

Data Management for Civil Infrastructure

5 Things You Need to Know Now



BROUGHT TO YOU BY:



Industry trends that impact collaboration and data management practices

Volume. Digital tools are driving higher volumes of data. As 3D model-based design and simulation see greater adoption, you must work with and manage ever-greater quantities of data.

Exchange. Businesses and project teams are getting more distributed and more complex. With the proliferation of digital information comes the growing need to exchange information quickly, reliably, and securely with all internal and external team members of designers, contractors, sub-contractors, and customers/owners.

Velocity. More than ever, firms are under pressure to be more productive and efficient—delivering higher levels of quality and customer service while maintaining margins and schedules. To address these criteria, firms need process predictability that allows them to protect and preserve profit margins and adherence to schedules.

Data management is a vital but often-neglected element for success in civil engineering projects.

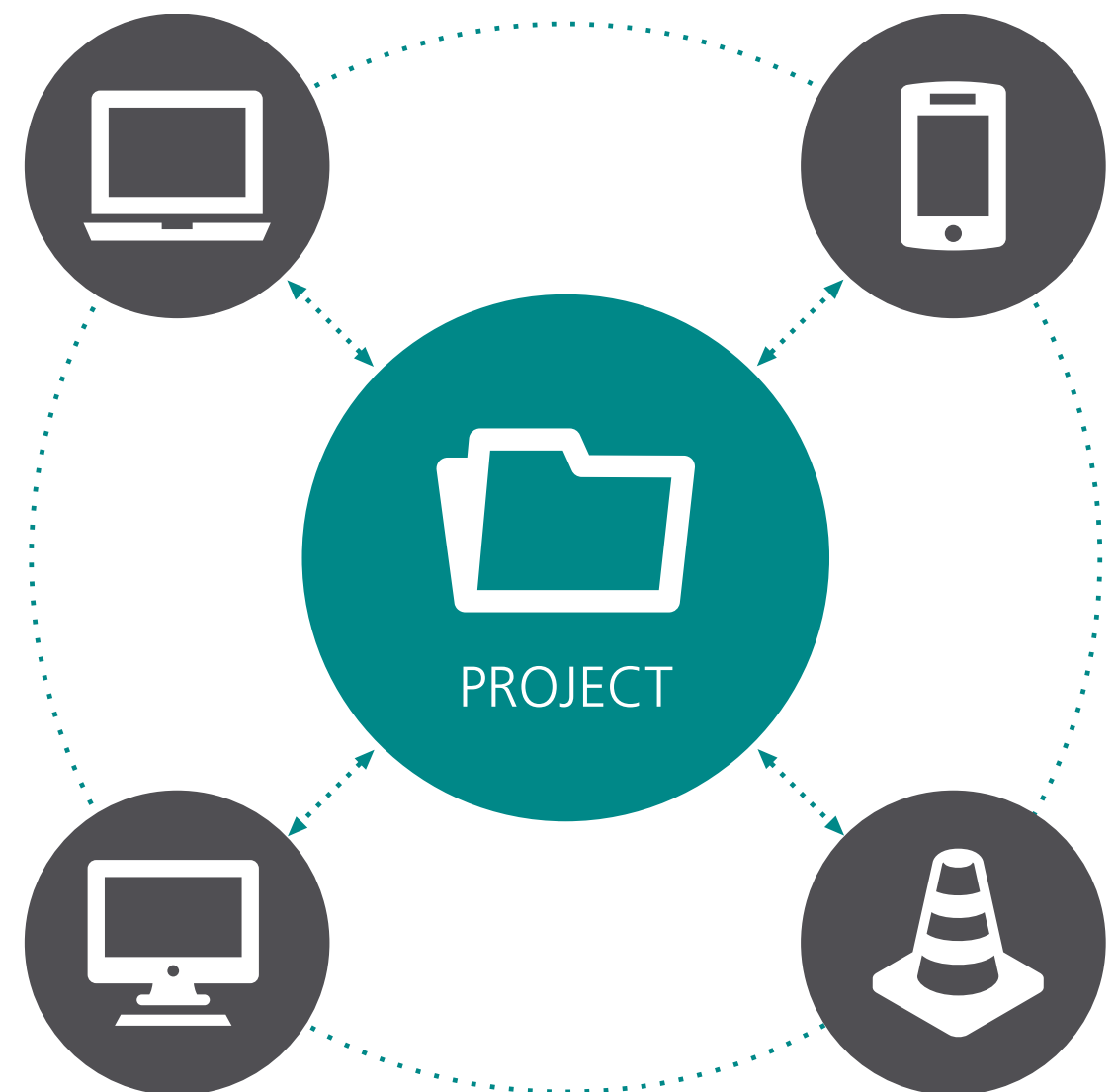


1. Maximize project success with a single source of data

Project data management should make your job easier, not more frustrating. If you're like most firms, Microsoft Windows Explorer and some mapped network drives are what you use to organize your project data into manageable parts. You might have one drive for design data, another drive for administrative data, and additional drives for other content such as submittals, client files, and more. Although this type of setup is common, it can be problematic. Project data can easily be stored in the wrong subfolder or drive or even server. It can be too easy for project data to be accidentally misplaced—for example, by dragging and dropping a folder into another folder without even realizing it. Worse yet, what about problems due to improper file access controls?

