

Seven Benefits of Cloud Construction Technology



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Introduction

In today's fast-evolving construction industry, every business is looking for ways to grow, work smarter and stay competitive. Technology, especially cloud-based technologies, holds the key to business transformation. By harnessing it, your business can expand and get ahead at previously unimaginable speeds.

Businesses that embrace cloud construction technologies continue to gain momentum and boost productivity. In fact, almost half of business leaders say increased efficiency is the biggest benefit of cloud-based services, while over 40% cite security as its main draw.¹

Historically slow to adopt new technologies, the construction industry is now seeing the tide turning, with construction professionals now open to the endless possibilities offered by cloud-based tech. In 2020, for example, almost half (47%) of all UK construction enterprises bought storage of files as a cloud computing service.²

Unlock a multitude of benefits

The ultimate in collaborative tech, cloud-based software allows you to work from anywhere, access project information any time and remotely visit a site in real-time. Once considered a 'nice-to-have', cloud construction technology is now an integral part of day-to-day operations.

In fact, it has changed working practices forever. It ensures your teams are in constant contact, and boosts collaboration and efficiency by offering a single source of truth, and a scalable, secure platform to store and manage data.

Moreover, cloud technologies strengthen security, reduce risk, prevent data getting lost and save you time and money by reducing staff and power costs, as well as your carbon footprint. In fact, companies using cloud computing report saving 20% annually on infrastructure costs.³

Migrating your existing systems to the cloud allows you to streamline processes and align ways of working. That improves productivity. Meanwhile, automation tools free up time to concentrate on other business activities.

Seven benefits of cloud construction technology

Our customers tell us again and again how Autodesk Construction Cloud has enabled them to transform how they operate. In this ebook, we've gathered some of their stories so you can hear directly how construction professionals across Europe are enjoying transformative growth in collaboration, efficiency and productivity.

Align ways of working on-site and in the office

To be competitive, every business needs to be more efficient and agile. Aligning your systems and processes will improve team engagement, save time, boost productivity and reduce risks.

Streamlining processes and aligning ways of working are powerful ways to encourage collaboration, increase efficiency and improve employee engagement. Small steps today lead to big benefits in the future.

Centralise data

Move away from fragmented workspaces and implement a single source of truth.

See the bigger picture

Manage secure access to relevant data, and track progress against timelines so you deliver on deadline.

Use apps for better data management

Use web and mobile apps to manage sharing construction drawings, requests for information (RFIs) and submittals seamlessly between the office, the site, the client and others.

Connect the dots

Plan, escalate and resolve work all in one place with linked workflows.

IN FOCUS: SQUARE

With dispersed teams in multiple locations, SQUARE wanted to reduce the time it spent producing quality reports and managing payment schedules. Founded in 1992, it specialises in high-end architectural projects.

The company turned to [Autodesk Build](#) to help manage quality control and project costs, and connect site and office teams better.

Soon, the team cut cost management task times from many hours to just minutes with simplified workflows and aligned work practices on Build.

SQUARE's team can now harness Build insights to make better-informed decisions, while all its financial and project information is consolidated in one place.

“We had no centralised tool to manage quality control like non-conformance reports on our projects. Our management team struggled to gauge the health of our projects and evaluate the performance of our subcontractors.”

– **Amr Mohamed Ali**
Planning Department Manager at SQUARE



Seeing the value

SQUARE cut cost management task times from hours to minutes with simplified workflows and aligned processes.



