

THE MORE THINGS CHANGE, THE MORE THEY STAY THE SAME



Chris Torrens and **Allison Sweeney** S-E-A

The courtroom was quiet in that way that suggests a turning point in the case. Papers were stacked neatly, laptops open, the low voices of attorneys giving way to anticipation as the expert witness's report, central to the case, was brought into focus. It had been presented during discovery as authoritative and meticulous, the product

of years of experience. And then cross-examination began. An odd phrasing here, an improper citation there. Something felt off. Within minutes, all unraveled as it was discovered that the report hadn't just been written by an expert, it had been generated in part by artificial intelligence (AI). What followed was the swift and decisive collapse

of credibility as the judge moved to strike the testimony entirely from the record.

In a recent Harvard Business Review podcast interview, McKinsey & Company CEO Bob Sternfels offered a glimpse into how the firm is reshaping its strategy around AI. Asked about the company's size, his answer reflected an important shift in

how that question is even defined. “I update this almost every month,” he said, “but the latest number is about 60,000—40,000 humans and 20,000 agents.” Just a year and a half ago, McKinsey had roughly 3,000 AI agents, and Sternfels expected it would take until 2030 to reach a one-to-one ratio of agents to employees. Now, he believes that milestone is less than 18 months away, with every employee supported by at least one AI agent.

Forensic engineering and the surrounding industries are reaching a similar inflection point, one that underscores a familiar truth: the more things change, the more they stay the same. Today’s tools, such as advanced simulation software, high-resolution scanning, drone-based inspections, non-destructive CT scan abilities and much more, are more powerful and accessible than ever, allowing us to gather data faster and with unprecedented precision. Yet as the volume and complexity of that data increases, so does the need for experienced human judgment and, perhaps even more importantly, the relationships that support it.

Technology can identify patterns, flag anomalies, and compare datasets, but it cannot replicate the trust built among engineers, clients, attorneys, and courts. It cannot replace the nuanced discussions that shape an investigation, the gut instinct that guides questions, or the credibility earned through years of practice. In a field where conclusions must stand up to scrutiny, it’s not just about *what* the data shows; it’s about *who* interprets it, *how* it’s communicated, and whether it’s trusted. As the investigative and analytical tools we use every day continue to evolve, they don’t diminish the role of the human; they elevate it, reinforcing that while the methods may change, the responsibility and that human element at its core, remains the same.

As the unending growth of technologies and AI becomes even more embedded in our professional workflows, one thing that remains indispensable is the critical role of human judgment. While these systems can process massive amounts of information and generate outputs at remarkable speed, they still lack the ability to do what humans can: weigh context, assess credibility, and make principled decisions in uncertain or high-stakes situations.

Let’s say a civil/structural engineer investigates a building collapse. This individual will use high-resolution scan data to map the building, and perhaps that data shows areas of deterioration that might point to an obvious reason for the collapse. But the engineer, being able to draw on experience, will also look into things like build-

ing history, codes and standards, periods of maintenance, as well as load distribution. These other factors could perhaps bring them to a completely different outcome than what the initial scan data suggested. This professional judgment is shaped by experience, ethics, and accountability and still remains the constant that determines whether data is relevant, reliable, or appropriate to act upon. In fields like engineering, conclusions carry real legal, financial, and safety consequences. This is why it is ultimately the human expert who must interpret the results, challenge assumptions, and stand behind their outcomes. Technology may evolve, but the need for thoughtful, accountable decision-making endures.

That same principle extends beyond individual judgment to the need for collaboration across disciplines and even industries. As technology advances, investigations rarely live within the boundaries of a single expertise. That same building collapse, for example, may require input from structural engineers, but what about corrosion of metals like rebar or steel beams? What about the foundation settlement under the building? What about warnings or hazard communication failures? Materials experts, geotechnical engineers, mechanical engineers, and even human factors specialists each bring a different lens that technology alone cannot replicate. The scan data may show *what* happened, but it takes a coordinated effort from professionals to understand *why* it happened. These conversations during site inspections, debates in conference rooms, and shared insights over a meal are where critical connections are made and assumptions are tested. It is this multidisciplinary collaboration that ensures conclusions are not only technically sound but also complete, credible, and able to withstand real-world scrutiny.

Just as critical is the role of personal relationships and building trust, something that has always been foundational, regardless of how much the tools around us continue to evolve. With all these steady increases and advances in technology and AI, decisions are still made, accepted and defended by people. Clients rely on engineers they trust. Attorneys depend on experts who can clearly and credibly communicate their findings. And courts weigh not just the data, but the confidence and integrity behind it. These relationships aren’t built by algorithms; they are developed over time through consistency, transparency, and professional accountability. You’ll always remember the engineer who calls you with empathy to break the bad news that your client was responsible for the incident,

or the one who answers the phone at any time of day to talk through the nuances of a tricky case. As technology accelerates the pace and complexity of our work, it doesn’t replace this human element, it reinforces it. Because at the end of the day, no matter how sophisticated the tools become, trust remains the real piece that gives conclusions their weight.

Think of the opening scenario in a different way. The courtroom was quiet as the expert’s report, central to the case, was brought into focus. As questions began, nothing wavered. Each answer was clear, supported by both advanced tools and deep expertise. The data held, the conclusions aligned, and the credibility of the expert was strengthened. In the end, the report and testimony were allowed by the judge and helped shape the outcome of the case.

The contrast between these two scenarios is clear. In one courtroom, credibility unraveled in moments. In another, it held firm because it was built on experience, reinforced by relationships, and supported by technology used in the right way. That is the balance the profession and the industry must continue to strike. The tools will keep advancing. The data will keep growing. AI will keep suggesting outcomes. But the right outcome will always depend on the same constants: sound judgment, collaborative insight, and the trust earned over time. Because when the questions begin, and they always do, it won’t be the technology that answers them. It will be the expert. And that is why, no matter how much the landscape evolves, the foundation remains unchanged.



Chris Torrens is vice president of business development at [S-E-A](#), located in the Baltimore, MD, office. With over 25 years of experience in the forensic engineering, fire investigation and consulting space, Chris and his team are responsible for the development and oversight of [S-E-A](#)’s business development concepts and strategies.



Allison Sweeney is the manager, marketing projects based out of [S-E-A](#)’s Columbus, Ohio, office. In her current role, Alli conceptualizes digital and print marketing campaigns, plans corporate and regional events, updates and runs the company’s social media presence and website, and works to generally maintain and enhance the company’s brand recognition.