revizto

Bridging the Gap

The 2025 Digital Design & Construction Report

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ABOUT THIS REPORT

For this report, we commissioned a survey through Censuswide of over 2,000 individuals from across the global construction sector with an emphasis on the AEC community. The survey was conducted March-April 2025. More than 80% of the respondents are in leadership roles from C-suite to CIOs, BIM/VDC, digital engineering/construction and architecture technology practitioners. About 75% of respondents are from firms with revenues over $100M USD, while 43% respondents are from firms with revenues over $500M USD. The majority (65%) of respondents work on projects with budgets of $51M-$500M USD. Survey results have been rounded to the nearest unit (ones digit) for reporting purposes. Revizto was not named as the research partner.

A MESSAGE FROM THE CEO

This is a defining moment

The global construction economy, already a $13 trillion giant, is projected to reach $22 trillion by 2040[1] with growth being driven by the urgent demand for infrastructure, energy transformation, urban expansion, and the AI race. But while the opportunity is massive, so are the pressures. Projects are bigger, timelines are tighter, labor is harder to find. The challenges multiply with supply chain disruptions and volatile global conditions.

The way we build today isn't good enough. Despite its size, construction remains one of the least efficient industries in the world. We've seen firsthand how even the most ambitious projects stumble due to fragmented communication, outdated workflows, and not enough skilled hands to get the job done. When we work in silos, we lose precious time, resources and money.

At Revizto, we believe the architecture, engineering, construction and operations (AECO) industry is entering a new era. That's why we created this report.

We want to offer a clear-eyed look at the forces shaping our industry, from policy shifts to the mounting pressures to build smarter and faster. It's also a call to every owner, developer, architect, engineer, and contractor. Those who embrace innovation and adopt next-generation technology will be the ones who thrive in this next chapter.

This report is more than a collection of trends. It's a roadmap. It reflects our belief that with the right mindset and technology, the AECO sector can overcome its biggest challenges and unlock unprecedented value – not just for projects, but for the communities they serve.

Let's get to work.

ARMAN GUKASYAN
CEO, REVIZTO

Practitioner Perspectives

Insights from 2,000 AEC professionals on today's challenges and tomorrow's opportunities.

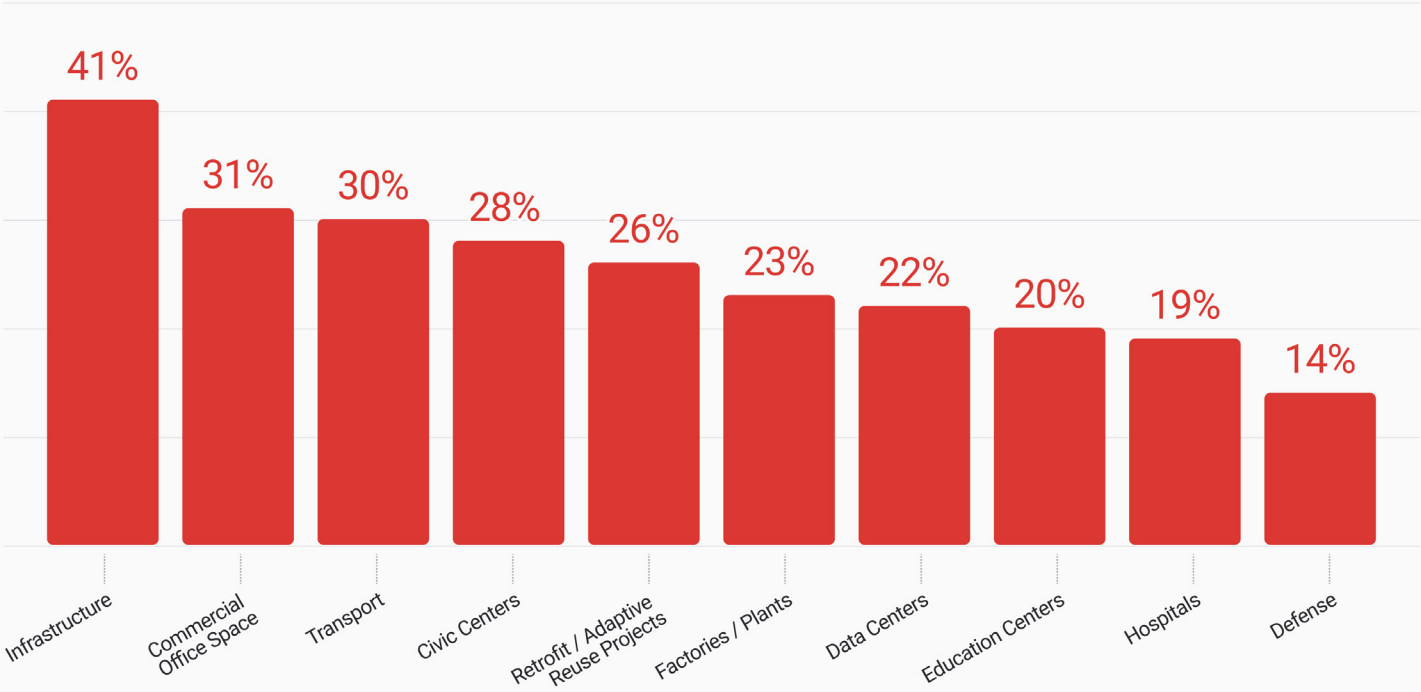
The AECO industry is always dynamic and evolving, influenced by a variety of internal and external factors. In recent years, we've seen projects increase in size, cost and complexity while workforce shortages and supply chain disruptions continue to affect the industry. Economics in the way of inflation and tariffs are adding another layer of risk. Some industry experts argue that the current approaches to risk-sharing and cost-estimation cannot keep up with the increases in project complexity, risk and scope.

Through our research, we set out to listen and learn, to gauge the reality of today's construction environment. In many cases, the responses were anticipated, given the current environment; in other cases, eye-opening.

Where Project Demand Is Growing

One of the first questions we asked was where those surveyed are seeing the greatest demand for design and construction services. As expected, infrastructure (e.g., telco, water systems, energy & utilities) topped the list at 41%. However, surprising to us was that commercial office space came in second at 31%, transportation (e.g., rail, roads, airports, ports) third at 30% with civic centers (e.g., multipurpose arenas, museums, government buildings) and retrofit/adaptive reuse following. The next top three were factories/plants, data centers and educational facilities.

Where are you seeing the greatest demand for design & build services?



Here's a little more detail with some regional context.

AEC leaders in the USA (49%), UK (42%), Australia (41%), Germany (36%), and France (36%) all said the top area they are seeing increased and/or the greatest demand for design and build services is in infrastructure, compared to those in the UAE who see the greatest demand in transportation (36%), and those in Saudi Arabia, who see increased/ the greatest demand in civic centers (41%) with transportation at 31%.