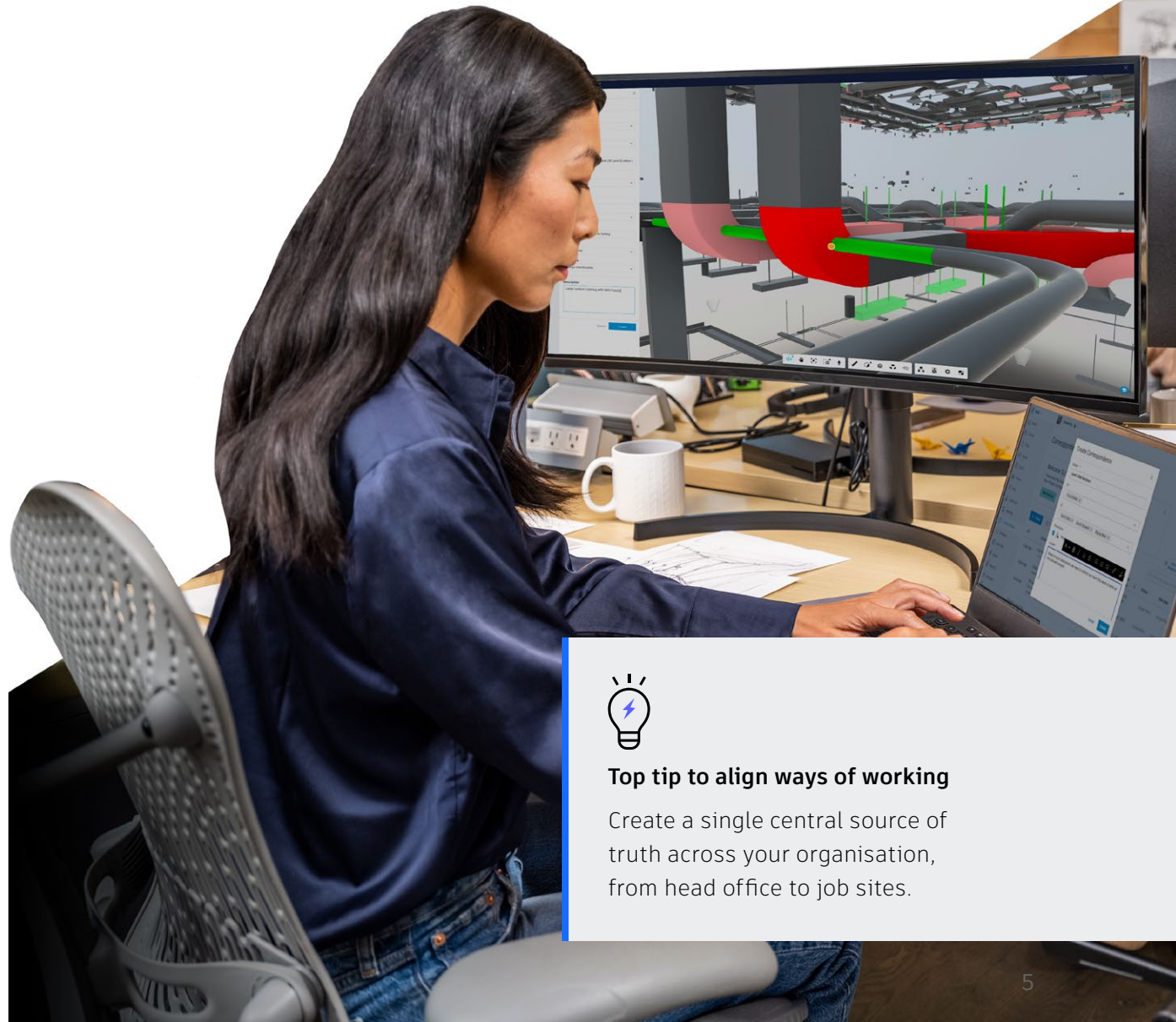
IN FOCUS: JJ Rhatigan

JJ Rhatigan is an award-winning general building contractor operating across Ireland and the UK. Established in 1952, it's a family-orientated operation and continues to grow rapidly.

As the business expands and evolves, so do its project requirements. The team realised that using automation, streamlining processes, and consistently storing data and documents would save huge amounts of time.

“Aligning our ways of working on site and in the office means our teams can move between projects easier.”

– Sonny McAnulty
BIM Manager at JJ Rhatigan



Top tip to align ways of working

Create a single central source of truth across your organisation, from head office to job sites.

