RISK in Focus

RISK in Focus

Table of Contents

RISK in Focus

Cyber in Construction

Background

Organizations across many industries are undergoing a technology-enabled transformation known as the fourth industrial revolution. "Industry 4.0" (I4.0) refers to the automation of manufacturing and industrial practices and the integration of smart technology. In an effort to implement principles of Industry 4.0, construction companies are making a critical shift to digital methods for sharing and storing data, managing workflows and transactions, and coordinating daily operations.

As the use of technology becomes more widespread in construction, companies are discovering that as they become more reliant on technological solutions that save money, time, and labor, they also open themselves to new exposures related to cyber incidents.

Hazard 1: Making Incorrect Assumptions about Insusceptibility

Construction companies are not traditionally considered obvious targets for cyber incidents since they have not historically been associated with high tech or with large amounts of valuable, sensitive data. This notion is increasingly outdated.

Any company that maintains their own records, including employee data like social security numbers, health insurance information, and bank account numbers for direct deposits, is an attractive target. This obviously describes today's construction firms.

Additionally, construction companies can be the point of access to their project partners' systems and their data, including financial accounts, bidding estimates, architectural designs, and security details for a building or construction site.

Many construction companies assume that, since they are small businesses, they are less attractive targets and can fly under the radar of cybercriminals. However, cyber incidents involving small and medium businesses are on the rise. Between 2015 and 2019, cases involving medium-sized businesses increased by 100%, and incidents involving small businesses increased by 200%.[1] More than half of small businesses that are victims of a cyber incident will go out of business within six months.[2]

> Between 2015 and 2019, cyber incident cases involving medium-sized businesses **increased by 100%**, and incidents involving small businesses **increased by 200%**.[3]

Even if a company's data were to be inconsequential to hackers, ransomware attacks will force a company to pay to get access to their own data and systems.[4] A refusal to pay, or a delay in paying, could have major consequences, including work stoppages, claims suits filed for unfinished work, and reputation suits from partners for damages.

Hazard 2: Not Accounting for the Risks of Mobile Technology

Accessing crucial data remotely, while extremely convenient for employees on the move, creates a cyber vulnerability for construction companies. "Bring your own device" (BYOD) policies are common among construction workforces. It is nearly impossible to guarantee the security of company information accessed through these devices when owners are also using them to check personal email accounts, peruse social media sites, stream content, and browse the Internet.

In a recent survey, 93% of the construction industry respondents indicated they use smart phones in their work, a 21% increase over 2014 figures.[5]

Hazard 3: Not Planning for Inevitable Employee Cyber Errors

Though the idea of a malicious external hacker is the pop-culture image of a cyber threat, the most serious cyber risks come from company insiders acting erroneously, not maliciously.

According to one analysis, **between 2018 and 2020, insider cybersecurity incidents increased by 47%, and the cost of resolution increased by 31% on average.**[6] Again, many of these incursions may have been unintentional, but the potential for a significant financial or reputational loss is the same as from a malicious attack.

Undoubtedly, high turnover rates in the construction industry contribute to this hazard. Staff training is difficult to manage when many employees are temporary. Also, as construction firms bring on new employees, they may not conduct sufficient background checks (or bypass this step altogether) to speed up the hiring process. In these cases, employees with problematic backgrounds might be brought on board where they may have access to the company's valuable data.

Hazard 4: Failure to Ensure Third-Party Partners are Following Best Practices

The lifecycle of a construction project involves multiple third-party companies. Architecture, engineering, construction, subcontracting, and facility management specialists are involved at various stages in the process. Information shared among these groups is only as safe as the weakest link. It is nearly impossible to guarantee a sufficient level of ongoing cybersecurity and training for all parties involved in a construction project. Compounding this difficulty, new vendors with unknown or nonexistent cybersecurity track records are opening their doors every day.