Budgets & The Cost of Change

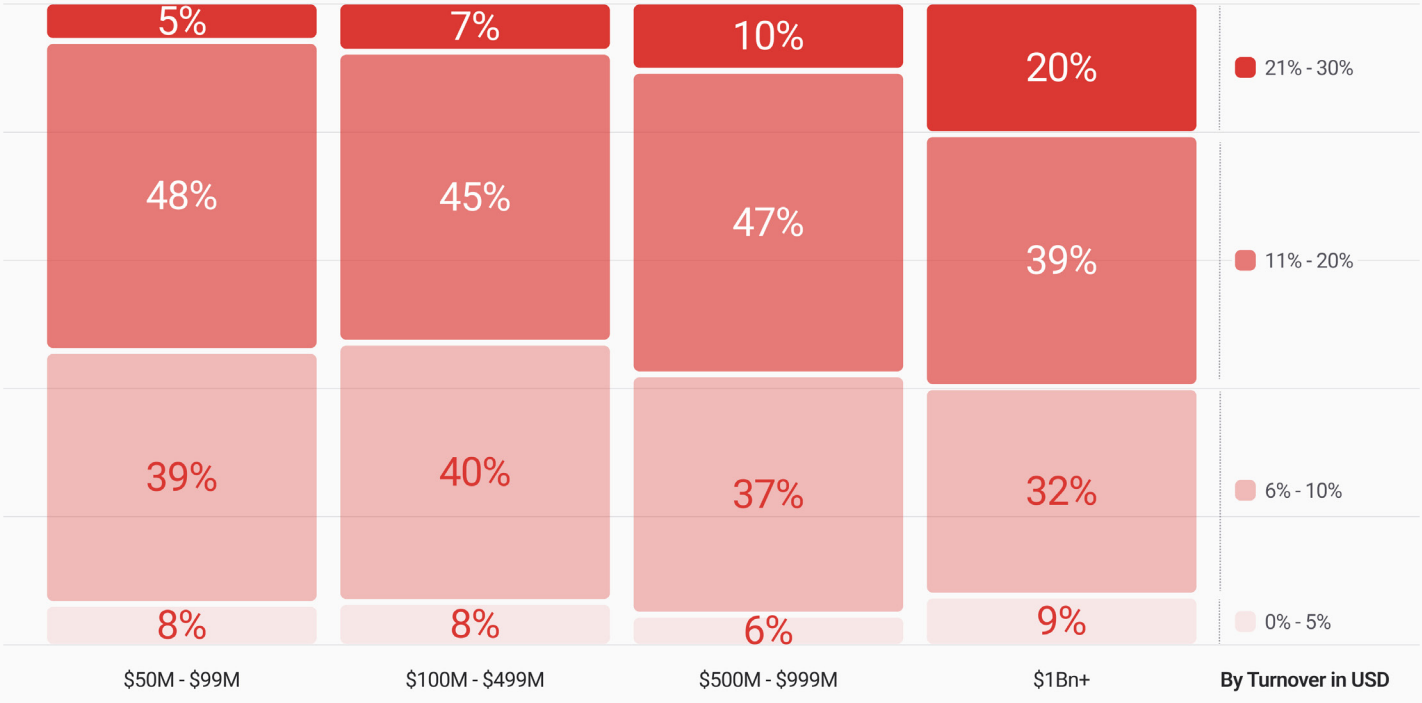
With demand for services placed in context, we then asked the global AEC leaders how much project costs increase over the original estimate on average. The responses were enlightening.

The most popular response among respondents (45%) indicated an average increase of 11–20% over the original estimate, which already includes a 10–20% contingency typically applied to complex projects[2]. As expected, companies working on larger, more complex projects report higher percentage change in budgets. For example, 20% of companies with >US$1 billion projects reported budget changes between 21-30%.

#1 Reason for Budget Overruns

Change orders, client changes, and scope creep

On average how much do budgets change from the original estimate?



The top reason for budget overruns, cited by leaders in the AEC community, was change orders, client changes and scope creep (56%). Unforeseen site conditions was a close second at 53% followed by design errors at 45%, poor communication (37%) and construction errors (33%).

What are the top reasons for reworks on projects?

56%	Change Orders, Client Changes, and Scope Creep
53%	Site Conditions and Unexpected Challenges
46%	Design Errors and Incomplete Plans
37%	Poor Communication and Coordination
33%	Construction Errors

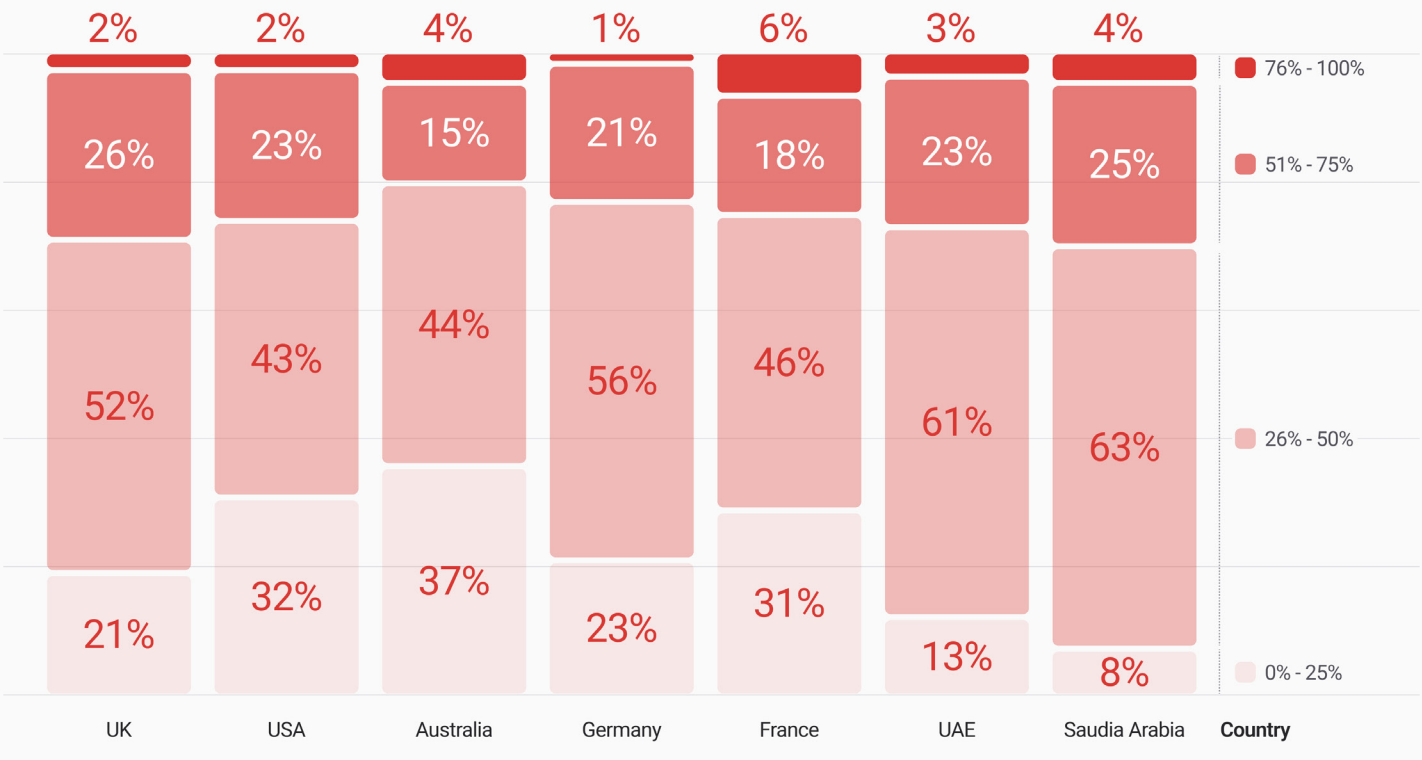
> "As an industry, we need to improve project productivity to help minimize budget increases."

ROMAN BARAN
SENIOR MANAGER, DIGITAL CONSTRUCTION AT CANARY WHARF GROUP

These numbers might surprise some as many of these projects are built on more collaborative procurement contracts and technology such as BIM.