Create more accurate estimates

Estimations are part and parcel of the construction industry, coming into play in cost management, planning, risk mitigation and identifying issues.

The more accurate you can be early on, the more likely you are to save money and time, and to avoid problems down the track.

Standardise cost management workflows

This gives you visibility to be proactive and reduce risks later on.

Use the cloud to centralise activities

Centralise all cost management activities in the cloud to improve cost control, gain real-time visibility of cost-related risks and forecast accurately.

Empower estimators

Combine sheet-based and model-based quantity takeoffs to allow estimators to provide accurate and clear scopes of work.

IN FOCUS: SQUARE

Faced with quality and cost management challenges, the SQUARE team looked to [Autodesk Build](#) to help streamline processes and reduce risks.

With its customisable capabilities, Autodesk Build allows them to tailor cost codes to ensure accurate budget management and have greater control over project costs.

They can now efficiently create contracts, purchase orders and requisitions, while including all relevant technical details in the documentation.

Using uniform cost coding standards means they can identify the right information to complete the subcontractors' payment process, improving the overall financial management of each project.

“Previously, it would have taken me three hours to gather all the information together to link cost spend and project schedules. But now Autodesk Build tells me everything I need to know in seconds.”

– **Amr Mohamed Ali**
Planning Department Manager at SQUARE



IN FOCUS: Rider Levett Bucknall

Rider Levett Bucknall (RLB) is an independent global construction and property consultancy. It wanted a more joined-up pre-construction process and integrated digital workflows to improve outcomes and cost estimations.

It tested [Autodesk Construction Cloud's Assemble](#) – which connects BIM data to support estimating and scheduling – on a large power plant project in the UK, with tools like [Revit](#) and [Navisworks](#), to boost efficiency and improve the estimating process.

By improving their model checking and conditioning processes, RLB can quickly create accurate and detailed cost estimates in the required output format.

“We used solutions from Autodesk’s AEC collection to check the information model and condition the model for quants takeoff and further costing. Once the information model is checked and conditioned, we import the information into our ROSS 5D cost estimating software using the extended properties. This means we can standardise the model mapping process for our team.”

– Allan Trotter
Digital Lead for Cost Management
at Rider Levett Bucknall



Top tip to create more accurate estimates

Centralise and automate all your cost-management activities.

Harness automation to free up capacity

Automated tools work around the clock. They're also happy to take on mundane, repetitive tasks so you don't have to.

As well as the plethora of workplace benefits – higher performance, increased productivity, reduced human error – automation is big business and set to explode. The global business process automation market is projected to grow to USD19.6 billion by 2026.⁴

And this growth is mirrored in the construction industry. Over 80% of construction businesses plan to implement or increase their use of automation in the next decade.⁵

Automation has the power to transform your company, taking on repetitive jobs, reducing the risk of human error and helping you to stay competitive, because your teams can focus on other business activities.

IN FOCUS: Rodio Swissboring

Rodio Swissboring is a regional leader in special foundations and soil technologies in Central America, part of the VINCI construction group who span 120 countries worldwide.

For Rodio Swissboring, developing a structured way to manage their project information was a priority. In 2020, the company began its standardisation journey and by 2022, the team transitioned to using Autodesk Build.

The team estimates it has reduced the time spent searching for, comparing or consulting about project information by 10% thanks to [Autodesk Build](#).

“Managing issues was an entirely manual process before with site managers and engineers using 2D drawings to resolve problems. Now the teams can easily see any changes made without missing details like previous revisions.”

– **Sofia Flores**
BIM Co-ordinator for Rodio Swissboring



Seeing the value

Rodio Swissboring cut time spent on project information by 10% with Autodesk Construction Cloud.



IN FOCUS: Pure Salmon

The team at Pure Salmon, a land-based Atlantic salmon farming company, was keen to find ways to save time and reduce costs.

