USING TECHNOLOGY TO MITIGATE CONSTRUCTION RISKS

How emerging technologies are paving the path for safer, smarter worksites - and what it means for insurance

triax®

Introduction:

Within a changing industry, the persistent need for improved safety measures remains.

For the construction industry there is no greater priority than worker safety, yet statistics show disappointing trends. According to the Bureau of Labor Statistics, construction accounts for more than 21 percent of private industry fatalities and 40 percent of those occur as the result of a fall. Construction's rate of severe cases – those that lead to days away from work – is 20 percent higher than all U.S. industries.[i]

Adding to the complexity of these safety challenges are shifting workforce demographics. Experienced workers are retiring, taking their skills and knowledge with them, and there are not enough qualified workers to take their places and meet demand. Across the industry, an astounding 70 percent of contractors reported difficulties finding qualified workers, which directly impacts construction safety. A recent industry survey reported that 80 percent of contractors are either highly concerned or moderately concerned about increased safety risks due to unskilled workers on the job. As demand grows and new workers are brought on board, contractors are struggling to address evolving risks and keep projects moving forward safely and efficiently.

These continued safety challenges have led industry veterans and newcomers alike to question what can be done to decrease safety incidents and make the quest for zero incidents a reality. Increasingly, the way forward starts with technology.

While historically construction has remained a reluctant adopter, this trend is changing, and a growing majority of construction firms are embracing technology to gain critical visibility, improve worker safety and reduce risks.

As construction technology proliferates, the conversation around worksite safety and risk has shifted to *"How can technology and data proactively identify, mitigate and manage risks?"*

What strategies are contractors using to boost safety? According to the USG Corporation + U.S. Chamber of Commerce Q3 2018 CCI:

33%

33% of contractors are leveraging safety-enhancing technologies

34%
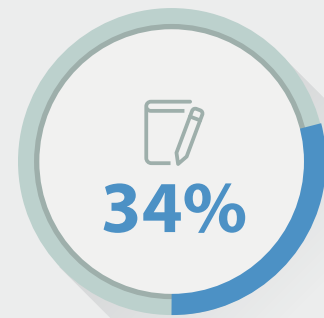
34% of contractors are tracking and assessing safety records

Technology and its impact on loss mitigation:

Contractors are investing in IoT solutions, such as wearables and sensors, to help them better measure, monitor and manage risk exposure on the day-to-day. These technologies serve as extra eyes, ears and hands at the jobsite, automatically capturing data from workers, equipment, tools and the environment in real-time. By providing unprecedented, data-driven insights into daily operational and risk management practices, new technologies are connecting the field and corporate office in a way that was never possible before.

Forward-thinking contractors are also using technology and data to revamp their jobsite hazard analysis programs and communication with insurance partners. Worker-worn devices, for example, can paint a more accurate picture of unsafe conditions or near-misses, helping companies and their insurance partners take an unbiased, honest look at their specific risk and loss control practices. Together, construction firms and their insurance carriers can combine new and existing data sets to determine the greatest risks – such as workers with fewer than 90 days experience on site – and refine practices to better protect workers and keep projects moving forward.

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Technology is enabling a shift in the contractor-carrier relationship by powering:

- **Real-time notification of safety incidents.** More timely identification and notification means faster response and better care for a potentially injured worker. The ability to receive real-time alerts also has the potential to protect workers by preventing them from entering unsafe areas, containing exposure and reducing risk across the worksite.

- **Data to modify behaviors.** Technology measures safety behaviors on site in a way that was previously not possible. Wearable technology like **Spot-r from Triax Technologies** can detect regular low-height activity, which upon investigation, might reveal that workers are jumping into the excavation pit or off the loading dock instead of using a ladder. Data provides an opportunity to better understand behaviors and reinforce best practices to minimize exposure and enhance overall safety culture.

- **Streamlined reporting.** Research shows that the longer it takes to report an incident, the higher the associated costs. Technology solutions streamline incident reporting and provide objective data about an incident, such as when and where it occurred, which workers were nearby and weather conditions on site. In addition, by reducing the lag time between when an incident occurs and when help arrives, the risk of compounded injuries can be reduced. Fewer or less severe safety incidents means reduced insurance claims, and therefore reduce costs. This may result in more attractive insurance premiums .

