As New Technologies Emerge, Cyber Risks Build Fast for Construction Companies

CHUBB®

By Stephen Buonpane
and Michael Tanenbaum

Funding in U.S.-based construction technology startups surged 324% in 2018, to nearly $3.1 billion, compared to $731 million in 2017.[1]

The Advancement of Technology in Construction

The construction industry is one of the oldest and most vital industries in the world. It's also an industry that has been notoriously slow at adapting to the digital age. But times are changing. Today, numerous technologies and delivery methods are rapidly transforming multiple aspects of the industry. Not only have there been significant advancements in traditional construction tech – such as Building Information Modeling (BIM) – construction sites are becoming more digitized and smarter than ever. Funding in U.S.-based construction technology startups surged 324% in 2018, to nearly $3.1 billion, compared to $731 million in 2017.[1]

One example of this trend is the use of wearable devices, which are taking aim at one of the industry's greatest challenges, keeping workers safe. According to OSHA, over 20% of all US workplace-related fatalities annually happen in the construction industry.[2] Now, devices worn by workers can provide project managers with a look into individual behaviors, locations and other factors on a jobsite, so they can identify unsafe actions or situations before they cause

injury. Workers can also be alerted to perilous conditions before it's too late, and project managers can amass data to identify issues and trends impacting jobsite safety before they escalate and take steps to mitigate them.

Additionally, Artificial Intelligence (AI), Virtual/Augmented Reality (VR), drones, BIM, and modular construction are enabling buildings to be designed and built with new efficiency and accuracy, bringing welcomed productivity enhancements to an industry where on-time-and-on-budget is a cornerstone of profitability. It is estimated that projects can be completed up to 65 times faster with modular construction.[3] As contractors recognize the bottom-line value, the U.S. modular construction industry is expected to grow by 40% in the next five years.[4] And with AI, drones and BIM, project managers can identify and mitigate exposures in building design and construction that in the past would have remained undetected until the building was completed and operating. AI and VR are also bringing new precision to project tasks, from bricklaying to crane operations.

Technology is bringing a wave of change to the industry – transforming everything from how buildings are designed and built, to how workers are kept safe and projects are managed. It's also ushering in new and heightened cyber risks.

2

With the widespread growth of the Internet of Things – the plethora of devices connected to the Internet – construction companies are able to manage jobsites and projects in new and efficient ways and can collect data on buildings, equipment and workers that wasn't available in the past. Sensors can measure everything from weather conditions, moisture levels, and air quality, to employee lifting practices. Already, there are more devices connected to the Internet than there are people on the planet. And with the additional speed and bandwidth of 5G coming soon, the number of devices will grow exponentially.

Contractors, insurers and service providers are also starting to test the impacts of Distributed Ledger Technology (DLT) and Blockchain applications. DLT and Blockchain could enable the industry to use and share data in a streamlined fashion across numerous areas, from proof of insurance and certificate records, to subcontractor enrollments, claims administration, contract retention, materials tracking and payroll collection. They are expected to enhance transparency and the credibility of data at an insurer's disposal, accelerate transactions, lower administration costs and make recordkeeping more efficient for all parties.

Another positive byproduct of technology's rise is its potential impact on the workforce. After shrinking during recessionary times, the construction industry has been challenged by labor shortages. The industry's burgeoning use of technology will help it to attract workers with new skill sets to build smart buildings on smart jobsites.

Technology is bringing a wave of change to the industry – transforming everything from how buildings are designed and built, to how workers are kept safe and projects are managed. At the same time, it's ushering in new and heightened cyber risks.

Assessing Cyber Exposure

Cyber risk is most synonymous with privacy threats; companies think first of data breaches and hackers putting personally identifiable or sensitive financial or business information at risk. But like technology, cyber risks have evolved rapidly and data breaches are now just the tip of the iceberg. For construction companies, four cyber perils are particularly pronounced:

1

Malware and ransomware.
Ransomware demands have increased significantly across all industries in the past couple of years, as have the associated financial demands. Sometimes the aim of the perpetrator is not financial gain, but to cost the company productivity and derail projects or operations. These increasingly pervasive attacks target all industries.

2

Lost, stolen, or hacked Bring Your Own Device (BYOD)s.

Many construction companies rely heavily on mobile workers and maintain 'Bring Your Own Device' policies. If employees' devices that access corporate emails, systems and information are not kept properly secured, they create substantial cyber vulnerabilities for the employer.

3

Phishing and social engineering schemes.
According to the Chubb Cyber Index℠, 27% of the commercial cyber incidents reported by Chubb policyholders last year were the result of social attacks, including phishing. In phishing exploits, bad actors send emails pretending to be from reputable companies in an attempt to induce people to divulge confidential information, such as passwords.

4

Hacking of IoT devices.
If critical technology – from a worker's safety vest to an autonomously operated crane – does not work as expected or is disrupted by hackers, the result can be catastrophic. Imagine if a worker's wearable does not alert them, as it should, to an imminent peril on the jobsite, or an autonomously operated crane is hacked to collapse? The threats on this front are multi-dimensional. There are privacy concerns with data at risk, potential third party liability as well as business continuity exposures.