Hazard 5: Executing Careless Wire Transfer Transactions

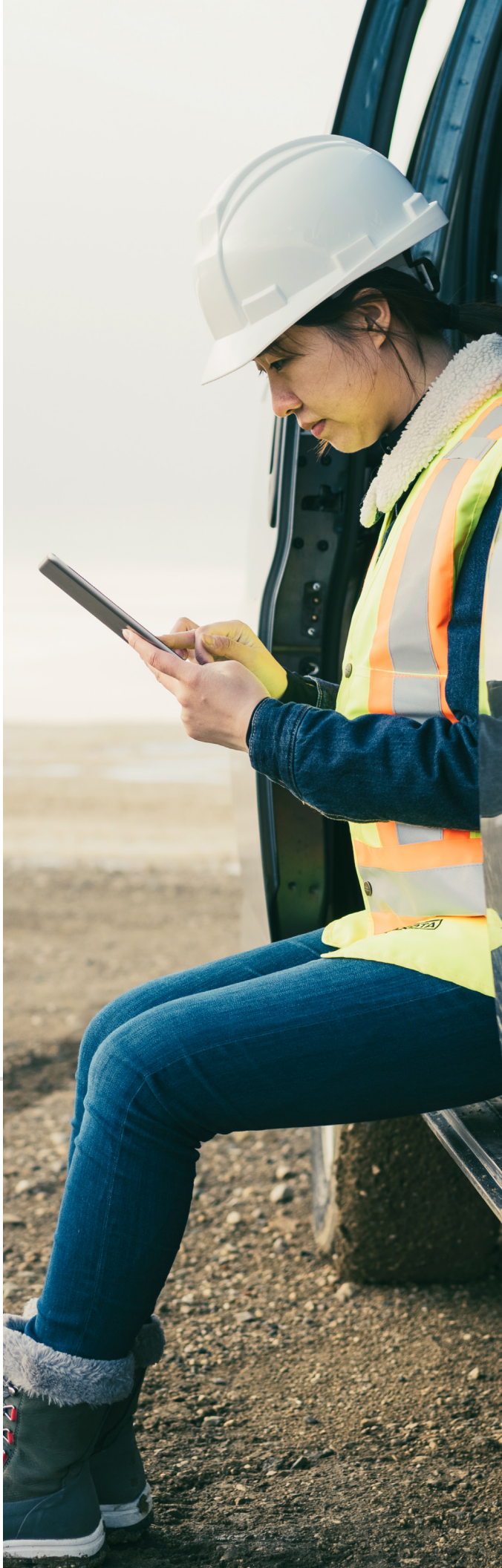
Financial wire transfers are very common in the construction industry and these high-dollar transactions are a lucrative target for threat actors. However, routine verification of each payment can be burdensome; particularly if the company is familiar with the vendor.

