition, users can rest assured that tested and proven direct-to-cloud technologies will see, locate and alert emergency responders to help protect workers during critical situations.

In partnership with Blackline Safety, using Blackline's G7 devices and the Blackline Live monitoring and analytics platform, all gas detection readings are reported to the cloud, offering insights such as real-time monitoring, heat mapping and alarms for combustible and toxic gases. Instant data delivery on device usage, bump tests and calibration ensure compliance and greater worker safety. Besides automating regulatory compliance, Blackline's G7 device can wirelessly connect a worker to a live monitoring team — meaning real-time help is always available.

Additionally, the Blackline Safety technology provides GPS location monitoring with geofencing functionality which allows Total Safety to monitor and provide easy-to-read real-time report dashboards that can be leveraged into actionable items for gains in worker efficiency. Plus, the technology provides information on where your workers are in emergency situations.

SafeTek WorkZone™

Keep your jobsites safer and more pro-

ected with connected SafeTek WorkZone™ technology. Advanced atmospheric monitoring in partnership with Blackline Safety G7 EXO devices connects your entire worksite and shares readings and alarms with other Blackline Safety devices in proximity. Trustworthy and reliable, devices connect to Total Safety's Technology Center so you can be confident that your gas detection devices are always online, data is collected 24/7 and help is always ready.

Workers requiring breathing air can be protected with Total Safety's connected Smart Compressor. The Smart Compressor supplies Grade-D breathing air for up to 100 people at once and requires fewer technicians on-site to operate the system.

Regulatory-driven inspections and reporting are made easier by implementing Total Safety's Smart Inspection solution, which uses mobile/connected technologies to manage the entire process.

Drive efficiency and compliance with Total Safety's connected vending solution for asset management, control, distribution and tracking on a per-contractor/worker basis. Eliminate loss and waste and control spend while making sure your workers have access to required PPE.

Using SafeTek WorkZone™ connected innovations, Total Safety can help safeguard your jobsite, increase efficiency, and ensure compliance with OSHA and other local regulations.

SafeTek Communications™

It's important to understand the value of communication when it comes to safety. The ability to communicate no matter where a worker is and under any critical circumstance could save that worker's life. With SafeTek Communications™, Total Safety is able to offer flexible communication solutions that fit the unique needs of your industrial worksite.

Customers can pick from a variety of communication solutions that work best for them. Total Safety can support a wide range of business needs, from rental or sale of intrinsically safe two-way radios and tower systems for short-term projects, to setting up complex, permanent site-wide communication networks. As a Motorola Gold Partner, you can trust Total

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Safety to meet any communication need.

Furthermore, with Blackline Safety's G7 family of devices that are push-to-talk enabled, Total Safety is able to provide its customers with seamless communication integrated with IoT gas detection devices. This combining of technologies allows workers to be connected, protected from hazardous gases and to communicate, all while carrying less equipment throughout the workday.

SafeTek Hub360™

Total Safety brings all of the IoT devices, and the data captured, together in one multi-functional platform. Securely accessed from anywhere in the world, SafeTek Hub360™ displays critical insights into the health, safety, efficiency and compliance of your projects, including project performance data, safety incidences/observations, gas exposures by worker, predictive analytics, efficiency reports and job completion insights.

Connected safety configuration for gas detection

Total Safety partners with Blackline Safety as part of its SafeTek Shield™ worker safety technology solution. Blackline Safety's G7 Personal Gas Monitors transmit gas and location-based sensor information directly to a cloud-based platform, provide instant alerting safety information, and have two-way communication functionality over satellite and cellular networks.

Blackline's G7 EXO is the world's first fully connected, direct-to-cloud area gas detector. The equipment is rugged and can be deployed in seconds for emergency response scenarios or left in the field for an amazing 100-plus days on a single charge. Features include alarms, communication capabilities and, because it is connected to the cloud, real-time atmospheric data, notifications and reporting. Direct connection to Total Safety's SafeTek™ Technology Center means it is constantly monitored by subject matter experts well-versed in area gas detection.