It needed a solution to help capture, manage and retain data cross-functionally and throughout a project's lifecycle.

With two new facilities under development in the United States and Brunei, it turned to [Autodesk Build](#) and [BIM Collaborate Pro](#) to boost efficiency.

And the results speak for themselves. With more than 50% time saved on processes like meeting admin, design reviews and sharing documents, the team can focus its efforts on value-adding activities.

“The schedule tool in Autodesk Build supports the project team members to keep on track with project status, but then the meetings tool is also one of the most useful features because we can now spend less time preparing the agenda and creating minutes of meetings.”

– **Azza Nureldin**
BIM Lead at Pure Salmon



Seeing the value

Pure Salmon saved 50% of time on processes with Autodesk Construction Cloud solutions.



Top tip to free up capacity through automation

Automate repetitive and manual tasks, and consider what your teams could achieve with the time gained.

Improve standards and compliance

Successfully managing project data and documentation is an age-old problem in the construction industry.

Email chains, hand-written records or multiple spreadsheets can be unreliable and lead to expensive mistakes, while inconsistencies in documentation across projects can create inefficiencies and gaps in communication.

Don't rely on old-fashioned processes. Instead, look to centralise data and automate elements of your operations to boost efficiency, maximise performance and reduce compliance risks.

Traditional ways can't compete with digital when it comes to creating, sharing and storing information. By making the switch to a standardised approach, you'll save time and find smarter ways of working.

IN FOCUS: JJ Rhatigan

The scope of JJ Rhatigan's projects is extremely varied. Its document controllers must ensure teams can upload files to the company's common data environment using the correct naming convention system, and make changes when needed.

They worked with their Autodesk Construction Cloud customer success team to add a feature that digitally enforces naming conventions by setting rules around them.

Since introducing the new naming convention workflows, Jamie estimates he's halved the time he spends manually checking documents.

"Prior to using Autodesk's Construction Cloud as our common data environment, I spent lots of time emailing and file sharing project data. It was time consuming and open to both error and risk."

– **Jamie Monaghan**
Document Controller at JJ Rhatigan



Seeing the value

JJ Rhatigan halved the time it spent on manual checks with a standardised naming convention system.



IN FOCUS: Pure Salmon

For the Pure Salmon team, a standardised, structured approach to data is crucial. It adheres to global industry standards for its approach to document management to reduce confusion. Autodesk Build helps it comply with these – the team saved up to 70% of time using the ISO 19650 naming convention workflows on the United States and Brunei projects alone.

“With such a geographically diverse team, having a standardised and structured approach to how we understand our data is invaluable.”

– Azza Nureldin
BIM Lead at Pure Salmon



Seeing the value

Implementing Autodesk's naming convention workflows saved Pure Salmon 70% in time spent.



Top tips to improve compliance

- Document all decision-making
- Automate enforcement of naming conventions
- Automate approval workflows



Drive continuous improvement through data

Data is everywhere on the construction site. When captured and analysed correctly, it leads to better efficiency, reduced risks, time and cost savings, and improved performance.

In 2020, bad data led to USD1.8 trillion in losses worldwide. That was potentially responsible for 16% of rework, amounting to USD88 billion in costs.⁶

Continuously collecting the right and relevant data can help you:

- Identify high-risk areas that may affect design, quality, safety or project controls
- Gain visibility into project performance and daily activities
- Use lessons learned – for example, the [Autodesk Construction Cloud Bridge](#) tool creates predictive insights that can be used in future projects
- Improve timelines and meet deadlines
- Provide more accurate quotes.

Construction projects are complex. Data can help you untangle potential problems and improve performance, saving you time in the long run.

IN FOCUS: Pure Salmon

Pure Salmon relies on data from previous projects to help inform its decision-making practices, improve pre-construction processes and identify potential problems.

“Not only can we highlight issues earlier during the build phase to resolve things quicker, but we can learn from past mistakes and build these into our decision-making practices for the future,” says Azza Nureldin, BIM Lead at Pure Salmon.