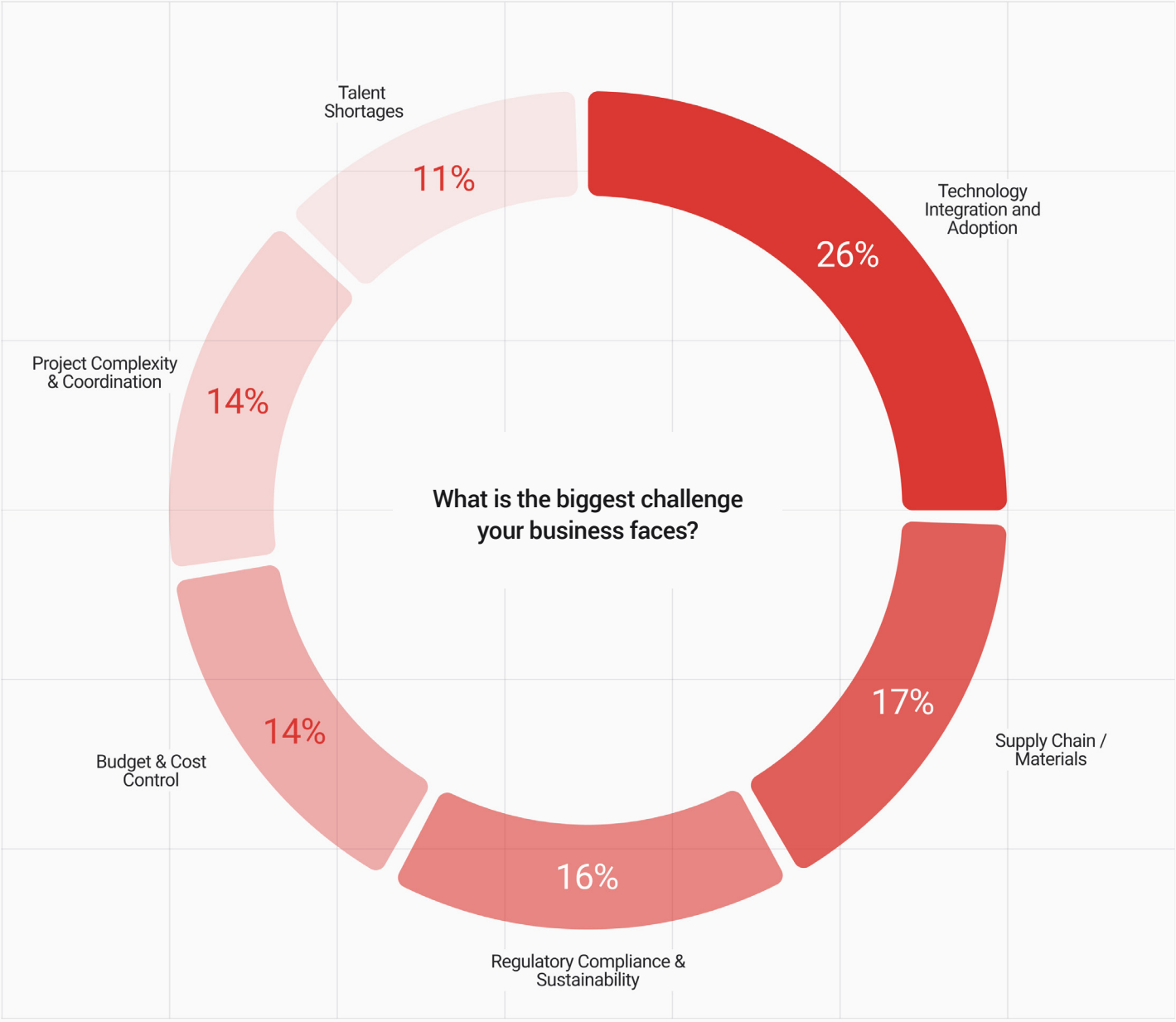
Last but not least, we asked our AEC leaders what proportion of their projects are publicly funded. Half of them said 25–50% of their projects are partially or fully funded by public money. This matters because these aren't just construction budgets, they're taxpayer dollars. When projects run over budget or fall behind schedule, it's not just a line item that suffers. It's the public footing the bill. Delays and overruns can mean wasted resources or additional funding needs, ultimately stretching the very tax dollars meant to serve communities.

For your company, what % of projects are publicly funded (partially or entirely)?



Time vs. Technology

The construction technology market size is expected to almost double by 2030[3], a trend closely aligned with the overall expansion of the construction industry. While technology investment is substantial, our survey found that the primary challenge lies not in availability, but in adoption and accessibility. Notably, those surveyed cited technology integration and adoption as the top challenge, with 26% of AEC leaders highlighting these issues.



Despite the introduction of many new standards intended to improve interoperability, the industry continues to face inconsistent and fragmented standardization across stakeholders. Compounding the issue, widespread technology adoption often demands interconnected systems that require significant time investments for deployment and training – adding additional friction to the process.

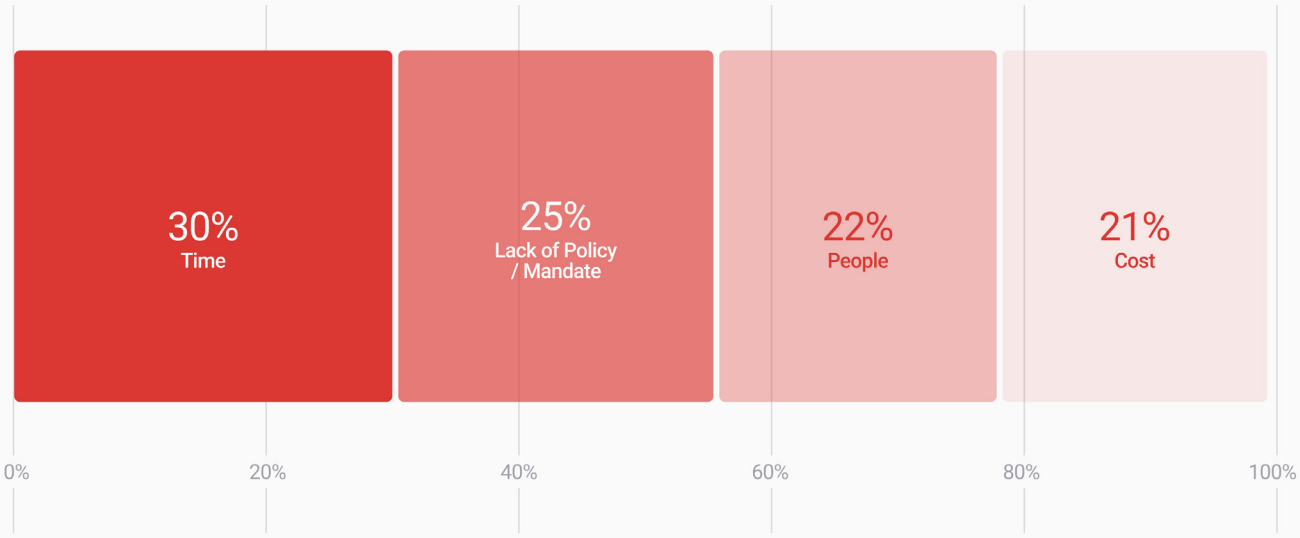
Our survey revealed an important nuance. Financial cost was not ranked among the top barriers to adoption. Instead, deployment and training time topped the list, followed by the lack of policy or mandate, and a general resistance to change.

It's not a huge surprise. People across the construction spectrum are pressed for time, whether it be training staff on new tools, keeping up with regulations, supply chain disruptions, etc.

Specifically, 31% of AEC leaders at companies with a turnover of US$50 million - US$100 million identified the biggest barrier to adopting new technology as time compared to respondents at companies with projects of US$1billion or over, who identified the biggest barrier as lack of policy / no clear mandate (internally or externally) at 32%.

The challenge is to find a solution that can bring the outputs of those specialized tools together so everybody from owners to the AEC professionals to the operations and maintenance staff, can easily assess and access that information intuitively with very minimal upskilling.

What, if anything, has been the biggest barrier to adopting new technology?

