

# The civil engineer's guide to digital project delivery



## Chapter #1

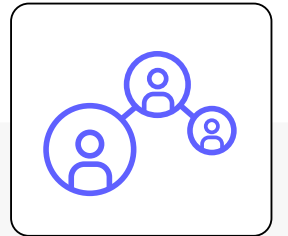
# What is digital project delivery?

In the dynamic world of civil engineering, where innovation drives progress, digital project delivery stands as a bedrock of efficiency.

At its core lies cloud-connected workflows, bringing data, teams, and processes together across the project lifecycle, and providing real-time collaboration. For civil engineering firms looking for ways to address talent shortages, improve project management, and raise productivity— it's a game changer.

Through a cloud-based common data environment (CDE), team members from every discipline can come together to plan, design, construct, and operate projects in unison through the integration of live, multi-discipline data. From Building Information Modeling (BIM) to live links with Geographic Information Systems (GIS), every piece of information finds its place in a centralized source of truth.

This centralization means stakeholders can access the latest project data and drawings and contribute in real time, from any location. With powerful tools like Forma Data Management and Forma Design Collaboration, your civil engineering teams can harness the full potential of collaboration, transforming the way you conceive, execute, and deliver your proj-



“Our model, enabled by working in a cloud-based [common data environment], allows for our different infrastructure groups to have access to talents across the country. We know who we can contact at any point in time to immediately jump on [a] project from any location and work at lightning speed.”

Experienced Infrastructure CAD Manager



## Chapter #2

# Creating cloud-connected workflows

“ We got all our subs working in a single model... It helped streamline things, prevent errors. Everything’s up to date because everybody’s working in the model.”

Kurt Smith, Project Manager, Arcadis



It’s estimated that over half of all rework, globally, is still caused by poor data and miscommunication.<sup>1</sup> This highlights the critical importance of effective collaboration and data management in project delivery.

With powerful digital project delivery tools like Forma Design Collaboration, you work within a cloud-connected, shared workspace. This means data silos dissolve, and communication barriers vanish. All team members can collaborate in real time, no matter where they are located.

Gone are the days of choppy and fragmented processes that can lead to data loss, model inaccuracies, and delayed project times. With digital project delivery solutions, you get a seamless and consistent flow of information that weaves a powerful digital thread, connecting every aspect of the project throughout its lifecycle.

<sup>1</sup> <https://www.autodesk.com/design-make/articles/digital-project-delivery>

## Chapter #3

# Saving time and reducing errors with cloud-connected workflows

Studies show that firms using digital project delivery solutions can take on more projects,<sup>1</sup> thanks to the gained efficiencies like impressive download and publishing times. While it's about empowering your team to work faster, it's also about working smarter without ever compromising on quality.

Great design is all about the details, and cloud-connected workflows put those details front and center. You now get to have complete oversight of projects, gaining visibility throughout the entire design process. A dashboard keeps you informed with timelines, checklists, and design iterations with historical context.

But the benefits don't stop there. The design data captured during the process is connected to the rest of the project lifecycle in a common data environment (CDE). This ensures continuity and efficiency from start to finish.

With digital project delivery solutions, you elevate your ability to innovate, freeing up time and resources for teams to focus on the most impactful work. You also gain a historical record of design changes and why they were made, which can be used to justify decisions or carried forward to benefit future projects.



“ I was at the point where I was giddy because of how much time we were saving... You didn't have to put aside an entire day just to plot plans... You can publish from an iPad, your entire plan set while you're on your way to your meeting.”

Experienced Infrastructure CAD Manager



<sup>1</sup> <https://www.autodesk.com/design-make/articles/digital-project-delivery>

## Chapter #4

# Project transparency with a common data environment

“ It’s all about transparency and having everybody working together to create the necessary solution to keep the project on schedule.”

Levi Nass, Director of Development, MultiGreen



In today’s complex world of civil engineering, with so many moving parts, being able to always have eyes on the project is vital. Working from a common data environment (CDE) gives you greater visibility of your project information and easy access to the latest data, helping you to make informed decisions.

Products like Forma Data Management and Forma Design Collaboration allow you to integrate multiple data sources within a single project, freeing you from the use of proprietary formats across different software applications and cumbersome VPNs or limited local networks. Plus, you no longer have to worry about every unique approach to digital filing with standardized folder structures and project templates.

By housing all project communication and correspondence within a CDE, your stakeholders gain visibility into the workflow process, and can refer to client requests and comments. This greater transparency leads to clearer project management, higher project quality, and puts you in great shape to win more business.



## Chapter #5

# A more profitable journey with digital project delivery

McKinsey Global Institute's report on the productivity gap reveals staggering figures: a global gap of \$1.2 trillion,<sup>2</sup> underscoring the urgent need for improved performance and processes in the architecture, engineering, and construction (AEC) industry.

The good news is, a survey by Deloitte uncovered that 43% of engineering and construction executives anticipate increased investments in innovative design processes like BIM.<sup>3</sup> Here, digital project delivery solutions play a pivotal role, helping you to expand the adoption of integrated BIM across the project lifecycle, from design to construction and operational phases.

The transformative power of digital project delivery lies in its ability to enhance collaboration by eliminating project silos and connecting workflows in the cloud. For civil engineering firms like yours these efficiencies translate into tangible benefits—like better adherence to schedules and, ultimately, more profitability.

Finally, the pandemic brought about radical changes in work dynamics, necessitating more flexibility and options for hybrid work. The cloud-based nature of digital project delivery solutions effectively allows working from anywhere, which not only helps you to attract top talent, it enhances overall employee wellbeing, morale, and retention.



# 43%

of engineering and construction executives anticipate increased investments in innovative design processes like BIM.<sup>3</sup>

“ We expect to reduce planning amendments by 10% as a result of integrating BIM with other computing systems plus our digitization and standardization.”

Erika Carloni, Head of BIM Development and Coordination, Heratech

<sup>2</sup> <https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/rise-of-the-platform-era-the-next-chapter-in-construction-technology>

<sup>3</sup> <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us-2022-outlook-engineering-and-construction.pdf>

# Accelerate with digital project delivery today



Take the next step in positioning your firm for long-term success. Get in touch to discuss how digital project delivery solutions can transform the way you work.

Talk to us