82% of wearable device users reported an improvement in safety. [II]

Spot-r wearable Clip

- Worker-generated alerts
- Evacuation alarms
- 6 months battery life, easily rechargeable

Data-driven insights into what is happening across a jobsite can help both insurance brokers and contractors make smarter decisions about their business and safety.

Enabling a new level of construction safety with technology:

Adopting technology and leveraging data requires dedicated resources and close collaboration between contractors, insurance carriers and technology providers. It will also require adopting a data-driven culture and developing the internal infrastructure to leverage technology to its full potential at every level of the organization.

There are numerous solutions in the marketplace today promising to save time, prevent accidents, and boost profitability. For any firm to be successful in technology adoption, they must begin with a strategic, focused approach to innovation and technology:

✓ **Define the problem.** Don't start with the technology, start with the problem. Is it near-miss identification, incident reporting or emergency preparedness? What challenges or business problems do you have that cannot be solved with existing tools? Outline the specific issue that you're attempting to solve for before you begin evaluating potential solutions and think through the data you're hoping to collect.

✓ **Incorporate multiple functional leaders.** Gather input from different departments and functions, such as safety, risk, operations, and IT. What issues do they see and what does an "ideal solution" look like to them? By including multiple stakeholders early on in the conversations, you can ensure that you're investing in a solution that can work across your company.

✓ **Test and adjust.** Try the solution in the field as well as a "lab" setting. If a solution doesn't work, it won't be used. Be sure to solicit feedback from system administrators and workers and share that feedback with your solutions provider. Regularly evaluate progress – starting with 30, 60 or 90 days – and explore what else the solution can do to add value.

✓ **Prepare for the data.** Not only may safety leaders on site need to act upon the insights – and in the long-term, interpret trends - but there may be new data elements that require the expertise of others. How will you aggregate the data, who will you share it with and how will you protect it?

Along those lines, evaluate how the tech can integrate into your existing systems as well as third-party solutions. Integration can extend your IT investment and enable one set of data to "talk" with another, streamlining both vendor management and user experience.

✓ **Emphasize a collaborative safety culture.** Leaders at both the corporate and jobsite levels need to be prepared for change management challenges. Have a plan for training current employees and new hires, and help them understand the benefits of becoming a tech-powered, data-driven culture. Along these lines, it's important to remember that technology is only one aspect of a sound safety culture. Using technology and data to drive down safety incidents must be coupled with a commitment to reviewing and, if necessary, changing corporate culture.

Conclusion:

Ensuring that every worker returns home safely is the foremost goal of every construction firm. Technology replaces assumptions with data and turns traditionally lagging indicators into leading, real-time ones.

Contractors and insurance providers can strive to mitigate risk in the ways of the past and get the same results, or they can choose to adopt modern approaches and embrace technology, opening up the door for reduced risks, improved costs and safer jobsites.

There's never been a better time to embrace technology within construction.

Spot-r by Triax provides comprehensive visibility into what's happening across project sites: where workers and equipment are located, how they are interacting, and if any safety incidents have occurred.

Safety First. Receive real-time safety notifications and unauthorized equipment operator alerts and send out worker- and site-level evacuation alarms in the event of an emergency.

Intuitive Worker Tools. The rugged, unobtrusive Spot-r Clip is worn by every worker on a project and provides a direct line to supervisors. The unique push-button allows workers to report hazards or signal distress without leave their post.

Custom Reporting. A Cloud-based dashboard securely aggregates your Spot-r safety and productivity data, making it easy to filter and share reports by incident type, trade, subcontractor or project location.

The Support You Need. Triax's dedicated project team takes the lead with network installation and user training and continues to monitor your jobsite to ensure seamless connectivity.

Sources:

i   United States Department of Labor. Commonly Used Statistics. Retrieved from: https://www.osha.gov/oshstats/commonstats.html

ii Association of General Contractors. (2017, Aug 29). Seventy Percent of Contractors Have A Hard Time Finding Qualified Craft Workers To Hire Amid Growing Construction Demands. Retrieved from: https://www.agc.org/news/2017/08/29/seventy-percent-contractors-have-hard-time-finding-qualified-craft-workers-hire-amid

iii Slowey, Kim. (2018, Sept 7). Construction Labor Shortages Exacerbate Safety Issues. Construction Dive. Retrieved from: https://www.constructiondive.com/news/construction-labor-shortage-exacerbates-safety-issues/531823/