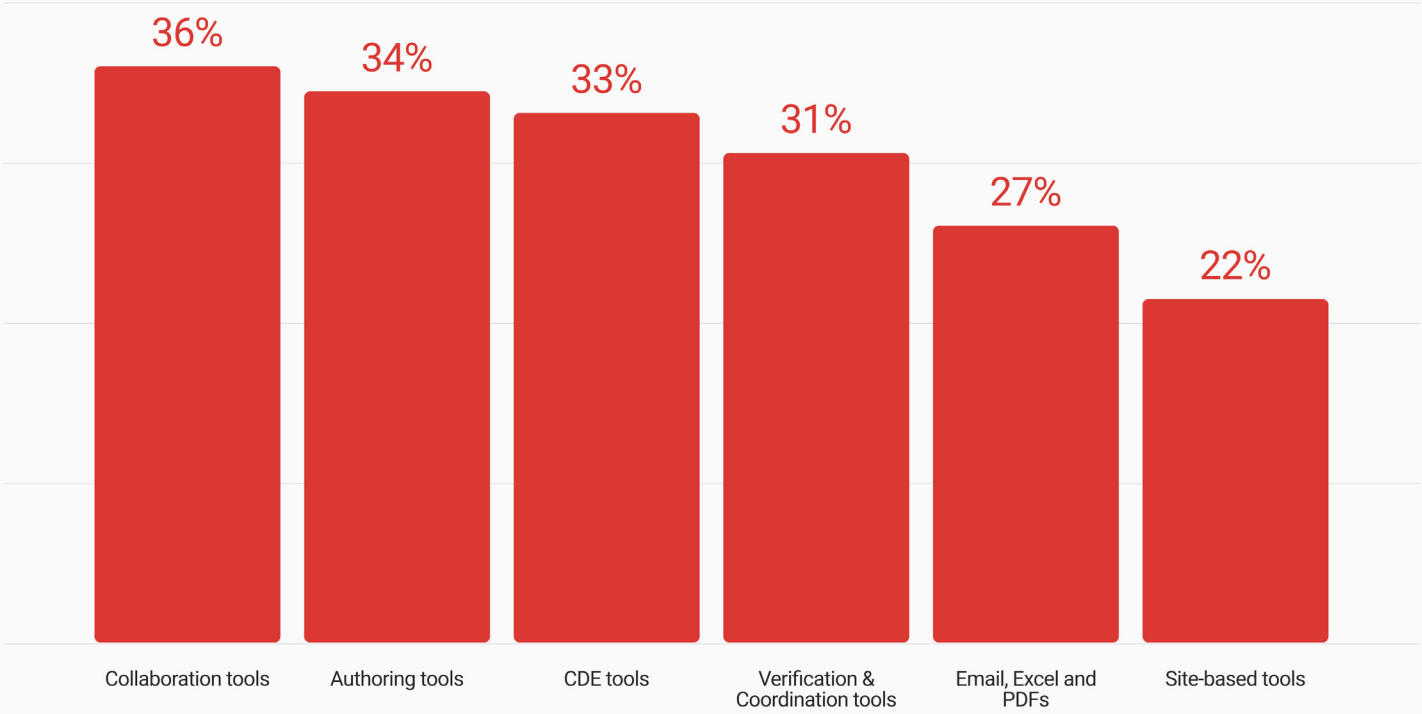


Top Technologies Shaping the Industry

From collaboration and authoring tools to common data environment (CDE) and coordination solutions, those surveyed have largely embraced technology, challenging the stereotype that the industry is slow to adopt new tech. This acceptance is also driven by necessity, as projects are increasingly larger and more complex, involving numerous stakeholders.

More than one-third of leaders in the AEC community said they relied heavily on collaboration tools to complete projects. Naturally, authoring tools and centralized data management platforms followed closely in importance.

What are the tools in your software stack that your team relies on most?



The Democratization of Data

> "There is a collective maturity around how digital data can help bring collaboration and transparency into the construction space. With these, we get certainty, and with certainty, there is reduced risk."

JASON HOWDEN
CHIEF INNOVATION OFFICER, REVIZTO

It's clear from the survey that our industry is learning to democratize access to data.

Whether horizontal or vertical construction, technology is transforming our industry from a traditional, siloed environment to a dynamic, collaborative, and data-driven ecosystem.

It's a shift that is imperative if the industry is to meet the infrastructure and transportation demands spotlighted in our survey and reflected in widespread government and commercial commitments. These projects are typically fraught with multiple stakeholders, large project teams and complexity. Collaboration across disciplines and geographies is increasingly important, and industry professionals are making the necessary adjustments.

As budgets increase and barriers to technological adoption decrease, the industry is shifting from a fragmented approach to a holistic ecosystem where data flows seamlessly across project lifecycles.

> "There still is a gap in trust between design and trade contractors. Where do we meet in the middle to work as efficiently and as effectively as we can from design coordination through trade coordination?... It really just boils down to this communication."

JASON STEELE
VDC MANAGER AT CERRIS SYSTEMS, FROM REVUP 2025

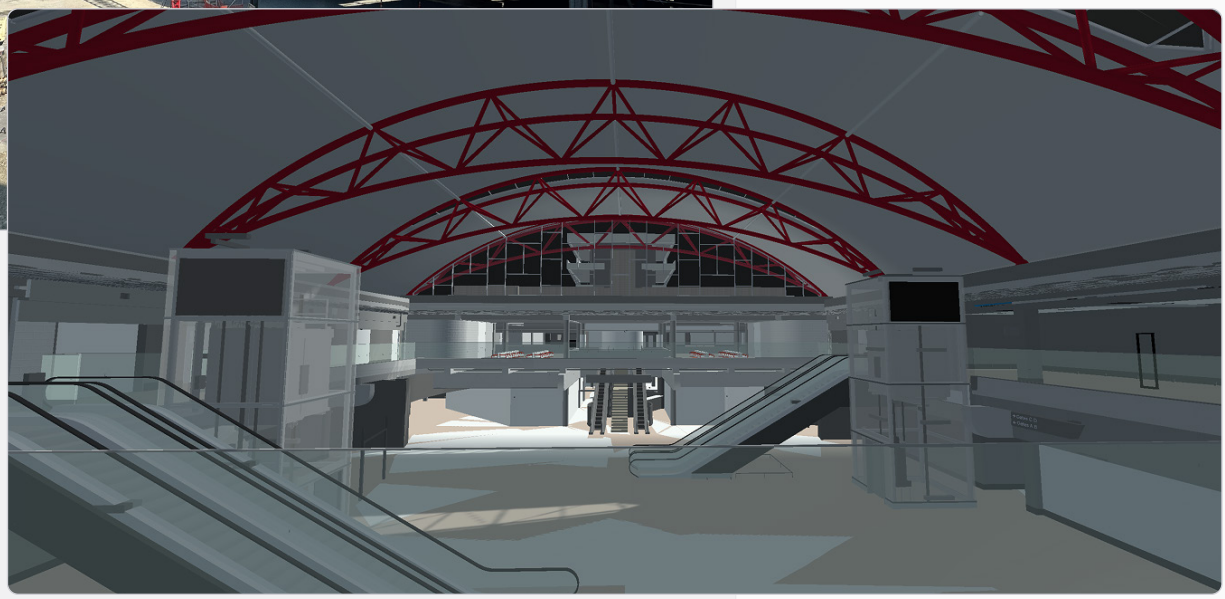
Industry Leaders Delivering Bold Projects

A look at pioneering projects around the world pushing the limits of design, engineering, and construction.

Pittsburgh International Airport:
A Smooth Takeoff and Transition

The Pittsburgh Airport Airside Renovation Program includes the construction of a new 75,000-square-meter terminal at Pittsburgh International Airport as well as renovations to the existing concourses. During the design phase, the complex project required the collaboration of as many as 10 different companies in a variety of disciplines all working remotely in different cities. As the design manager for the renovation, Abstract Group was responsible for initiating and managing the project's overarching design and data organization strategy. It was a task complicated by scale, where issues can vary in location by nearly a half mile.

Scott Deisher, associate, registered architect, and design researcher at Abstract, said, "When you're working with an airport the size of a couple of city blocks, there must be customizable tools to handle such enormous projects." To manage the data, particularly the point clouds of critical areas in the airport and the Revit models, Abstract introduced Revizto.



75,000 Sqm

Project Size

> “The number of emails we’ve been able to reduce about model and design issues is enormous. The issues are placed, we have relevant watchers on each issue, and people jump into the chat box and discuss it.”

SCOTT DEISHER
ARCHITECT, FORMERLY AT ABSTRACT GROUP

Deisher noted that most point cloud workflows have a steep learning curve and require data to be processed through proprietary systems and passed through multiple plugins before being viable for usage. “With Revizto, a couple of clicks are necessary to change the view settings, but you’re doing it in the 3D model itself, which saves significant time. The fact that you can view these huge point clouds in the software and continue navigating around the model at the same speed is incredibly useful.”

It even allowed the team to handle multiple versions of Revit. He added, “You can have your 2019 and 2022 models in the same three-dimensional space without having to go through the issue of regularly updating the entire model. Having a place like Revizto, where you can take all of that information and host it in the same place, creates a single source of truth that can grow throughout the life of the project,” said Deisher. The new terminal is on track to open on time in fall 2025.

“We [the JV partners] established this goal: how can we bring the best of us to the table? It was an open discussion about what technologies and tools we’ve all found to be successful and how they can be leveraged on this project. Revizto was one of those that fit not just our want, but our need to have a highly collaborative project.”