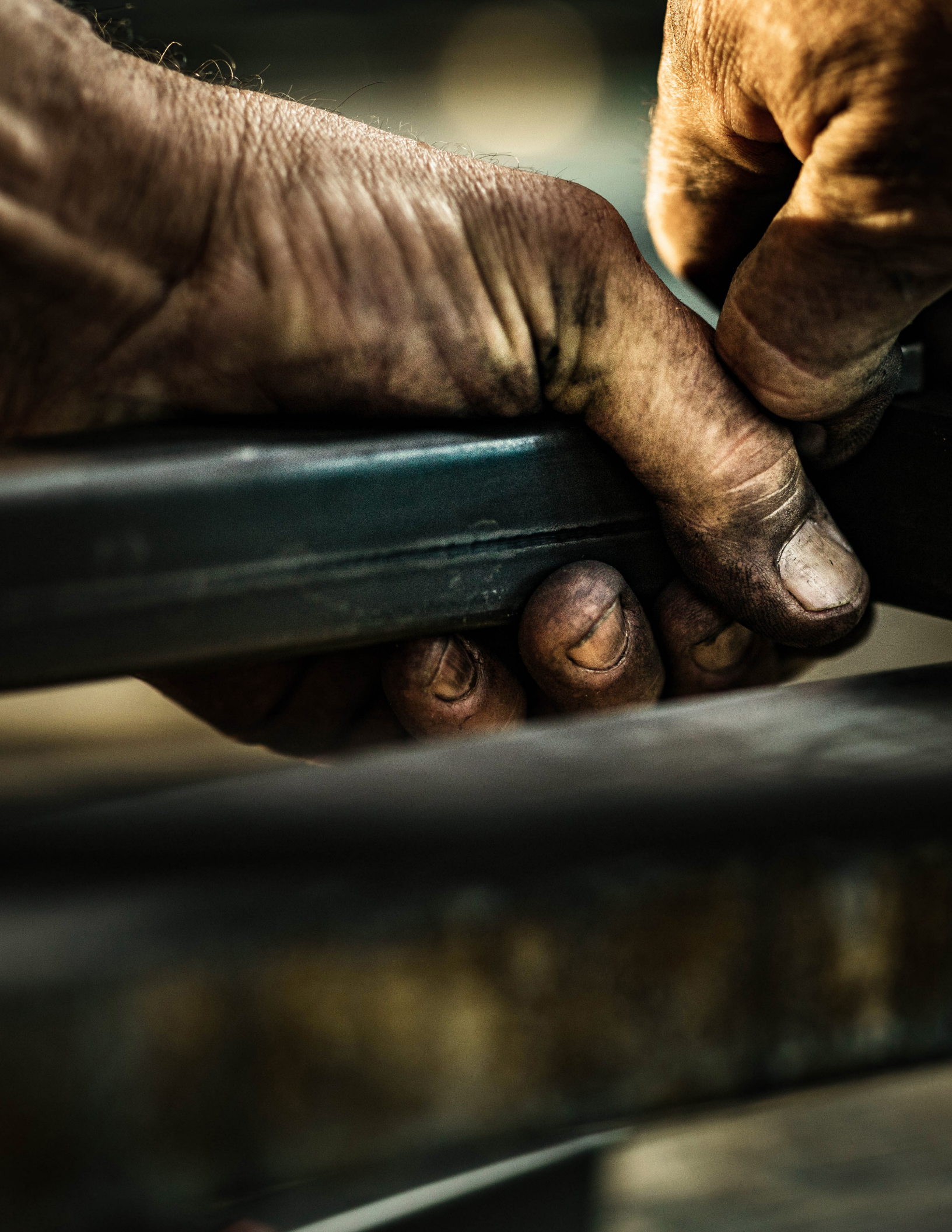
According to the FBI, the greatest number of victims of cybercrime in 2019 were due to phishing/vishing/smishing/pharming scams, leading to over $57 million in losses.[7] Phishing is a common method of wire fraud in which cybercriminals pose as the legitimate company in a transaction by spoofing an account, then sending unsolicited requests for personal financial and/or login credentials.

Often wire fraud attempts are easy to recognize, but increasingly these phishing attempts look deceptively real.

One scenario is known as the "business email compromise" (BEC) scam, in which a company is targeted and compromised by a cybercriminal who then sends fraudulent emails from that company in an attempt to trigger unauthorized fund transfers from the victims. There is no spoofing or faking of financial accounts in this scenario. **According to the FBI, BEC scams resulted in losses of $1.7 billion in 2019.**[8]

> Phishing is a common method of wire fraud in which cyber criminals pose as a legitimate company by spoofing an account.





RISK in Focus

An Aging Workforce

Background

Being labor intensive, the construction industry is directly impacted by the gradual aging of America's workforce. The number of Americans over age 55 in the labor force is projected to increase from 35.7 million in 2016 to 42.1 million in 2026, at which point aging workers will make up nearly one quarter of the labor force.[9] The National Association of Home Builders recently reported that workers under the age of 25 represent only 9% of the construction workforce, while the proportion of workers over the age of 55 had increased from 17% to 22% between 2011 and 2018.[10] These trends signal potential risks for the construction industry and hazards that construction companies will need to address now and into the future.