It is predicted 30.7 billion IoT devices will be installed in equipment, monitors, sensors, alarms, and buildings by 2020. This is double the amount of devices from 5 years ago, and this amount is expected to double again within the next 5 years.[5]

Keeping Ahead of Cyber Risk

A cyber incident can be a small glitch or it can be catastrophic to a company's reputation and balance sheet. With the evolving nature of technology and cyber exposures, managing cyber risk is an ongoing, enterprise-wide endeavor, but there are some fundamental steps you can take now to mitigate exposure.

Educate and Train Employees.
Whether you have BYOD policies or not, employees should be well versed on proper password hygiene and up to date on the latest cyber threats and how to manage their devices and electronic interactions to mitigate risk.

Keep Cyber Security Software/ Firewalls Current.
All security software and firewall protection should be updated regularly both corporately and on jobsites. Mobile devices and laptops of all workers (BYOD and otherwise) should be encrypted so if a device is stolen or misplaced, its data remains secure.

System Backups.
All systems should be backed up regularly – both online and offline.

Insurance Considerations

Construction companies should undertake enterprise risk reviews, or risk mapping, to assess their current cyber exposures at both the corporate and project levels. Particular attention should be paid to areas such as third party liabilities arising from cyber risks, which are on the rise. Loss of tangible assets due to cyber events is another emerging area for construction companies. Contractual liabilities related to cyber events should not be overlooked.

While Commercial General Liability, Builder's Risk and Errors & Omissions are familiar coverages for large contractors, what's not as well known is how and if cyber risks are covered under those policies. With risk mapping and assessments in hand, a company's current cyber insurance policies, limits and contractual liabilities can be adequately assessed to see where cyber exposures may be covered and where vulnerabilities exist.

Ensuring proper protection for these growing cyber-related risks is critical in today's operations, project owners are also requiring the coverage on a more frequent basis; it's expected that cyber-specific coverage will become a standard contractual requirement going forward.

Along with crafting the necessary cyber insurance, Chubb helps mitigate exposures by working with insureds to prepare crisis and incident management plans and providing post incident services to help ensure an efficient and effective response to minimize the adverse impact of a cyber event.

Chubb has the experience and commitment to crafting new and better ways to help our construction customers insure and manage the growing exposures that go hand-in-hand with the productivity, efficiency, and safety new technology is bringing to the construction space.

Visit the Chubb Construction Site Microsite:

www.chubb.com/us/ChubbConstruction

The construction industry's growing use of new and emerging technologies will forever change the way projects are getting built, how workers are protected, and how industry data is collected, analyzed and used. While this evolution creates a promising outlook for the construction industry, it also presents new challenges and new risks. When it comes to technology and cyber issues, the legal liability and regulatory landscapes are in their infancy.

With contractors' increased use of technology, Chubb has the data resources and information to use in assessing emerging risks and honing cyber solutions. We also have the experience and commitment to develop new and better ways to help construction customers insure and manage the growing exposures that come with the increased productivity, efficiency, and safety that technology brings to the construction space.

Contact Us

Stephen Buonpane
T 212.703.7026
E stephen.buonpane@chubb.com

Michael Tanenbaum
T 212.827.3803
E michael.tanenbaum@chubb.com

The cyber risk landscape continues to grow exponentially.

About the Authors

Steve Buonpane

Mr. Buonpane is the Executive Vice President of underwriting for Chubb's Primary and Excess Casualty Construction divisions in its Major Accounts business unit. Based in New York City, he is responsible for overseeing the execution of the divisions' underwriting strategies countrywide. Mr. Buonpane began his career in 2003 at AIG as a home office underwriter in the Construction Risk Management division. He holds a Master of Business Administration degree with distinction from New York University's Stern School of Business, and a Bachelor of Science degree in finance from the University of Delaware.

Michael Tanenbaum

Mr. Tanenbaum is the North America Head of Cyber & Professional Liability for Chubb's Financial Lines division. He is responsible for Chubb's cyber and Errors & Omissions (E&O) operations across North America. Michael has 20 years of industry experience with multiple roles in Professional Liability since first joining Chubb in 2001. Michael received his BSBA from Boston University.

Footnotes

1. Source: https://techcrunch.com/2019/02/16/investor-momentum-builds-for-construction-tech/
2. Source: https://www.osha.gov/oshstats/commonstats.html
3. Source: https://4b15vr13762d1t2kqp47j8d4-wpengine.netdna-ssl.com/wp-content/uploads/top-10-contech-trends-2019-infographic.png
4. Source: https://www.marketwatch.com/press-release/modular-construction-market-worth-12967-billion-by-2023-2018-08-03
5. Source: https://www.forbes.com/sites/louiscolumbus/2016/11/27/roundup-of-internet-of-things-forecasts-and-market-estimates-2016/#5ebcadde292d

https://www.statista.com/statistics/471264/iot-number-of-connected-devices-worldwide/

Chubb. Insured.℠