JACK MORAN
DIRECTOR OF VDC AND INTEGRATED SERVICES AT CLARK/SMOOT/CONSIGLI

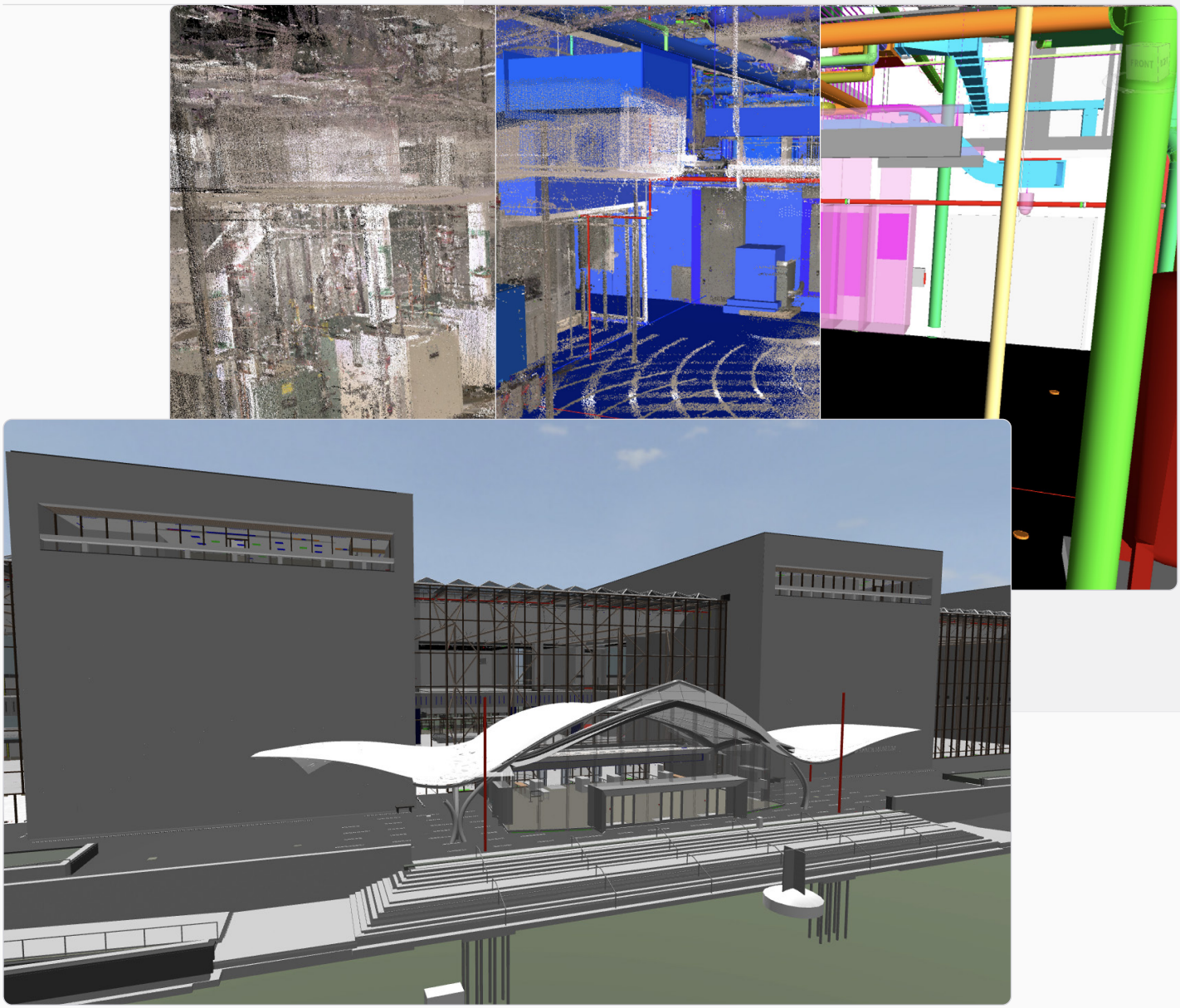
Smithsonian Institution: *Transforming Air and Space*

The massive renovation of the iconic Smithsonian Institution’s National Air and Space Museum in Washington, D.C. – the first in its over four decades of existence – included the revitalization of the over 15,000-square-meter, three-story building, inside and out. This exciting transformation has also been a catalyst for the museum’s newly established BIM standards and guidelines and an opportunity for the joint venture (JV) team of Clark Construction Group, LLC, Smoot Construction Co., and Consigli Construction Co., Inc. (CSC) to bring the value of BIM data to the entire project team and stakeholders.

Faced with the challenge of fusing disparate elements, the JV partners set a new standard for visualization and collaboration technology and tools in a BIM ecosystem that provided value to the project team, the owner, the museum staff and ultimately the customers.

15,000 Sqm

Project Size



As Richard Petrarca, Project Manager for LendLease, the construction manager on the project, says, “I have never seen the collaboration that we’ve had between the contractors, AE firms and the owners. Being able to have all the parties involved from day one, seeing issues as they come up has been just a tremendous advantage.”

Michael J. Carrancho, Deputy Director at the Smithsonian Institution agreed and sees a continuing benefit of the tool well after the renovation is complete.

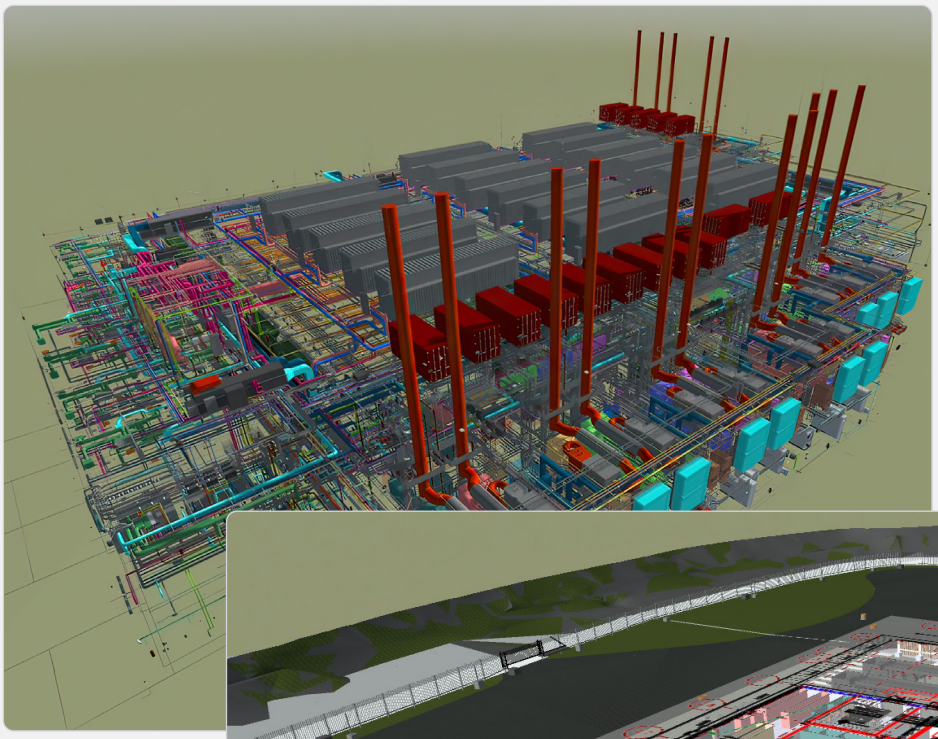
> "Our coordination meetings are typically one hour a week for these huge projects. That means instead of a four-hour session, my modelers are back working three hours extra every week. That's massive."