+ Only 9% of the construction workforce is under the age of 25
+ Over 22% of workers are over 55

National Association of Home Builders

Hazard 1: Poor Preparation for Increased Age-Related Jobsite Disruption

Construction project schedules can be significantly disrupted by employee sicknesses and injuries. This is especially true when it involves experienced workers who are exceptionally skilled – a more common characteristic of older employees in this industry.

As we age, our bodies change both physiologically and cognitively, which ultimately leads to an increased risk of injuries. Specifically, we experience a decline in strength, flexibility, balance, vision, reaction time, hearing, and dexterity. This is even more likely to be the case with construction employees who have spent decades working in harsh environments performing physical labor.

According to the Bureau of Labor Statistics, in 2017 the construction sector experienced more than 13,000 nonfatal injuries involving workers age 55 and over that resulted in lost time. Across all industries, 37% of injuries to workers aged 55-64 involved 31 or more days away from work. Meanwhile, 39% of injured workers aged 65 and over missed 31 days or more.[11] The percentage of lost time rates for these two age groups are much higher than for any other group.

2017 Bureau of Labor Statistics

+ 13,000 nonfatal injuries involving workers age 55
+ 37% of injuries in workers aged 55 – 64 involved 31 or more days away from work
+ 39% of injuries in workers aged 65 involved 31 or more days away from work

Hazard 2: Inadequate Planning for Workforce Shortages

As construction workers age and ultimately retire, their employers lose the benefit of their knowledge, experience, and problem-solving skills. This phenomenon is further exacerbated by the current labor shortage in the construction industry. 78% percent of construction companies report they are having difficulty filling salaried and hourly positions.[12] Construction company owners who don't take a long-term view of employee development and training will soon be struggling to make do with an overall less skilled and less reliable team.

+ 78% percent of construction companies report they are having difficulty filling salaried and hourly positions.[13]

Hazard 3: Failure to Implement New Technologies

As the age of the average construction worker increases, construction companies may find themselves more hesitant to implement new technologies, fearful that their older workers will resist learning and adapting to new systems.[14] However, studies have shown that no age group is more or less adept than another when it comes to engaging with new technologies.[15] Nevertheless, this misconception may persist among business owners who assume their older workers will stubbornly prefer "tried and true" processes. These companies could miss out on tremendous opportunities to upgrade their productivity, deliverable products, and workforce efficiencies, thereby becoming less competitive in the market over time.

Hazard 4: Not Recognizing the Likelihood of Behavior to be Age Discrimination

In its 2019 report, "Ageism in the Workplace," Hiscox noted that 21% of U.S. workers over the age of 40 have experienced discrimination in the workplace because of their age. At the same time, they found that only 38% of workers had received some form of age discrimination training in the prior 12 months.[16]

+ 21% of U.S. workers over the age of 40 have experienced discrimination in the workplace 38% of workers have received some form of age discrimination training in the prior 12 months[17]

The Age Discrimination in Employment Act (ADEA), in conjunction with requirements imposed under the Americans with Disabilities Act (ADA), requires employers to provide reasonable accommodations to allow disabled employees to perform the essential functions of their job. "Reasonable accommodations" include reducing hours, allowing a more flexible work schedule, or restructuring workload and job duties.[18] **Companies that are not able to demonstrate their adaptability to these measures may find themselves facing a lawsuit.** As it is, law journals are replete with accounts of major lawsuits stemming from blatant as well as more subtle cases of workplace age discrimination.[19]

Rising Cost of Insurance for Commercial Vehicles

Background

One of the most significant cost burdens for construction companies and developers alike is commercial vehicle insurance. It is a necessary operating expense that does not generate a return nor drive growth. Since this expense adversely impacts operating income, company owners must do what they can to prudently minimize these costs.

