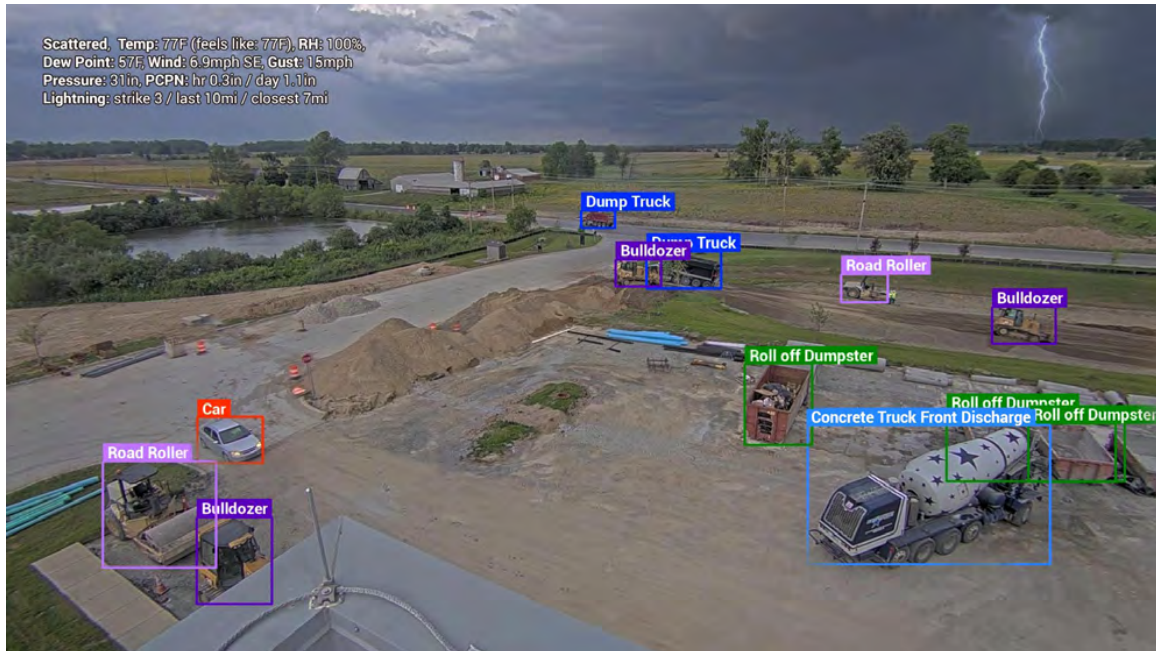


## 6 Ways AI is Improving New-Home Construction Right Now

By Leah Draffen, June 15, 2023



The possibilities—and skepticism—of artificial intelligence (AI) are endless as various industries search for ways to implement capabilities into daily tasks. The home building industry is no exception as developers create various solutions to common home builder ailments. From the juggling of paperwork and data storage to securing material bids or design plans, startups are arriving with answers to everyday stresses and challenges.

While AI can assist in a multitude of scenarios, these companies note that a human touch is still needed to not only develop these technologies but see each solution through to completion. Below, learn six ways AI can improve the new-home construction process for builders and their teams.

### 1. Creating a Home's Digital Copy

After individually going through the home build process, Digs' founders both experienced a pain point many home buyers frequently face—as one of the largest investments of their lives, they knew little information about their brand-new homes. With one founder being a former home builder and both possessing backgrounds in developing easy-to-use customer-centered technology, the duo set out to create a scalable solution for homeowners while solving a common data consolidation problem for builders.

“Digs AI helps organize the build process through room segmentation and data association,” says CEO and co-founder Ryan Fink. “Digs AI ingests messy build documentation (selections, change orders, etc.) and collects and organizes everything to create the most accurate representation of the home.”

The AI-enriched file management and modern collaboration enable builders to work more efficiently and easily hand off each home's information to homeowners in a highly organized and interactive digital copy. Users can drop files onto a space on a floor plan enabling spatially associated selections for each room. Additionally, users can store files, and Digs will associate them with the correct room (e.g., bathroom #1) on the floor plan.

Digs launched its beta version in February, and the official launch was in May. “We're aiming to deliver the customer experience that new-home buyers and homeowners anticipate in the year 2023,” Fink adds.

### 2. Streamlining Bidding and Sourcing

To create a “healthier and happier industry,” DigiBuild's procurement software can help builders gather an average of 10 bids, find materials and niche suppliers—including sustainable, minority-owned, woman-owned, and veteran-owned businesses—order materials on a predictive schedule, and make change orders with a click of a button.

“There’s roughly 750,000 pieces of paper for any given project, and at DigiBuild we are doing our part to eliminate a portion of that. One of our goals is to digitize and drive sustainability within the industry,” says April Moss, chief operating officer and co-founder.

Using ChatGPT and AI, DigiBuild continually looks for and vets suppliers to add to their ever-growing construction ecosystem. To disperse supplier catalogs, the team is also using ChatGPT and AI. “In this industry everybody has a little nuance on its units or ounces, whatever it is they’re doing. We’re taking all these specs and information and using ChatGPT and AI to disperse it within different categories so that all the language is the same,” says Moss.

In October 2019, [DigiBuild](#) partnered with IBM while deciding to focus on supply chain. It was then that its software platform, DigiProcure, was launched. A few months later, the pandemic only exacerbated the need for materials sourcing and procurement as project disruptions and delays increased. For a technology company, Moss presses that the human element of this industry isn’t lost. She and the team at DigiBuild believe that AI, ChatGPT, and its software can be used to make the industry a better place with less stress, so that builders have more time to spend with their families.