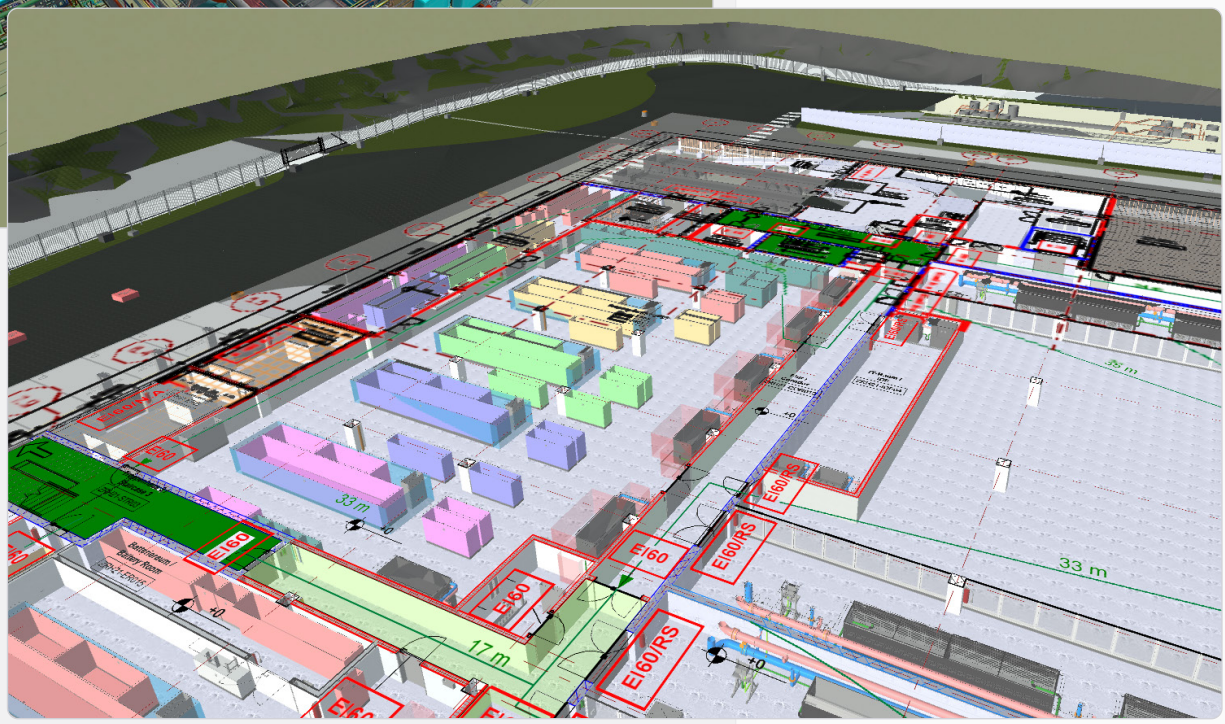
JEROEN VAN DIJK
DESIGN MANAGER,
HASKONING

Haskoning:
Resolving a Data Center Dilemma

Led by engineering and design firm Haskoning, the MEP project team was given an ambitious deadline of just 10 weeks to design and coordinate a massive data center (with a facility footprint spanning the equivalent of 14 football fields) for one of the world's top data center owners. It's an environment where every detail matters and delays can cost millions.

Specifically, the task was to integrate a complex web of mechanical, electrical, structural and architectural elements across multiple disciplines. Jeroen van Dijk, Design Manager at Haskoning, confirmed, "We work at top speed and cannot afford any room for error. A successful project is all about communication. At the end of the day, we NEED to talk to each other—I'm not saying emails, mind you—talk to each other, that's how you get the best designs."





14 Football Fields

Facility Footprint

10 Weeks

Full Design Delivery Timeline

With communication in mind, the organization incorporated an intuitive collaboration tool to its digital ecosystem that could consolidate data from various sources that ranged from 2D drawings to 3D models and communicate directly within the models thus reducing the reliance on emails and external communication tools.

Training was a critical component in ensuring all team members, including subcontractors and local partners, could effectively use the tool. Every team member went through a one hour training session to learn the basics. Predefined stamps allowed team members to quickly flag issues and assign them to the right person, streamlining communication and ensuring accountability. It enabled a closed-loop workflow where issues are opened, solved, reviewed, and closed, ensuring accountability and transparency.

> “Successful project coordination is not isolated to project reviews or official activities; it requires everyone to be an active participant and requires regular team communication. Our success hinges on fluid, effortless communication and coordination that goes well beyond the formal review activities. If one of us fails, all of us fail.”

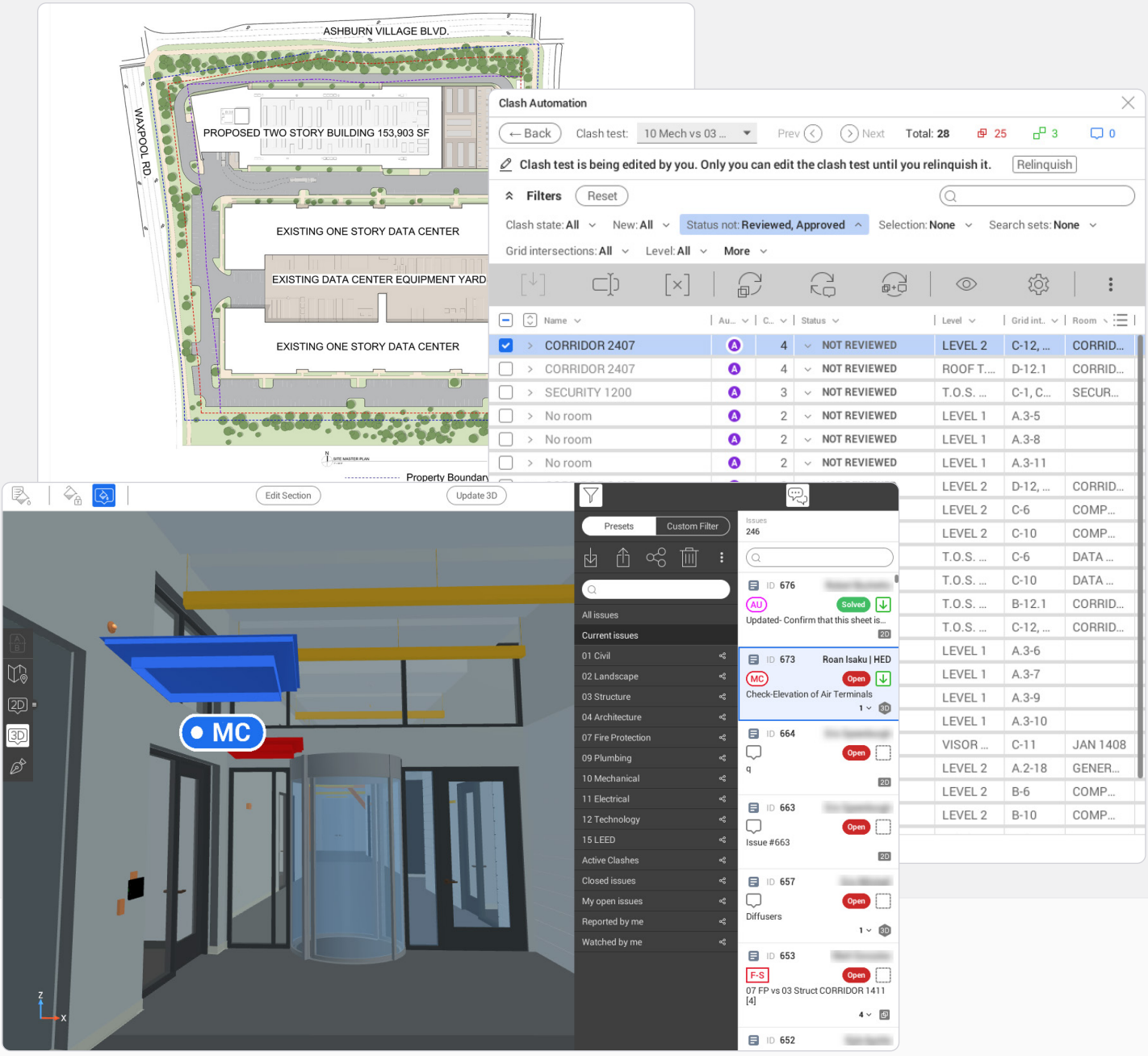
ROAN ISAKU
PRACTICE TECHNOLOGY LEADER, HED

