The 2021 Infrastructure Investment and Jobs Act has renewed the focus on capital construction projects in states and localities across the country. These large, complex projects involve multiple challenges for the agencies that oversee them: controlling costs, staying on schedule, ensuring delivery quality and more. Project managers must comply with extensive work regulations and environmental standards; they must meet requirements for contractor and supplier diversity; and they have to enforce health and safety protocols.

Many governments, however, are ill-prepared to make the most of this once-in-a-generation influx of federal funds. Legacy document management technology and antiquated processes can impede agencies’ ability to accept and spend funding.

What keeps a capital construction project moving? Documents and workflows that reach the right people for the right action at the right time. Yet many governments run construction projects with fragmented, general-purpose systems for content management. These systems cannot adequately support construction needs for timely, productive and secure information sharing among all project participants.

The infrastructure bill emphasizes “shovel-ready” construction projects. And as funding makes its way to states, counties and cities, these local agencies should consider modernizing their document management systems with a design focused on the needs of construction and rapid project startup.

A modern system provides document management and workflows designed to serve large construction projects. Smarter systems also enable rapid implementation, as well as easy integration with an agency’s existing work processes and other software.

Benefits of ‘Shovel-Ready’ Management Systems

Modern technology can help an agency make improvements in several key aspects of construction management.

Faster startup. Although each construction project is unique, all new projects have some common document management needs, especially at the outset. A modern system provides the tools to activate new projects quickly, including templates and predefined workflows based on industry best practices.

In-progress communication, collaboration and automation. The document management system plays an essential role in reducing miscommunication that can lead to cost overruns, rework and schedule delays. Project teams will accomplish more with system tools that streamline transmittals, optimize approval processes and reduce miscommunication. Purpose-built interfaces help all users do their work more easily, which creates operational efficiencies throughout the project. A central repository for project documents and standard tools for viewing and markup help managers communicate clearly with contractors and vendors. And real-time tracking of key metrics can detect potential problems early.

Improved compliance. The system can help an agency improve compliance across a broad range of complex health, safety, security and environmental requirements. To strengthen cybersecurity, the system maintains secure access and document controls based on defined user roles and permissions. An audit trail of document interactions supports inspection readiness and compliance monitoring, even after the project is complete.

Data for analysis. Project teams can identify lessons learned and create value for future work with in-depth data on project activity and supply-chain performance.

Getting Started with a Modern Document Management System

When exploring options for a new document management system, several factors can guide an agency’s choices.

First, determine if a cloud-based or on-premises solution will be a better fit for the agency and its projects. A cloud-based solution is often the better choice, particularly for large agencies with major projects that involve multiple participants.

To make the case for a modern document management system, IT leaders must be ready to communicate the need — and the
value — of this investment. There are several important ways to communicate this to budget directors and executive leadership. First, create a business use case that educates stakeholders on the potential improvements in time and productivity that are possible with new technology. Show how these gains will translate into potential project benefits, especially for costs, schedule and construction quality.

Next, identify how the new system costs will be funded. The subscription-based pricing of a cloud solution may be eligible for operational budgets, with spending allocated as it is incurred across multiple years and projects. An on-premises system, meanwhile, will likely require an initial capital expense followed by annual maintenance fees. For both implementation models, federal funding may be available to cover some of the initial costs. The Infrastructure Investment and Jobs Act allocates $20 million each year for FY 2022-2026 to accelerate implementation of advanced digital construction management systems.

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The urgency of needed infrastructure work and the availability of new federal funding will accelerate capital construction projects in the next several years. A modern document management system will help governments manage these projects effectively and maximize their value to the public.

This piece was developed and written by the Government Technology Content Studio, with information and input from OpenText.

Smarter Management for a Major Airport Expansion

Modern document management systems can greatly improve an agency’s preparedness for future construction projects. That was the case with one of the largest authorities in the U.S, which gained tremendous value from a modern document management system as it prepared for a multi-year surge in airport capital improvements.

The airport previously relied on an older document management system, which was implemented by a consulting firm that did not have experience with capital construction. As the airport planned new projects, the limitations of that system design became clear. For example, standard workflows needed to be created separately for each project, an effort that could take multiple weeks each time.

To replace the older system, the authority chose a document management solution from OpenText. Initial system design, configuration and creation of core workflows was performed by Stellar Services, an OpenText partner.

The modern OpenText solution defines new projects automatically with standard workflows that support core management needs, including:

- Submission and tracking of contractor and vendor responses to agency RFIs and RFPs
- Secure document submittals, reviews and approvals with consolidated comments
- Daily reports and a live dashboard of key project metrics to track progress
- Meeting minutes that preserve discussions and decisions
- Digital change order issuance and controlled distribution to the affected parties
- Templates that create consistency and clarity in project documents

Heavy reliance on email communications was another limitation of the previous document management system. In the OpenText system, 500 internal and external users share plans and project documents directly, eliminating version-control problems and reducing the confusion of paper and email exchanges. The authority that oversees the airport now specifies that contractors and vendors must be willing to participate in the OpenText system for all new airport construction projects.

Today, the OpenText system manages projects that significantly expand the airport’s flight and passenger capacity, remodel the terminals and parking areas for more efficient flows and a better passenger experience, increase safety and meet sustainability goals.