“We’re an ethically-driven company. We want to use the data we capture to proactively manage our assets in a sustainable way by creating predictive insights to inform our asset management activity.”

– **Azza Nureldin**
BIM Lead at Pure Salmon



IN FOCUS: Ibens

Antwerp-based construction company Ibens specialises in the healthcare, educational infrastructure and care housing industries. It introduced Autodesk Construction Cloud as a Common Data Environment (CDE) in 2020.

Having easy access to project data is key for the team. Its compliance information, including safety checklists and surveys, is all stored on BIM 360.

The tool has significantly streamlined the company's collaboration with clients and partners, reducing review times from four weeks to one.

In the next few years, Christopher hopes to create an intelligent self-learning system that automatically shares insights from previous projects for better decisions.

“We’ve already connected the Autodesk Construction Cloud with our Microsoft Dynamics 365 application, automatically linking data across the business. Data from the platform is exported to Microsoft Azure each night, and we’ve developed a search engine so that project leaders can search through all the information on there.”

– **Christopher Baute**
Digital Innovator at Ibens



Seeing the value

Ibens cut review turnaround times by 75% with Autodesk's Construction Cloud.



Top tips to improve compliance

Don't miss out on valuable insights. Ensure you harness today's data to improve tomorrow's decisions.

Maximise efficiency by integrating current systems

System integration can eliminate unnecessary work and give you access to the information you need when you need it.

For example, your accounting or cost-estimating software can be integrated into [Autodesk Construction Cloud](#) solutions to give you the latest, most accurate data.

Integrating your current systems will make data exchange between different platforms seamless, and help them to operate more efficiently.

From increased efficiency and reduced project bottlenecks to time and cost savings and improved security, integrated systems can enable you to operate more effectively and to future-proof your business.

IN FOCUS: SQUARE

System integration has been key for the SQUARE team. Integrating [Autodesk Build](#) with the standard assessment procedure enabled it to centralise data sources and avoid redundant data entry, improving its decision-making processes.

By streamlining its processes and systems, the team now has access to timely and precise information. That means it saves time and can concentrate on other areas of the business.

“Previously, it would have taken me three hours to gather all this information together to link cost spend and project schedules. But now Autodesk Build tells me everything I need to know in seconds.”

– **Amr Mohamed Ali**
Planning Department Manager at SQUARE



IN FOCUS: Rider Levett Bucknall (RLB)

Creating a single source of truth through [Autodesk Assemble](#) and integrating systems helped the RLB team operate quickly, efficiently and more collaboratively on its UK power plant project.

In fact, it found that having information centralised in the same suite of products helped facilitate faster design and quantity checks.

“Before this, information could be fragmented and held in silos. Of course, there is still an element of this when working with multiple stakeholders but now we can see the technology allows us to collaborate better so our focus now must be changes to mindsets in the industry.”

– **Allan Trotter**
Digital Lead for Cost Management
at Rider Levett Bucknall

IN FOCUS: Ibens

Since Ibens introduced [Autodesk BIM 360](#), all project data is stored on the platform, which works as the business’ common data environment from a project perspective.

“What I couldn’t live without is the accessibility of data. I really love that whether you’re holding your smartphone or using an unfamiliar laptop, when you go to the platform every single piece of information is available for you anywhere.”

– **Christopher Baute**
Digital Innovator at Ibens



Top tip to maximise efficiency

Reduce inefficiencies and boost productivity with integrated systems.

Cut bottom-line costs while embracing sustainability

It may generate around 40% of the world's carbon emissions,⁷ but the construction industry is making sustainable strides.

In a global survey, 48% of engineering and construction leaders said sustainability was top-of-mind or a major concern.⁸

Moreover, construction companies today are expected to design and deliver structures that are more circular in their approach.