Red Rum Data Center: *One Vision, Three Phases*

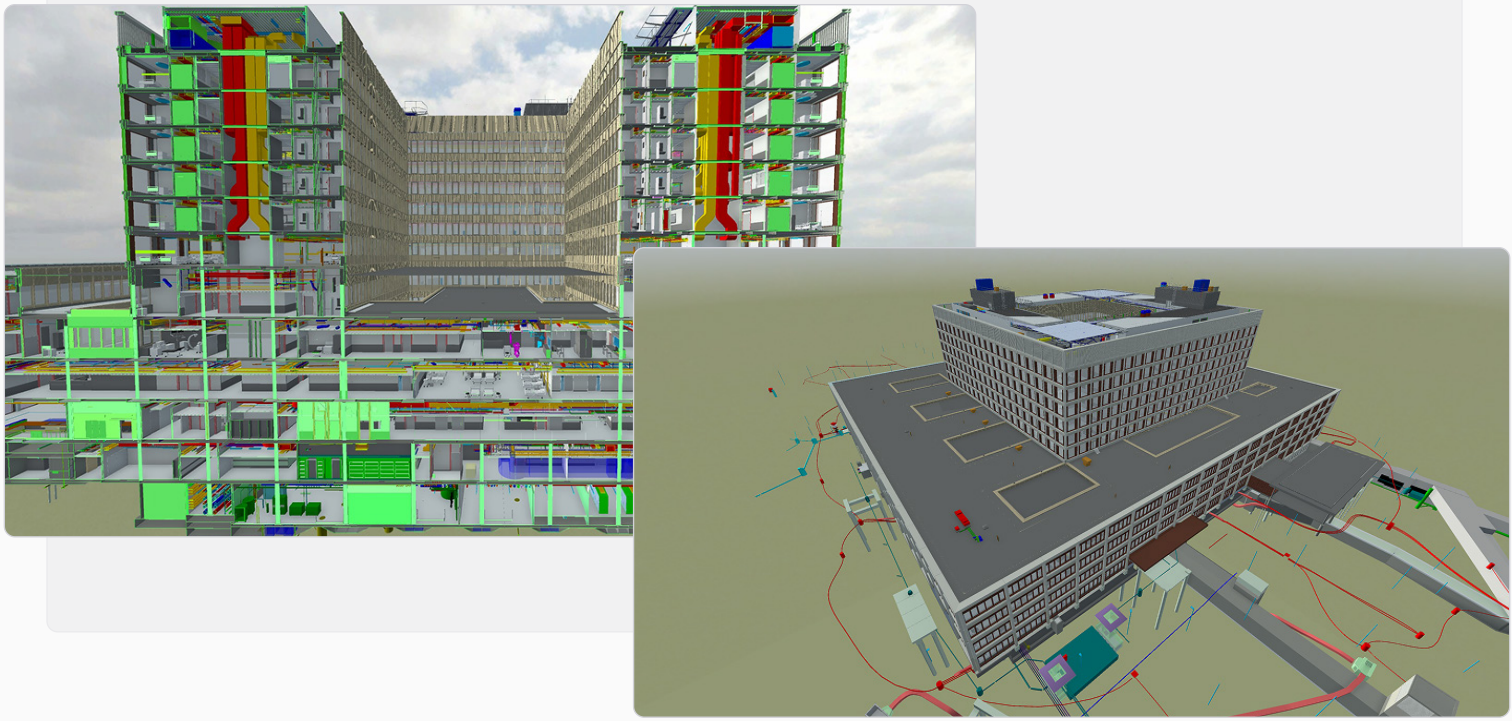
One 19,000-square-meter data center, three distinct design/built phases and one live linked solution. That’s the framework for the successful delivery of the Red Rum Data Center in Ashburn, Virginia.

HED, the US-based architecture and engineering firm for the project, was tasked to manage each of the three stages (e.g., Shell & Core, Interior Fit-Out, Tenant Fit-Out), each supported by a distinct Revit model. With careful phase mapping, HED live linked the models to each other to eliminate overlaps and conflicts.

The HED team then leveraged Revizto to quickly navigate across models, identify clashes, and create assignable issues, all within a centralized platform, facilitating real-time communication and problem-solving, ensuring the design team could efficiently address challenges and meet the client’s expectations as the project moved from design through construction to handover.



As the project progressed, the Revit models were exported to Revizto on a regular schedule, either twice a week or daily, depending on the project needs to ensure that the team always had access to the latest model updates. This has helped HED maintain velocity while avoiding costly field rework.



Aarau Cantonal Hospital:
Reimagining Coordination

> “The ease of use of Revizto makes it possible to introduce all parties involved in a project to the BIM method and thus create a common understanding of the building.”

PATRIC SOMMER
SENIOR BIM MANAGER,
IMPLENIA SWITZERLAND AG

The new construction of the Aarau Cantonal Hospital is a flagship project in the Swiss healthcare industry. At nearly 474,000 square meters, it will be one of the largest hospitals in Switzerland. Called the Dreiklang building, the project includes two staggered basement floors, four plinth floors, six bed floors and an upper technical floor. It requires approximately 65,000 cubic meters of concrete and 9,800 tons of reinforcing steel by the time it’s complete.

For the general contractor, Implenia Switzerland AG, it’s been an undertaking of massive proportions. The team faced three key challenges: integrating all project phases into a single environment, ensuring active participation from all stakeholders in the digital workflow, and managing tasks efficiently across multiple stages. Patric Sommer, Senior BIM Manager at Implenia Switzerland AG, confirmed, “We are active across all phases and trades. This places high demands on our digital solutions.”

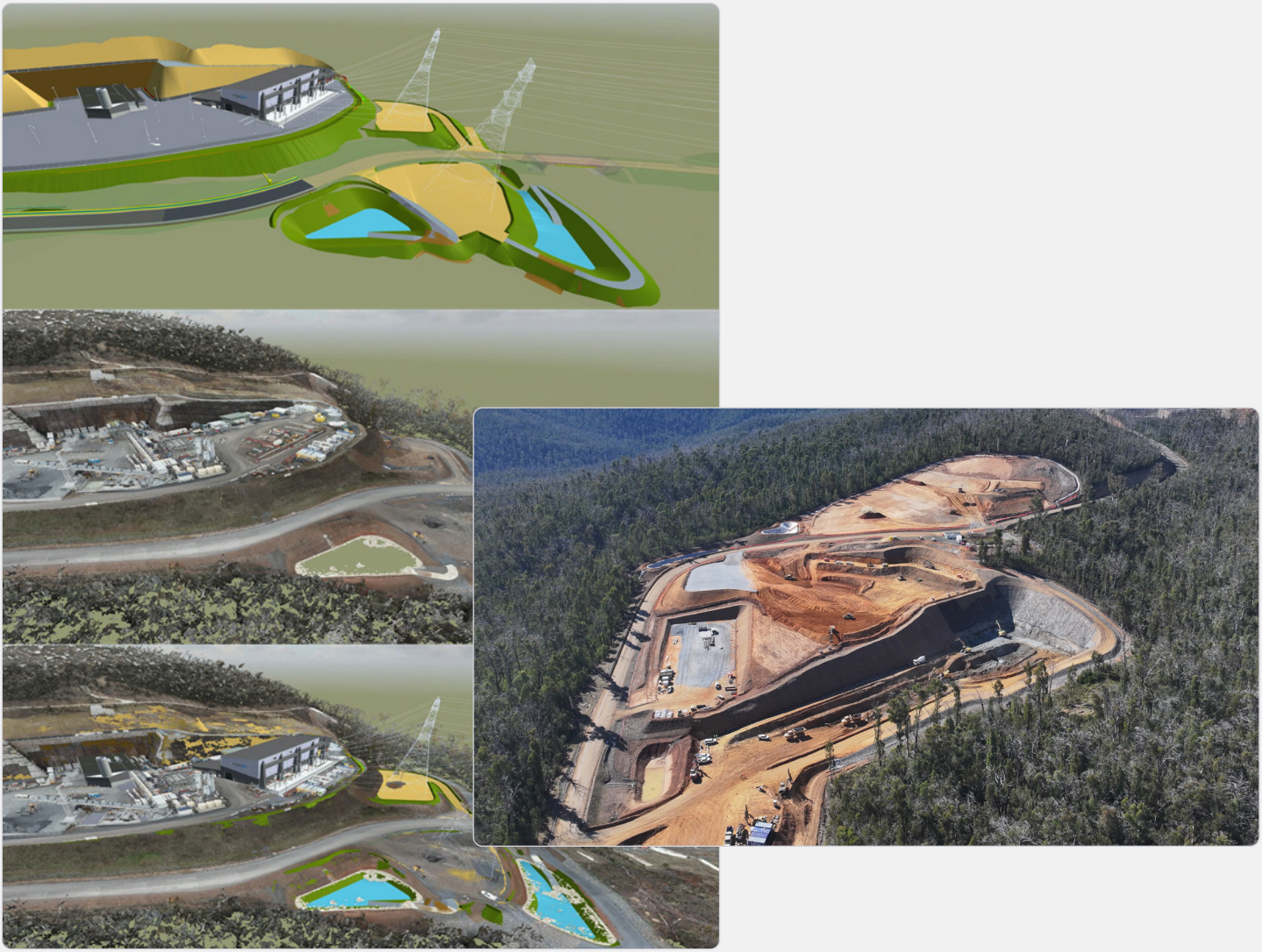
Implenia put Revizto in place as the central platform for project coordination. As a result, planning meetings have been significantly shortened and made more efficient. Through the use of point clouds and augmented reality, the team could compare the existing structure with the digital model and easily document any deviations. Cross-phase collaboration in a single environment enabled model-based work and installation planning, which is particularly important for medical equipment. Completion of the hospital is on track for April 2026.