Unfortunately, commercial auto insurance rates have been rising significantly in recent years and the trend is not expected to change in the near future. Forecasts for commercial auto insurance rates show increases between 10-20% in 2021, and that the highest increases, along with higher deductibles and lower limits, are in store for the largest commercial fleets.[20]

Hazard 1: Failure to Enforce Policies Requiring Drivers to Avoid Distractions

The risks associated with distracted driving are not new, but drivers have more and more distractions literally staring them in the face when they are behind the wheel. GPS navigation systems, Bluetooth audio systems, texts, email, cameras, and more are increasingly competing for a driver's focus.

Construction companies do not often adopt and/or strictly enforce policies related to:

+ Use of handheld devices while driving
+ Unauthorized passengers
+ Driving while eating

According to one recent analysis, distracted driving kills nine people each day and injures another 1,000. It accounts for 8.5% of the fatalities in automobile crashes.[21] Even though the use of handheld phones and PDAs while driving is illegal in many states,[22] it is still happening far too often with all drivers. This is particularly true for younger male drivers, who tend to drive more miles than their counterparts[23] and are so prevalent in the construction industry.

Hazard 2: Not Budgeting Adequately for Maintenance and the Cost of Minor Repairs

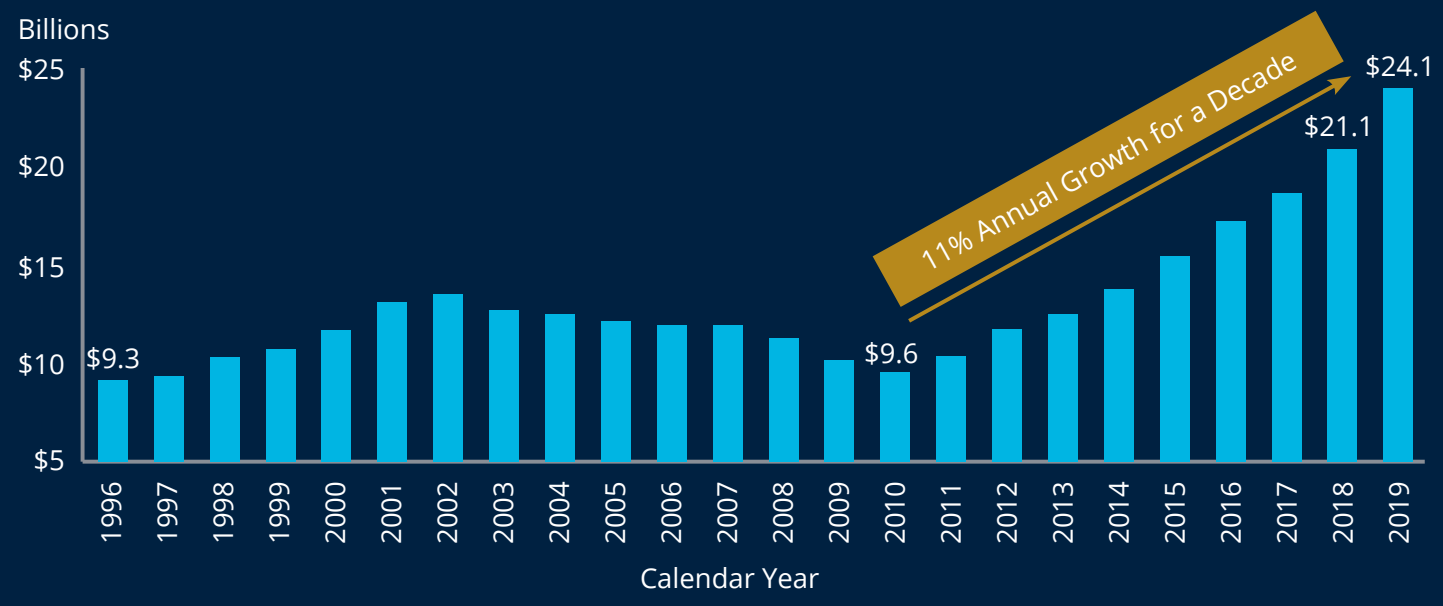
The advanced features on newer vehicles lead to increased costs to maintain and repair vehicles, even minor accidents. For example, as of May 2018, all new vehicles were required to have rearview video systems (backup cameras) in accordance with NHTSA regulations. This technology should reduce accidents; however, it has also made common, previously inexpensive repairs costly enough to trigger auto insurance claims. **According to U.S. government data, between 2000 and 2017, motor vehicle repair prices increased 61%**, and cars were far more likely to be declared total losses after an accident.[24]