Digitalisation can help boost your sustainability goals. For example, 3D printing doesn't just save you time. It can save the amount of materials used by 60%, and produces no waste.⁹

Along with the environmental benefits, it pays to go digital. Research by the McKinsey Global Institute suggests digital transformation can result in productivity gains of up to 15% and cost reductions of up to 6%.¹⁰

As the construction industry continues to embrace sustainability, digitisation can help construction professionals cut costs, minimise waste and meet their green goals.

IN FOCUS: Dura Vermeer

Dura Vermeer, a family-owned company, has 167 years' experience in construction, real estate, infrastructure and engineering.

It used offsite manufacturing and sustainable structures to deliver the Alliander Westpoort project – an entirely timber structure.

Partners turned to Autodesk solutions for the Industry Foundation Classes models in the pre-construction phase, reducing costly errors onsite, while nearly 90% of all the architectural and construction items were developed with BIM solutions like Autodesk's [Revit](#) and [Navisworks](#).

Autodesk solutions helped the team coordinate better, save time and avoid expensive errors. They estimate they saved up to 25% of time on model coordination activities.

“Would it have been possible to deliver the project without the use of construction management software? Yes. But it would have taken twice the amount of time.”

– **Kevin Vermeulen**
Manager Digital Construction
at Dura Vermeer



Seeing the value

Dura Vermeer saved 25% of time on model coordination with Autodesk Construction Cloud.



IN FOCUS: Bouygues Energies & Services

Bouygues Energies & Services (Bouygues E&S) specialises in facilities management, energy performance and renewable energy solutions.

Its team turned to [Autodesk Build](#) to help manage the multiple stakeholders involved, boost collaboration and avoid costly mistakes on two renewable microgrid park-and-ride projects in the UK.

For the Bouygues E&S team, digital processes have helped them work more efficiently, minimise waste and reduce operating costs.

“Working from a single platform that delivers a clear view across the project sites in real-time means we have greater insight into quality-related documents, and a central repository for all our information.”

– **Miles Messenger**
Head of Energy Engineering at
Bouygues Energies & Services



Top tips to manage costs through sustainability

- Keep everyone on the same page when adopting new ways of working
- Seek to minimise waste through digitisation

Conclusion: cloud construction tech is here to stay

Cloud technology is a game-changer for the construction industry. Now's the time to take advantage of what it can do for your business.

New technologies have the power to transform your operations, but as with any change, you'll need a well-thought-out digital strategy to reap the potential benefits and get buy-in from your teams.

By taking simple steps to connect workflows, teams and data at every stage of the project, you'll reduce risk, maximise efficiency, boost collaboration and increase profits. Cloud construction technology is a surefire way to stay competitive and future-proof your business.

“What I couldn't live without is the accessibility of data. I really love that whether you're holding your smartphone or using an unfamiliar laptop, when you go to the platform every single piece of information is available for you anywhere. There's no need to connect to a VPN or open another programme.”

