Digital Project Delivery

for Federal Agencies

What is digital project delivery?

Digital project delivery is the digitization of all aspects of construction, from planning and design through completed construction and asset handover. With digital project delivery, paper-based, manual processes are replaced with cloud-based, connected workflows that improve productivity, data access, and decision-making throughout the project. It goes beyond merely adopting technology. It's a collaborative approach to sharing data and handing off tasks between disparate teams.
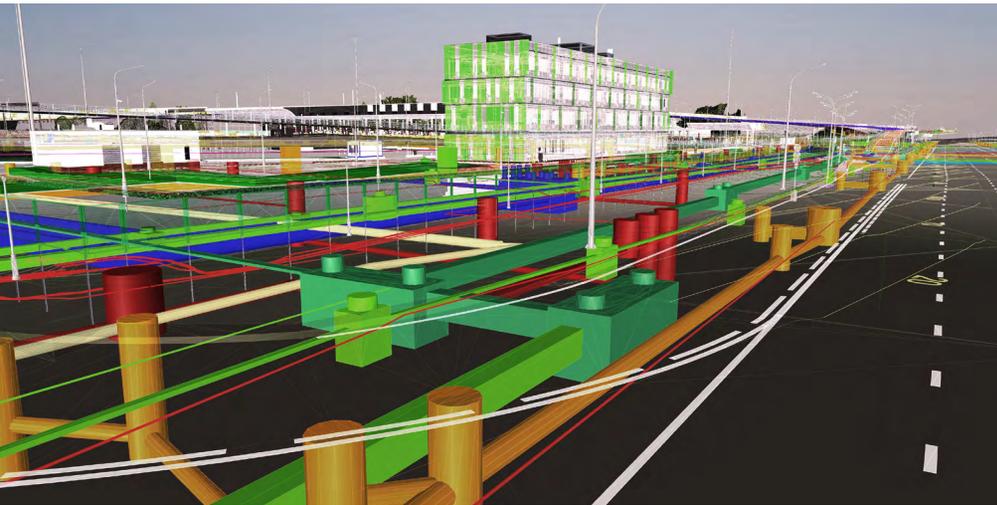
Elements of digital project delivery

+ **Standards:** Guidelines ensure that disparate teams approach technology with the same digital strategy and standards that support interoperability.

+ **Technologies:** Connected platforms centralize project data, connect the office to the field, and preserve data for future use.

+ **Data:** 3D models, along with existing conditions and as-built data, empower everyone with information to work smarter, faster, and better.

Trimble®

Why go digital?

Infrastructure budgets are large and complex, raising the risk associated with each project. Inflation and a neverending labor shortage threaten to eat into budgets and cast a negative shadow over the positive impacts of high-profile, high-impact construction projects.

Digital project delivery empowers you to minimize many of the common pitfalls of infrastructure construction. It also allows you to be more transparent to your stakeholders about progress, costs, and outcomes.

One study found that using BIM and digital delivery saves roughly

15%

in change orders.

❖ Trimble.

Key benefits of digital project delivery

| These benefits...	Increased efficiency and productivity	Better decision-making	Improved transparency and accountability	Expanded application of BIM
Enable you to...	Reduce the errors and miscommunications that lead to rework and waste.	Make data accessible and actionable to assess risk, allocate funds, and evaluate bids more effectively.	Get real-time visibility into the costs and impacts of each project.	Move beyond individual BIM deliverables to shared models and 4D/5D data.
	Minimize the time teams spend hunting down information, managing permit processes, and making corrections.	Empower teams to collaborate with shared data to solve complex challenges, like reducing waste and emissions.	Zero in on the root causes of delays, overruns, and communication errors.	Encourage designs to be made with a higher level of detail, which helps to define model deliverables, milestones, and handoffs.

How to
get started

The first step to implementing digital project delivery is digitizing your business processes by leveraging technologies that foster efficiency gains. As part of the evaluation of those technologies, make sure they are interoperable with other critical systems within your organization so that data can be leveraged by all stakeholders.

Next, mandate that project teams agree to principles that ensure the continuity and accuracy of data and processes. Here are a few example policies to consider:

+ **New technologies should use standards that support interoperability, which allows you to share information regardless of the technology vendor.**

+ **3D models should be geo-located to provide additional context to the design.**

+ **Project teams may use the technology of their choice as long as they are able to meet the requirements of their phase of the project.**

+ **All stakeholders should play a role in deciding which technologies are used and how data is shared between teams.**

+ **Participants agree to use automation that supports efficient workflows.**

Technology alone isn't a solution. In addition to these policies, it's important to seek out technology partners who think about the big picture. Seek out technology vendors who work in collaboration with consulting firms and industry organizations to establish digital project delivery best practices.