Hazard 3: Failure to Financially Prepare for "Social Inflation" Impact

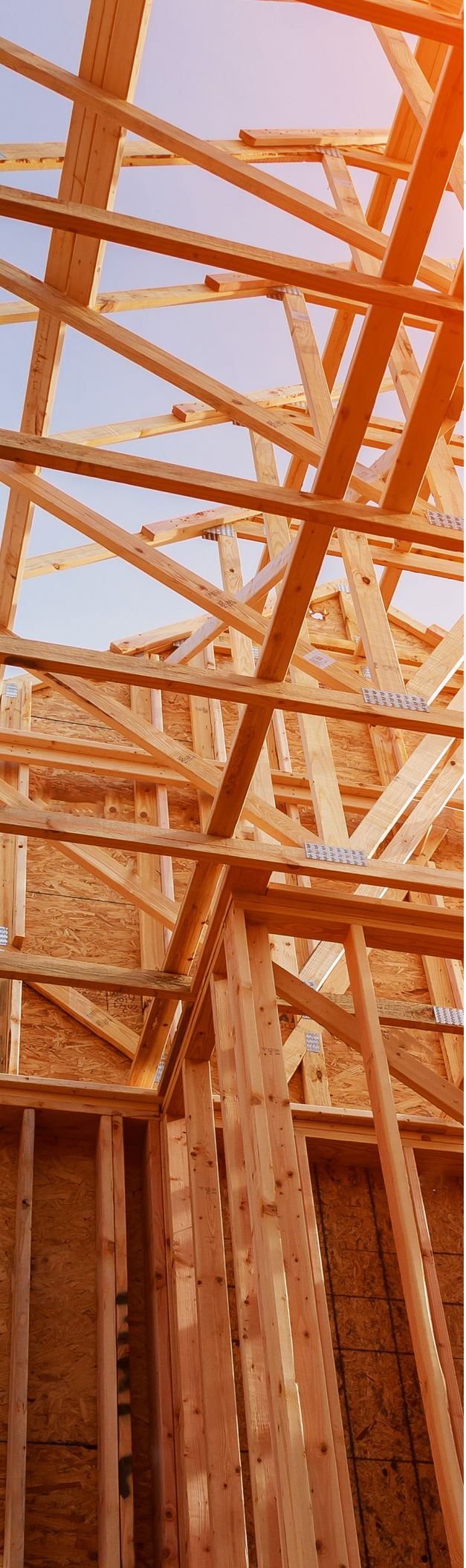
The term "social inflation" refers to the rising insurance losses due to the growing emergence of litigation financing and higher jury awards. The chart below from Swiss Re (the world's largest reinsurance company) illustrates the increase in the median jury verdicts on an annual basis. As can be seen in the chart, median jury verdicts have nearly doubled in just four years. To some insurance industry observers, increased commercial vehicle operation regulations over the past decade seem to have opened the door to more lawsuits and higher settlements.[25]

Clearly the rising cost of jury settlements against companies for their fleet-related accidents is having a tremendous effect on insurance premiums. These kinds of settlements simply cannot be borne by an insurance company without significant increases in premiums.

