New Construction Technology Releases For 2024

New apps for the new year include an AI program that answers project questions, a 360-degree camera for building models and a tool that automates procurement quotes. Going into the new year, staying on top of new tech trends is important to builders looking to maximize output and slash costs. Here are five recent announcements from software makers and other tech providers about new offerings or updates to existing products that are designed to smooth out construction for contractors:

Trunk Tools

Trunk Tools has launched its second product, TrunkText. Designed with the goal of saving contractors up to two hours a day, according to the company, the AI-based tool "reads" all documents and files associated with a project and uses the collected information to answer questions via a messaging app. Once all the project information is downloaded into TrunkText, anyone working on the project can ask a question and receive an answer based on the tool's ability to scan all the relevant files and give an informed response. For example, a project manager can type "How many casement windows do I need to order and what size?" and receive an answer within seconds based on project specs and construction drawings. In addition to the answer, the tool provides links to those relevant documents as a further resource. The technology can do what no single human project manager can by thoroughly reading millions of pages of detailed files, forms, change orders, RFIs and other documents associated with the designing and building of a project, Sarah Buchner, the company's founder and CEO, said in a blog post. The AI powering TrunkText was trained using construction data including specification sheets, building codes, safety procedures and regulations, RFIs, various types of contracts, change orders and scheduling forms.

StructShare

The GenAI program from StructShare automates getting quotes on construction materials for specialty trades. The new tool allows construction pros to make well-informed procurement decisions using insights on numerous factors, including pricing, supply chain issues and stock availability. The company says that the tool will increase accuracy in getting materials and project timelines, while reducing delays and costs in getting materials from the manufacturer to the trades to the project site. Users will have AI-enhanced data when making purchasing and order timing decisions throughout the construction process. The tool also tracks inventory. GenAI builds on StructShare's procurement platform features aimed at helping construction pros streamline all purchasing processes from field communications to purchase orders to invoice reconciliation.

Autodesk

Autodesk recently released Autodesk AI through its new Design and Make platform. This suite of tools and enhancements to existing tools is powered by artificial intelligence and machine learning and includes multiple features across new and existing programs. The new ML Deluge Tool on InfoDrainage offers predictability models for flood maps across a building site's surface. Civil engineers can use this AI tool to reduce their time spent tracking stormwater controls and runoffs, while using the auto-generated flood maps to design more sustainable and disaster-resistant drainage plans. According to Autodesk, the ML Deluge Tool provides accurate site flood maps almost instantly to help create enhanced rainfall ground models.

Autodesk Forma is a new AI predictive group of programs offering Rapid Noise Analysis, Rapid Wind Analysis, and Rapid Operational Energy Analysis tools. Supporting energy-efficient designs, these tools allow urban planners, architects and designers to quickly generate interactive models showing how buildings will be affected by their surroundings and the design. For example, architects can instantly see the difference in energy use from artificial lighting and fresh air ventilation versus the insulation value from a change in the window-to-wall ratio. The ability to see these models early in the design process can mean designs are more resistant to extreme weather, as well as more efficient and less costly to operate, the company says. The Autodesk Data Model is now in beta for users of Revit and will eventually be available for Civil 3D customers. This tool organizes large data sets into smaller chunks for streamlined sharing and viewing. Even data not originating in Autodesk can be integrated into the system, the company says. The Data Model will deliver the most updated plans, models, and schedules in specific blocks to relevant subcontractors, planning officials, and other stakeholders. According to the company, the user experience for Data Model is intuitive, and allows experts and non-experts to access the building information modeling process.

Ricoh

In partnership with 4D digital twin platform Cupix, Ricoh released the new Ricoh Theta X 360-degree camera. Intended to boost workflow efficiency and ease project management even on megaprojects, the camera generates 3D spatial images that can be directly linked with CupixWorks and CupixVista platforms for instant viewing, manipulation and analysis. Construction pros can collaborate on tasks like virtual walkthroughs. Advanced features include integrated GPS technology, which provides detailed and accurate mapping, as well as high-resolution imaging for low light or windy conditions, says the company.

In addition to the advanced imaging features, the camera generates numerous data points, which the 4D-modeling platform translates into georeferenced 3D maps providing various various views and different perspectives for various tasks. Updates like enhanced user support will be added soon. According to Ricoh, the camera will allow customers to collaborate remotely around the world and reduce digital imaging and modeling costs.

Sage

Sage has added another product to its cloud-based software portfolio with the Sage Construction Management program. This program provides preconstruction and project management tools that work seamlessly with Sage's financial software for end-to-end support geared toward small or medium-sized firms. Project managers can access and organize the complete bidding process, including cost estimates, schedules, and specs, and drawings. In addition to managing bids, the tool offers customizable dashboards to simplify tracking lead status or activity and put creating bid packages at your fingertips. Users can log into the system from office laptops or smartphones in the field. The cloud-based accessibility means all project operation stakeholders can manage their portion of the job within a single platform from any location at any time for improved flexibility and efficiency.

By Shelley D. Hutchins, LEED-AP