The cloud-based software platform provides insightful data analytics with visualization dashboards, real-time views into incidents and drill-down capabilities to monitor the safety of each employee. Furthermore, it allows for remote device configuration, alert profiles and emergency response procedures, and time-stamped GPS locations (including floorplan-based modeling). All of these are monitored in real time via Total Safety's SafeTek WorkZone™ offering.

The benefits of connected gas detection

Real-time visibility into the safety status of all workers

No matter where your workers are — whether in a busy facility or in a lone

worker situation at a remote site — with connected wearable devices, area monitoring and data-driven dashboards, the SafeTek Shield™ and SafeTek WorkZone™ solutions leverage Blackline Safety's technology to monitor the safety status of every single employee anywhere in the world. Now workers are protected anywhere with cellular or satellite connections. And, by clustering teams and sites, you gain real-time insights into gas exposure risks across any given workspace. Plus, the technology is utilized to view and manage worksite evacuations and mustering operations in real time.

Leading indicators in the data allow for predictive, proactive safety

By using predictive models on specific accumulated historical data across a range of IoT devices, you're able to identify patterns and, thus, key indicators to forecast where and when incidents are more likely to occur.

With early proactive analysis, you're able to change procedures, behaviors and responses quickly to avoid incidents. This reduces downtime in the case of planned events like turnarounds and shutdowns and for unforeseen events like potential gas leaks.

Streamline safety processes

With Total Safety's SafeTek™ worker safety technologies, utilizing technology supplied by Blackline Safety, you gain access to real-time data that can help enhance worker protection, in addition to fulfilling standard gas detection requirements. By eliminating manual data uploads and through automating reporting, there is no delay in accessing data and no human-fallible link in the measuring and reporting process. And with real-time data, help can be dispatched with full awareness of what risks are present, so responders arrive prepared to handle the situation.

Compliance reporting in real time

Industry regulatory compliance in safety and audits can cause nervous headaches for managers. With SafeTek™ worker safety technologies in place, you can gain full confidence that you are always compliant with industry regulations and have visibility to the current bump and calibration status of all devices.

The use of SafeTek™ worker safety solutions leveraging Blackline Safety's technologies allows you to see which workers are using noncompliant devices based on your organization's bump and calibration procedures and take corrective action to ensure they stay safe.

With IoT device firmware and settings automatically updated without needing to dock devices, this means they are always up-to-date and up-to-code.

Worksite efficiency

SafeTek™ enables Total Safety to offer its clients a truly connected workforce. Jobsite activity can now be monitored remotely with key data readily available to stakeholders in an easy-to-use dashboard, decreasing the number of employees needed on-site and,

in turn, significantly lowering safety risks across the board.

SafeTek™ uses IoT cloud-connected G7 devices from Blackline Safety that help with worker safety and are GPS-location tracked, so you can identify worker time and location, seeing where safety and productivity improvements can be made. Custom reporting using your data can identify patterns, insights and opportunities for facility layout improvements, shift management changes, contractor behaviors and resource scheduling.

With data-driven analysis, site operators can make informed and insightful decisions to translate patterns into efficiency and digitally transform the workplace. Moreover, because they are cloud-connected and always updated, there's no downtime to manually dock the devices for required changes.

Elevating safety in confined spaces

Total Safety's SafeTek SmartMonitor™ and its Technology Center use its centralized confined space monitoring (CCSM) solutions to offer remote monitoring of multiple confined spaces simultaneously. In the case of a project having 12 confined spaces where work will occur, one complete system replaces up to 12 traditional safety attendants by combining technology with three highly trained SafeTek™ technicians. This all-in-one solution comes with camera monitoring both inside and outside the confined space, electronic badge access controls, continuous 24/7 atmospheric monitoring, two-way communications, visual and audible alarms, and a team of SafeTek™ technicians. Projects can vary from a single confined-space entry up to hundreds of simultaneous entries. SafeTek SmartMonitor™ CCSM complies with OSHA's 29 CFR 1910.146.