Upward Trend in Incurred Losses
Incurred Losses, Commercial Auto Liability



Source: https://www.iii.org/insuranceindustryblog/experts-discuss-social-inflation-in-a-tobin-college-of-business-webinar/



RISK in Focus

Worksite Theft

Background

Construction sites are prime targets for theft. The work areas are often exposed, usually difficult to secure, and are known to house valuable equipment, goods, and supplies. The sites are a classic low-risk, high opportunity enticement for thieves and vandals. Construction site theft losses in the United States are estimated to range between $300 million and $1 billion annually in an average year with thieves taking tools, appliances, materials, and even heavy machinery.[26] During an economic downturn, the frequency of theft-related losses increases resulting in total annual losses falling in the higher end of the range.

Hazard 1: Failure to Develop Site-Specific Security Plans and Procedures

There are certain key elements of construction site security that are common to all projects. These include well-secured trailers, strong security fences, security details watching entrance points and monitoring deliveries, and overnight lighting. How these are utilized on each site, though, can and should vary. Treating every construction jobsite the same – regardless of the value of the items stored there, the crime rate in the surrounding neighborhood, the materials used, and the amount and type of equipment stored there – is poor security planning.

During the pre-construction phase, construction site managers tend to focus on the upcoming work itself – lining up subcontractors, securing permits, and other elements related to workflow and timing. Site security tends to be less of a priority.[27] However, if security planning isn't given sufficient priority at this point in the planning process, the financial viability of the project can be jeopardized from the start.

Hazard 2: Failure to Train

Ideal security procedures and related best practices are only as good as the compliance of every single worker on the site. Therefore, training is critical – including general practices and requirements of the company as well as any unique specific practices designed for that given site.

According to the Bureau of Labor Statistics, the employee turnover rate is 21.4% in the construction industry.[28] That means companies are not likely to finish a job with the same crews they started with. If new workers are not trained adequately when they joined the project (along with refresher training for the longer-term workers), the value of any initial training of original employees will decline rapidly throughout the project. Compliance will slip and incidents will be more likely to increase over time.

Hazard 3: Insufficient Screening and Background Checks for Employees and Contractors

According to some observers, most construction theft is by employees and others who have legitimate access to the site during the day and can access it after hours.[29] These people have plenty of opportunity to learn about the equipment and supplies on the site, as well as the vulnerabilities in the site security plan.

Given the transience of construction employment noted above, the tendency is to hire quickly, often without a sufficient review of references and background screenings. The same can be said about bringing on subcontractors on short notice.

Hazard 4: Failure to Maintain Inventory Records

Without maintaining an ongoing and full accounting of the major equipment and supplies on site, theft is more difficult to report and document, let alone detect. No doubt the figure is even lower for items without identification or serial numbers, and when those numbers have not been submitted to national registries. If the company is not using an owner applied number (OAN) for these smaller items, the odds for recovery are similarly low.

+ According to National Equipment Register, only 25% of stolen equipment is ever recovered.[30]

Hazard 5: Failure to Take Advantage of Security Technology

Chain link fences and padlocks on mobile trailers are not sufficient deterrents for thieves these days. And all too often, construction site managers rely on security technology designed for home use rather than for expansive outdoor worksites.

Construction company owners are pulled in many directions, but one area few of them spend enough time on is researching technology-based construction industry security solutions: such as RFID tracking, keyless heavy equipment, remote viewing, alarm systems, strategic lighting, and similar deterrence technology tools.

Hazard 6: Failure to Build Relationships with Businesses in the Area

Maintaining good will with the businesses and residents in the community immediately around the construction site should be a priority for many reasons. For example, these people can be the eyes and ears for the construction site manager. If they are motivated to be good neighbors, they may choose to contact police and the site manager if they see suspicious activity on the worksite.

Conversely, if they can't connect a face to the construction site or if their entire perception of the project is based on the noise, traffic congestion, loss of parking, and increased debris in the area, they will likely ignore any theft or vandalism they see or suspect. As such, not building relationships with neighboring business increases the likelihood of losses on the project over the long run.