“Eighty percent of what we do is software, and 20% is people. We have procurement managers on the back end watching and tracking supplies all the way to the jobsite,” she shares. “Yes, we’ve created a software using the latest technology, but we’re also creating a community of people to support each other, and it’s been organic.”

### **3. Supporting Customers and Sales**

In terms of customer service and sales, AI can help new-home sales teams answer questions through chatbots at all hours of the day. At AtlasRTX, president Mike Bills, Ph.D., says its chatbot (or digital assistant) can meet buyers wherever they are in their journey—without the pressure of live chat solutions. Home buyers are two to three times more likely to engage with a chatbot versus live chat because of the ability to immediately get answers to their questions, AtlasRTX data reports.

“Today’s consumers want a real-time experience (RTX) that is digital first, messaging enabled, and available 24/7. AtlasRTX’s chatbot allows buyers to engage with builders 24/7, in their own language,” Bills explains. “AtlasRTX offers a conversational experience where buyers can ask questions, express preferences, and be recommended homes and communities based on buyers’ preferences.”

Builders can implement a [chatbot](#) to operate autonomously on the website, guiding a buyer until they have indicated that they are interested. “Once they leave the website, we engage via text messaging where we nurture the lead to the point where they should be connected with a salesperson. After a model-home visit, our digital assistant engages buyers to determine their interest and timeframe and alerts salespeople to those buyers that are high priority,” Bills says.

Because AtlasRTX provides a managed service where they monitor and optimize the chatbots continuously, the chatbots are always evolving. Bills shares that ChatGPT is currently being incorporated into several of the chatbot’s capabilities.

### **4. Keeping Jobsites Safe**

Because falls can be fatal in construction, EarthCam has launched new AI camera technology for jobsite safety. Its latest algorithm can detect workers operating at height with accuracy and can allow safety personnel to view detailed recorded video to verify safe practices are observed, including fall protection and personal protective equipment.

“Detecting workers at height is one of the most in-demand, yet challenging AI models to develop,” says Brian Cury, CEO and founder. “EarthCam’s unique expertise in deploying and managing automated robotic cameras, together with advanced deep learning, will instill best practices with unbiased data.”

The new Edge Computer Vision and AI Object Detection software can send customized alerts based on predefined actions as workers climb a ladder, work on scaffolding, or operate an elevated lift. Prior to the new release, EarthCam’s visual data and analytics already included weather sensor data, equipment identification, and activity heat maps and has helped keep construction workers safe while mitigating risks.

The AI object detection can recognize specific vehicle types and license plates, handle access control, and verify deliveries for management. AI proximity advisories are also sent when workers are close to energized equipment keeping workers aware of their surroundings and allowing in-person safety site visits the option of remote inspection.

### **5. Simplifying Interior Design Choices**

To envision how an area will look, Planner 5D’s Design Generator simplifies future interior design projects by allowing builders or

architects to brainstorm ideas without investing excessive time or effort. “Design Generator is an AI-powered tool. At its core lies the combination of the Stable Diffusion AI model and Planner 5D’s proprietary algorithms that create unique interior design images based on the pictures of users within seconds,” explains CEO Andrey Ustyugov.

By uploading a picture of an area, users receive multiple options for a potential space and can serve as a collaboration tool between builders, designers, and clients. Ustyugov says the Generator works nicely for furnished and unfurnished spaces so it can be used at different stages of renovation projects as well.

“Once an image is uploaded, users are asked to specify the type of space: a kitchen, bedroom, bathroom, office, living room, or children’s room. Thanks to this, builders or designers can experiment with various formats and see how the space could potentially appear if its functionality were changed,” Ustyugov says. “The end results might even inspire users to reconsider the room’s layout unexpectedly.”

Originally released at the beginning of 2023 to iOS users, a [web version](#) for professional users has been launched since. Planner 5D is continuously improving its algorithm to ensure images are high quality and follow the latest design trends with the help of its skilled software developers and experienced interior design professionals.

Looking ahead, Ustyugov says, “We continue working on integrating generative AI in the Planner 5D interface and will launch another innovative addition to improve the design and renovation process for users in the upcoming months.”

## **6. Automating Smart Home Tech**

As builders continue adding and prioritizing smart-home solutions in their new-build packages, there’s an increased focus on smart-home technology automation and how AI can help. Nice North America’s chief product officer Paul Williams foresees “smart power” becoming a bigger part of what drives the smart-home market.

Williams says, “I believe that AI will significantly influence the next wave of smart-home technology. Where current products require manual programming in order to be automated, AI and machine learning have the potential to enable solutions that provide true home automation. This will be an exciting development in the industry as we work toward smart-home solutions that can adapt and offer efficiencies based on a customer’s habits, usage, and preferences.”

As part of its smart-home products and solutions, Nice uses video analytics (visual AI) on its surveillance camera products to identify events based on sensing vehicles and people. Offering integrated systems from lighting and audio to irrigation and energy management, Nice looks for ways in which AI can help simplify everyday movements for homeowners to create a truly connected and integrated home.

Seeing the implementation of AI as a continuous evolution that has the potential to anticipate the needs of homeowners, Williams says, “Today’s home buyers expect that the homes they purchase are fit for integrated smart-home solutions. This is especially true of the younger generations entering into homeownership,” Williams shares. “In order to do this, builders need to prewire the home so that it is compatible with wired smart-home solutions, whether they are incorporated at the time of the build or down the road.”