– **Christopher Baute**
Digital Innovator, Ibens

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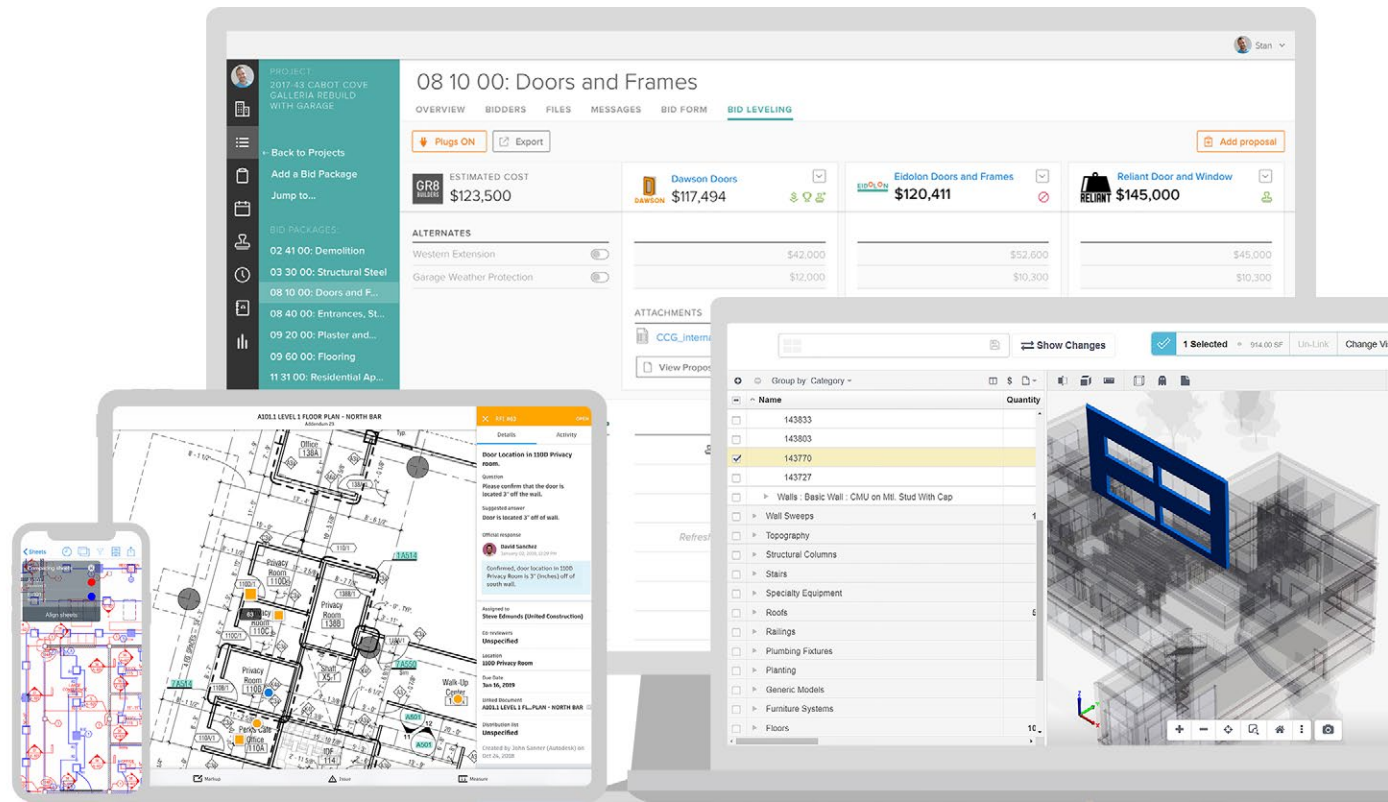
See the Future of Connected Construction

construction.autodesk.com

Our industry requires solutions that connect their information, teams, and technology –breaking down data silos and disconnected processes that hinder true transformation. As we navigate the ever-present push to do more with less, we need to uncover new ways of working, enhance connected digital workflows, and incorporate advanced analytics. To support us on this journey of transformation, we must lean into tools that connect construction – from design to plan, build, handover, and operations.

Built on a unified platform and common data environment, Autodesk Construction Cloud is a powerful and complete portfolio of construction management products that empowers main contractors, specialty trades, designers and owners to drive better business outcomes. Autodesk Construction Cloud combines advanced technology, a unique builders network and predictive insights to connect teams, workflows and data across the entire building lifecycle.

While the industry experiences unprecedented transformation, our mission remains the same: to help construction teams meet the world's rapidly expanding building and infrastructure needs while making construction more predictable, safe, and sustainable. And we've remained steadfast in our promise to deliver the industry's most compelling solutions, connecting data, teams and workflows from the construction site. This is our commitment to connected construction.





Autodesk is changing how the world is designed and made. Our technology spans architecture, engineering, construction, product design, manufacturing, media, and entertainment, empowering innovators everywhere to solve challenges big and small. From greener buildings to smarter products to more mesmerising blockbusters, Autodesk software helps our customers to design and make a better world for all. For more information visit autodesk.com/construction.

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