

# The Smart Construction Revolution: Technologies Which Are Redefining Construction Insurance and Risk Management

*A Review of the Technology Showcase at the International Risk Management Construction Risk Conference 2025*

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The IRMI Construction Risk Conference, recognized as one of the premier events in construction insurance, risk management, and commercial underwriting, painted a clear picture this year: The construction insurance industry is shifting from declarations, forms, and paperwork to data, algorithms, and real-time documentation. Numerous presenters, dozens of platforms, and an influx of leading insurers delivered a unified message: The role of the construction insurer is undergoing a fundamental transformation. This is a comprehensive review of the most prominent systems and technologies, along with their immediate ramifications for the industry in Israel.

## **AI – Integrating artificial intelligence into insurance underwriting: An end to proposal forms?**

The most significant development highlighted at the conference was in underwriting. After years of relying almost exclusively on proposal forms and declarations, construction insurers are now embracing an ecosystem driven entirely by data.

Companies such as Cytora, Concirus, Construction Risk AI, and Vertikal RMS demonstrated how algorithms analyze exposures at construction sites based on external sources, historical claims data, surveillance cameras, contractual documents, and commercial classifications. Rather than underwriters spending valuable time manually reviewing numerous documents, machines now process the data and present actionable findings to the underwriter. These systems can identify



irregularities between similar projects, cross-check contractors' financial information, and predict the primary interventions future claims will require. In the U.S.A., this is already standard practice. In Israel, widespread adoption is inevitable, though the pace of integration remains slow.

## **Real-Time Safety: Smart cameras and sensors that detect accidents before they happen**

Construction site safety has undergone a remarkable technological leap, as demonstrated by the conference.

## **EarthCam – The new eyes of the insurers**

This system is now almost mandatory at major construction sites in the U.S.A. High-resolution cameras, equipped with risk-identification capabilities, detect non-compliance, falls, work at heights without safety harnesses, and any other risk aggravating events. The platform has become a central tool for mitigating claims and capturing footage of complex incidents.

## **Brickeye – Site sensors**

The IoT system tracks water flow, vibrations, temperature, humidity, and other critical environmental conditions. In recent years, numerous water damage claims under construction policies have been avoided in the U.S.A. due to the Brickeye system, which demonstrates a significant ability to prevent claims and reduce losses by substantial margins.

## **Eddy Solutions – The solution to water leaks (and Israel's pioneering role)**

Sensors that detect water leaks and automatically shut off the water supply. This is one of the most practical solutions for insurers, especially during the framing and fit-out stages, when water damage is the primary risk.

Besides Eddy, it is important to note that Israel was one of the world's pioneers in this sector.

**WINT – Water Intelligence**, developed in Israel and initially integrated by the **Tidhar Group**, presented a similar technology several years ago, utilizing water flow analysis and automatic shut-off in the event of irregularities. Integration of this tool made Israel one of the first countries where the possibility of mitigating the extent of water damage events at construction sites was demonstrated, serving as an exemplary model for numerous American and European companies.

## **SafetyClerk – tracking worker certifications, licenses, and compliance records (also used in Israel)**

The system ensures full compliance with safety requirements, including licenses, validations, training,

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personal protective equipment records, and more. For insurers, it provides a new layer of protection that mitigates potential risk.

In addition to solutions from American companies, there is a strong Israeli presence in the U.S. digital safety market.

**Beti** – An Israeli-developed system utilizing a state-of-the-art model for staff management, tracking, control, and compliance.

**Safeguard** – Provides risk management and preventive solutions for site workers

Besides these two, other Israeli companies are engaged in developing compliance, tracking, and real-time alert systems.

These companies not only compete but sometimes lead in major tenders, demonstrating the advanced development of innovative Israeli construction management technologies.

Nonetheless the integration of these types of systems with insurance underwriting is almost non-existent in Israel, despite the inherent potential to transform construction insurance underwriting from a document-based process to a real-time, data-driven reality.

**Automatic certificates of insurance: The end of the never-ending era of documents**

The conference revealed how the task of processing certificates of insurance has shifted from being a chronic headache for contractors to a focal point of technological innovation.

**Certifical – Real-time certificates of insurance**

The system issues digital certificates of insurance, provides updates on cancellations, tracks limits of liability, and connects directly to insurance companies. In the U.S.A., large contractors are now refusing to work with subcontractors who are not connected to the system.

**illumend – myCOI – Legal and safety control**

This is an AI powered insurance

compliance management platform designed to streamline compliance, by extracting insurance requirements from contracts and using AI-powered automation to simplify reviews and processes. Some companies have reported that document processing time has decreased from ten days to only four hours.

**Trestle – Document management for complex tasks**

A tool used by contractors, legal consultants, and insurers to manage and control documents throughout the entire supply chain. In Israel, this type of automation is almost non-existent, even though it has the potential to save time, prevent missing documents, and substantially minimize contractual risk.

**Worker health and safety: An effective solution for large sites – but of limited use for smaller sites**

One of the most notable surprises at the conference was the popularity of a digital medical system for construction sites.

**JobSiteCare – Digital occupational medicine**

A virtual medical clinic is set up directly at the site. Injuries are reported online and diagnosed immediately by a doctor. In the U.S.A., the platform has been shown to reduce frivolous claims by workers, shorten treatment times, and minimize employee absences. Nonetheless, the solution is mainly relevant for large sites where hundreds of people work in parallel, such as infrastructure, energy, industrial, and other mega-projects.

In Israel, most construction sites are small or medium-sized, making the tool less applicable.

However, in major projects, there is significant potential for improving documentation and streamlining the initial processing of claims.

**Risk management systems: Full control throughout the project lifecycle**

**Origami Risk – Comprehensive insurance, risk, and safety solutions on a single platform**

A comprehensive solution for risk management, claims, policies, and underwriting. The demonstrations at the conference showed how contractors and insurers can issue reports, conduct loss runs, perform analytics for project risks, and manage the entire insurance portfolio.

**Jones – Subcontractor management for the general contractor**

The system maintains records of personal protective equipment, verifies licenses, tracks insurance certificates, and helps minimize contractor risk. It is widely used by general contractor organisations in the U.S.A.

**Looking to the future: How the connection between insurers and contractors will evolve**

The message from all demonstrations at the conference was clear: We are witnessing the emergence of a new reality, and the industry is headed in that direction. The insurer is no longer just a risk carrier, but a technological partner connected directly to what events at the construction site.

The integration of sensors, cameras, tracking systems, and certificate of insurance processing mechanisms is not yet fully standardized in the U.S.A. or Israel. However, the direction is clear: Site data will be continuously fed to underwriters, tracking will be constant, and the gap between insurers' perceptions and on-site realities will close.

**In Israel, where work accidents, water damage claims, and gaps in insurance coverage continue to take a heavy toll on the industry, this is a crucial opportunity. Gradual adoption of these technologies offers the potential to minimize claims, improve underwriting, and create an unprecedented level of transparency.**

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