®Trimble.
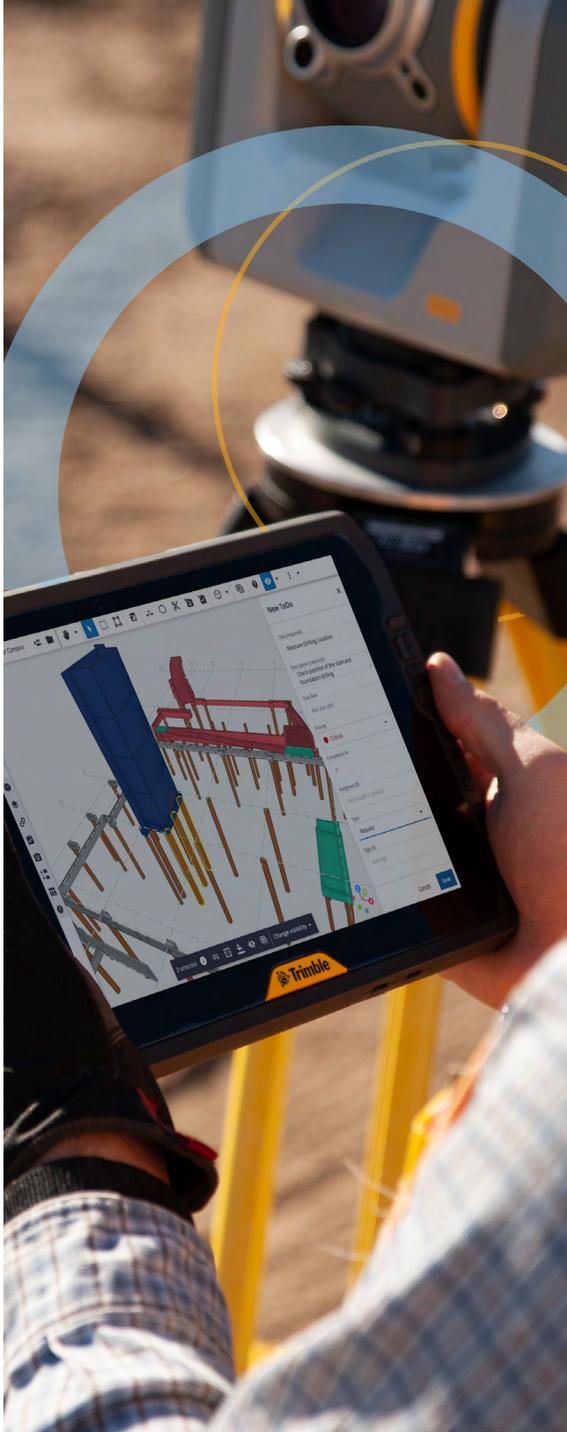
Federal Agencies Can

Deliver On-Time on Budget Construction Projects

through Connectivity

According to the American Society for Civil Engineers, America's overdue infrastructure bill will cost the average American household