Snowy 2.0:
On a Sustainable Megawatt Mission

Snowy 2.0 is the largest committed renewable energy project in Australia, expected to provide an additional 2,200 megawatts of dispatchable, on-demand generating capacity and approximately 350,000 megawatt hours of large-scale storage to the National Electricity Market for use across the region including Sydney and Melbourne. Located in the Snowy Mountains of New South Wales, Snowy 2.0 requires the construction of power waterways and access tunnels that connect the Tantangara and Talbingo dams, a new underground power station located 800 meters below ground as well as intakes, surge and gate shafts, tunnel portal accesses and 120 kilometers of tracks and roads.

"Revizto's ability to seamlessly host an outrageous amount of data and models continues to blow me away. It has streamlined collaboration across the whole project, providing a single source of truth for hundreds of team members based in different locations around the world."

KEVIN GOLDING
DIGITAL ENGINEERING COORDINATOR, SNOWY 2.0 OWNERS TEAM



27Km

Of geological models used in the project

Through the design stages and now construction, the Snowy 2.0 project team has produced approximately 400 design models, 2,500 LiDAR scans, 27 kilometers of geological models as well as borehole locations, lab test results and geotechnical discontinuity traces and projections.

The coordination challenges are many ranging from the physical size of the models and the seven distinct coordinate systems involved to the many project team members across different locations. On this project, there are currently about 750 users, ranging from owners team, principal contractor, designers, and subcontractors. Using Revizto as the data bridge, the team is able to easily access point cloud data and models, perform real-time excavation assessments, visualize rock face scans for geological analysis and transform stakeholder engagement workflows.

CONCLUSION

The Digital Mandate and Call to Action for Asset Owners

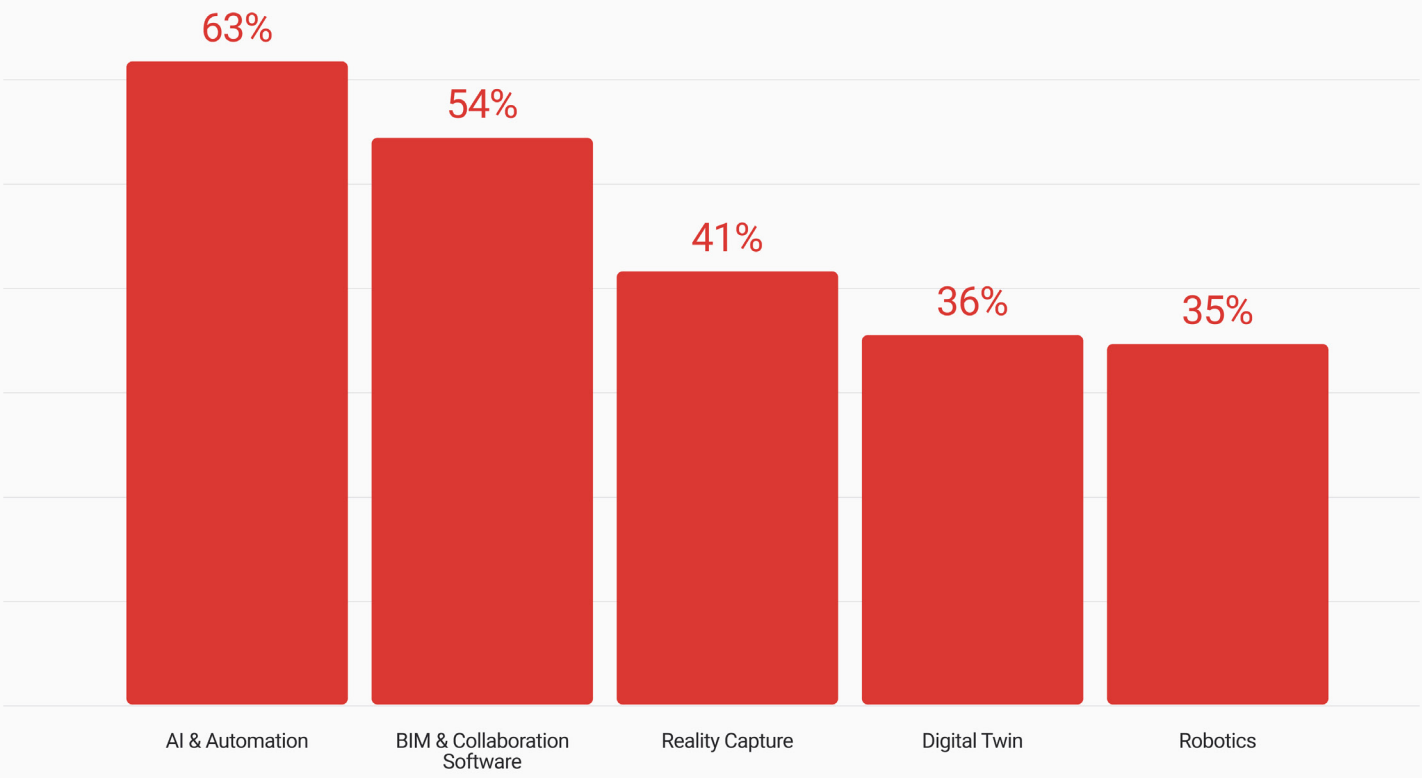
The future of the built environment is not just about bricks and mortar—it's about creating intelligent, adaptable systems that can meet the complex challenges of a rapidly changing world.

No longer confined to old-fashioned methods, the AECO sector is embracing digital collaboration, predictive analytics, and comprehensive data management. From renewable energy projects to urban development, technology is bridging gaps between design, construction, and maintenance, enabling us to deliver more efficient, sustainable, and resilient infrastructure.

Technology is key to addressing infrastructure risks and improving project outcomes. We believe, and our study confirms, that AI and automation will play a crucial role across all sectors, particularly infrastructure and transportation development. Keep in mind that the volume of data that exists today is exponentially greater than what it was even a few years ago, and that's where the application of AI and automated workflows is critical. That said, the real priority is delivering impact and value. That means leveraging AI and automation not for their novelty, but for their ability to solve real problems.

Per our survey, respondents in the U.S. (73%), the UK (63%), Germany (61%), France (57%), the UAE (56%), and Saudi Arabia (53%) reported that they are closely following AI & automation advancements.

What AECO technology trends are you following?



Importantly, owners are taking note of the advantages of today's digital solutions, and are looking to invest in solutions that support predictive maintenance and sustainability. As owners such as the Smithsonian in Washington D.C. and the Snowy 2.0 project in Australia have found, centralized data has value well beyond construction; it's vital for long-term asset management. After all, it's not easy to design and build an asset to meet today's regulatory requirements while simulating it for a future outcome.

JASON HOWDEN
CHIEF INNOVATION OFFICER, REVIZTO

> "The next step for our industry is to carefully evaluate technology stacks to ensure that the right solutions are implemented at the appropriate stages of an asset's lifecycle from initial inception through operation. The ultimate goal is to enable better, faster decision-making in a rapidly evolving construction landscape. The technology is here to facilitate this transformation."

Knowing where an asset is today, and more importantly, where it will be in 30 years requires considerable data and powerful models. Gathering that information, making sense of it, and sharing it with a wide range of stakeholders is no small task. One of the biggest hurdles is making sure that everyone, not just technical experts, can understand and use the digital data. But the payoff is worth it. When asset owners have clear, useful information, they can predict and preempt issues, make informed decisions, and ultimately save significant time and money across the asset's lifecycle. With the right data in the right hands, guesswork turns into foresight, enabling asset owners to safeguard their investments for the long term.

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About Revizto

Revizto enables the people behind the world's most important structures to do their best work. We connect architects, engineers, contractors and owners to deliver projects on time and on budget. By uniting teams in one shared 2D/3D space across the entire building lifecycle, we drive maximum collaboration and results. Our technology is built on a gaming engine, making it unbreakable for construction's toughest conditions. It works everywhere teams need it – in the office or on-site, across all devices.

Backed by Summit Partners and trusted by global firms like Jacobs, AECOM, AtkinsRealis, McCarthy, Skanska, and Stantec, Revizto empowers everyone to deliver critical infrastructure without risk or waste, for a world that's built to last.