"We monitor data from multiple IoT connected devices installed in and around each confined space and display it on a dashboard in a centralized control room. This patented process allows our SafeTek™ technicians to remain 100-percent focused on what is happening inside the confined space in real time, 24/7," said Palermo.

Real-world case study demonstrates benefits of SafeTek™

In this real-world example, a large U.S. refinery was planning a major turnaround that involved entry into 12 confined spaces over a 30-day period. The refinery wanted to reduce the risks associated with this activity, provide 24/7 continuous gas monitoring, and have visibility of all areas where work was being done. The goal was to improve overall safety and reliability from traditional hole-watch methods.

With the SafeTek SmartMonitor™ CCSM solution in place, the 24 attendants that would have been required by previous monitoring methods were replaced by a team of seven experienced SafeTek™ technicians. Total Safety was able to reduce the

number of at-risk employees in critical path areas by 70 percent, and they were able to deliver comprehensive data reports and live video feed monitoring for each of the 4,893 confined-space entries made during the entire project.

This type of enhanced safety and reduced risk of injury is made possible with cloud-connected IoT devices that are constantly monitoring workers and their environments. Using SafeTek SmartMonitor™ keeps workers safer and provides invaluable insights to activities being performed on the jobsite.

Connectivity isn't an option

Connectivity should not be an option, add-on or afterthought when it comes to worker safety, productivity and compliance. Total Safety's SafeTek™ worker safety technology offers the best solution for leveraging cloud-connected IoT technologies to provide real-time situational awareness that can save lives and provide valuable data-driven insights that allow businesses to focus on what matters most.

About Total Safety

For over 25 years, Total Safety has been dedicated to its core mission "... to ensure the Safe Wellbeing of Workers Worldwide." Since the beginning, Total Safety has been an innovator of emerging technologies and applying them to help keep workers and workplaces safer and in compliance. Total Safety has been protecting lives using its patented CCSM solution for nearly 20 years, passing on cost savings and efficiencies to customers. SafeTek™ is the latest in connected worker solutions designed to help companies stay in compliance and protect their workforce.

For more information, visit www.totalsafety.com or call (888) 328-6825.

About Blackline Safety

Blackline Safety is a globally connected safety leader that helps to ensure every worker gets their job done and returns home safely each day. Blackline provides wearable safety technology, personal and area gas monitoring, cloud-connected software, and data analytics to meet demanding safety challenges and increase the productivity of organizations with coverage in more than 100 countries. Blackline wearables provide a lifeline to tens of thousands of men and women, having reported over 150 billion data-points and initiated over 5 million emergency responses. Armed with cellular and satellite connectivity, Blackline ensures that help is never too far away.

For more information, visit www.blacklinesafety.com or call (877) 869-7212. ●

SafeTek™

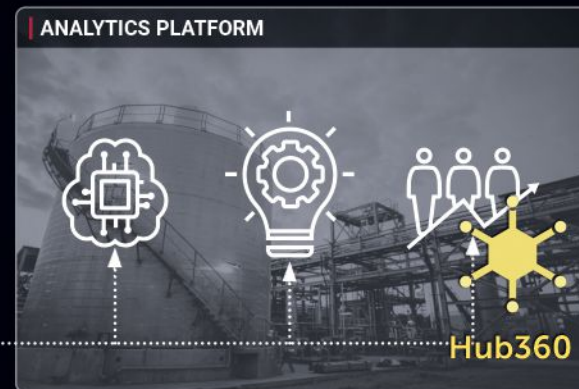
Worker Safety Technology

When Safety Matters, We're Ready.™

Creating a safety solution has never been easier than with Total Safety's SafeTek™ Worker Safety Technology Solution. From incident reporting to real-time gas detection monitoring, evacuation management, confined space management and breathing air solutions, we provide the technology and technical experience to help protect your most valuable assets, your people.



Communications



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