$3,300

a year by 2049

With massive infrastructure spending well underway, federal agencies have a landmark opportunity to mitigate those losses by creating and transforming critical assets. The construction projects implemented today will have a lasting impact for generations. However, there are challenges to acquiring funding and realizing the potential of those projects.
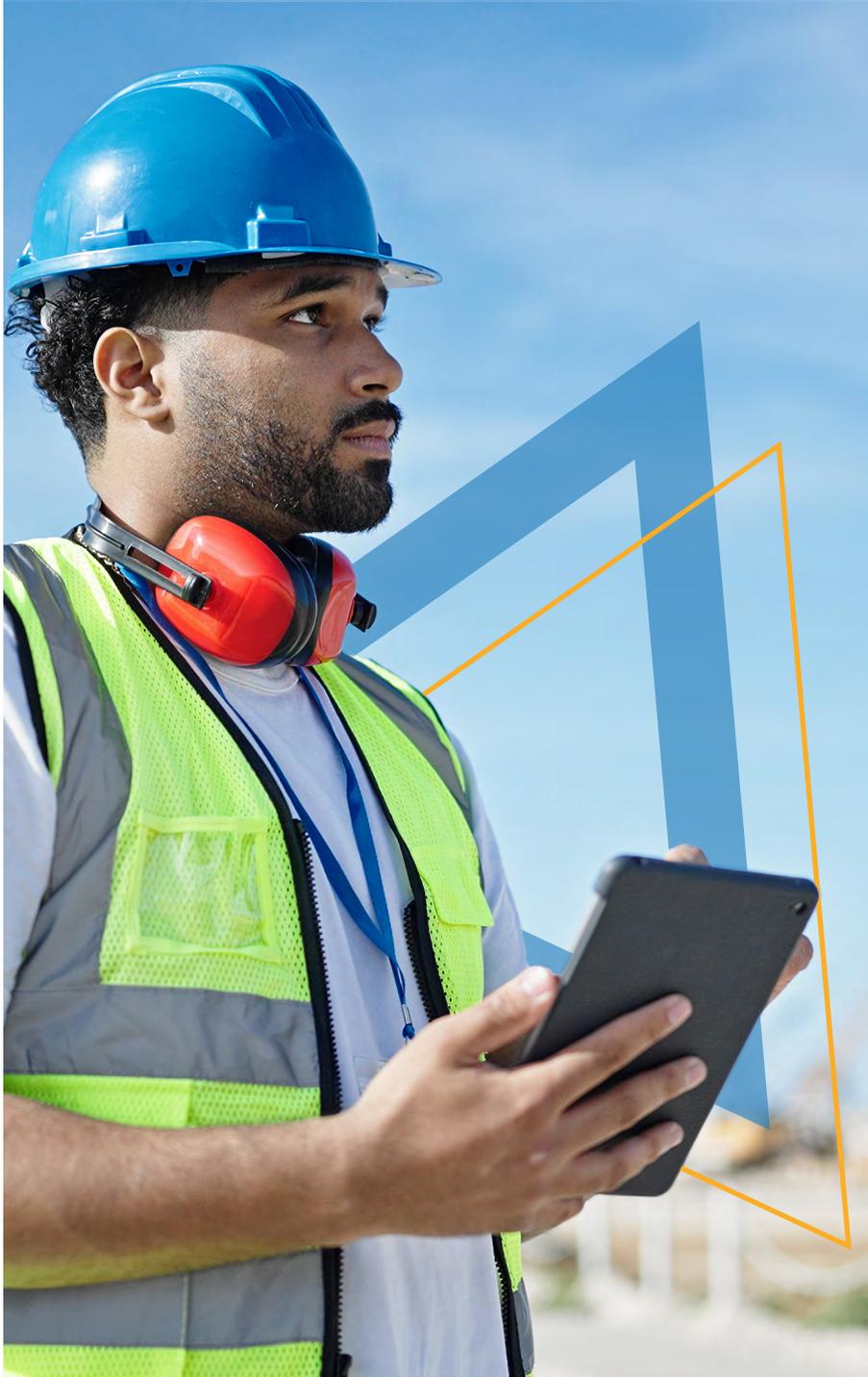
Infrastructure Project Challenges

+ Limited Labor

Funding comes at a time when construction talent is aging, and younger employees are hard to find.

+ Elevated Risk

With an unprecedented level of funding comes high levels of public scrutiny, financial risk, and complexity.

+ Social Responsibility

To stand out among other applicants, projects must demonstrably address sustainability, social equity, and inclusion.

Despite these challenges, federal agencies have an opportunity to jump-start a generational shift in what and how America builds

Opportunities

+ Advanced Technologies

Each project offers an opportunity to implement advanced construction technologies that can help federal agencies accelerate their digital transformation.

+ Infrastructure Legacy

The projects implemented today will have a lasting impact on mobility, connectivity, and sustainability for generations.

+ Future-Proofing

Agencies have an opportunity to build assets that can stand the test of time, meet future demand, and remain resilient against extreme events.

Connecting data and workflows can

fast-track success

To make the vision for the future of American infrastructure possible, federal agencies need to manage projects in new ways. The key is to use data to inform decision-making from the earliest planning stages through project handover.

Digital project delivery allows you to connect data throughout the construction project lifecycle so you can:

+ **Improve handoffs, from design to construction, and through operations and maintenance.**

+ **Increase accountability and transparency for project management and reporting.**

+ **Implement secure, cloud-based technologies that meet FedRamp compliance.**

◆ Trimble.

Advance your
digital transformation journey

Each infrastructure project comes with intense pressure to spend funds wisely, improve asset sustainability, and increase construction efficiency — all while navigating the realities of rising material costs and labor shortages.

Owners are in a unique position to lead digital transformation and help drive the adoption of digital project delivery across the ecosystem. You can be the catalyst for frequent collaboration among stakeholders and ensure teams are maximizing their impact and efficiency during the project.

You can reduce risk, increase visibility, and gain greater control over schedules and budgets by helping everyone involved work together more effectively and efficiently.

To continue learning about digital project delivery,

START HERE

◈Trimble®

The bigger picture:
Asset Lifecycle Management

Once you digitize your construction project management, you can begin to connect all phases of the asset lifecycle, from design and construction through operations and maintenance. This strategic, holistic approach to infrastructure construction, management, and maintenance is known as asset lifecycle management.

Implementing digital project delivery in conjunction with enterprise asset management enables you to share data throughout the continuum of the asset lifecycle. By connecting data, technology, and processes across all phases of the asset lifecycle, you can improve project outcomes and lower total asset costs.

Learn more about asset lifecycle management.