[1]https://www.travelers.com/resources/risk-index/2020-cyber-infographic
[2]https://www.fundera.com/resources/small-business-cyber-security-statistics
[3]https://www.travelers.com/resources/risk-index/2020-cyber-infographic
[4]https://www.bloomberg.com/opinion/articles/2020-05-22/companies-targeted-by-ransomware-must-choose-to-pay-the-price
[5]https://jbknowledge.com/wp-content/uploads/2019/12/2019-JBKnowledge-Construction-Technology-Report.pdf
[6]https://www.observeit.com/ponemon-report-2020-cost-of-insider-threats-global-cyberwire/
[7]https://pdf.ic3.gov/2019_IC3Report.pdf
[8] Ibid.
[9]https://www.aging.senate.gov/imo/media/doc/Aging%20Workforce%20Report%20FINAL.pdf
[10]https://www.jdsupra.com/legalnews/an-aging-construction-workforce-23079/
[11]https://constructionexec.com/article/managing-risks-of-an-aging-workforce
[12]https://www.agc.org/news/2019/01/02/seventy-nine-percent-construction-firms-plan-expand-headcount-2019-most-are-also
[13]https://www.agc.org/news/2019/01/02/seventy-nine-percent-construction-firms-plan-expand-headcount-2019-most-are-also
[14]https://www.becode.com.au/how-ageism-is-killing-the-construction-industry
[15]https://www.hrmonline.com.au/recruitment/digital-natives-death-another-myth/ https://www.hiscox.com/documents/2019-Hiscox-Ageism-Workplace-Study.pdf
[16]https://www.hiscox.com/documents/2019-Hiscox-Ageism-Workplace-Study.pdf
[17]https://www.hiscox.com/documents/2019-Hiscox-Ageism-Workplace-Study.pdf
[18]https://www.jdsupra.com/legalnews/an-aging-construction-workforce-23079/
[19]https://www.natlawreview.com/article/burrow-global-services-sued-eeoc-age-discrimination
[20]https://www.businessinsurance.com/article/20201216/NEWS06/9123385557/Alera-predicts-2021-rate-increases-across-several-commercial-lines.
[21]https://www.thezebra.com/resources/research/distracted-driving-statistics/
[22]https://www.iihs.org/topics/distracted-driving/cellphone-use-laws
[23]https://www.trafficsafetystore.com/blog/distracted-driving-is-a-leading-cause-of-death-on-u-s-roads/
[24]https://www.forbes.com/sites/jimgorzelany/2018/02/15/the-sum-not-the-whole-is-greater-when-it-comes-to-the-skyrocketing-cost-of-car-parts/?sh=b11ec9153dfa
[25]https://www.propertycasualty360.com/2020/05/28/these-motor-vehicle-accidents-let-to-major-settlements/?slreturn=20210125180701
[26]https://stealthmonitoring.com/security-blog/construction-site-theft-1
[27]https://www.constructionexec.com/article/construction-site-security
[28]https://constructionblog.autodesk.com/construction-industry-statistics/?AID=10282382&PID=9069228&SID=tuid%3A002488DBF53967EB35878674F4046630&mktvar002=afc_us_deeplink&cjevent=2c78b63f60f211eb8178001e0a1c0e10&affname=9069228_10282382#Labor-Shortage
[29]https://www.thebalancesmb.com/how-to-prevent-theft-on-your-construction-site-845325
[30]https://www.ner.net/annual-theft-report/

More Than Just Insurance

IMA is a diversified financial services company specializing in risk management, insurance, employee benefits and wealth management. It is the sixth-largest privately-held and employee-owned insurance broker in the country and employs more than 1,200 associates.

RISK in Focus Contributors

ANDREA KREUGER, *Strategic Risk Advisor*

RALPH FLETCHER, *Risk Control Advisor*

REBECCA GREEN, *Marketing Strategist*

BRIAN LEUGS, *Executive Editor & Contributing Author*

ALLISON WALL, *Contributing Author*

KAYE BARTON, *Contributing Author*

BRANDI KOSKI, *Contributing Author*

STEPHEN FLOYD, *Creative Manager*

JESSICA WALL, *Graphic Designer*

IMACORP.COM/RIF