What if you had a single solution for all of your project information? How would a single source of truth for your project that contained your engineering design data, but also your documentation, administrative data, client files, and even your email impact how you manage project data?

A single data source for organizing project data dramatically improves team efficiency and minimizes errors.



2. Improve security for project data

What does maintaining the security of your design project data mean to you? A typical civil project consists of many team members. Even though these members are all part of the same team, their need to access, edit, create, or delete project information is different. Drafters should be able to access, but not edit, a project's design. Engineers should be able to access survey data, but only after the surveyor approves it. Administrators should not be able to delete the engineer's correspondence. And no one should ever be able to alter the record drawings. If the wrong people had the wrong access rights to your project data, the results could be disastrous. Causing severe delays and costly errors for your project, your firm, and even your clients.

What if you were able to easily control access rights for all team members assigned to your project? What if you could do this by leveraging your existing Windows authentication? Consider the advantages of allowing individual access to only the right project data while protecting those information assets from any unauthorized persons.

Getting the right people access to the right project data should be a simple and easily managed process.

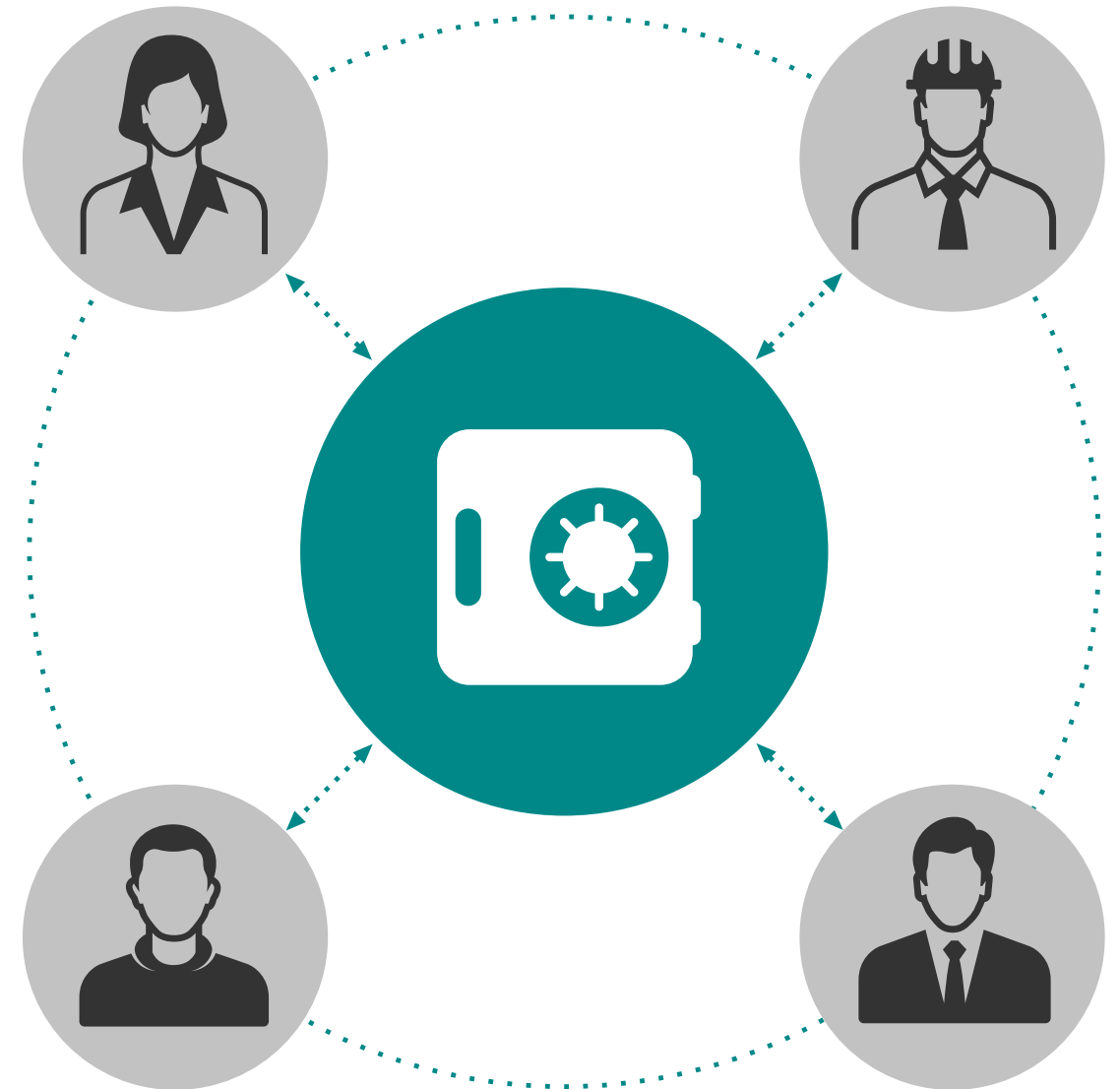


3. Instill company-defined standards

Standards help keep project data organized and easy to find. They provide direction as to how data within a plan set is presented. This can include everything from text types, to line weights, to sheet layouts. In many ways, standards are a company's identity. It helps firms maintain consistent deliverables across team members and projects. You put in a lot of time and effort to establish your company standards. They are a critical part of your projects.

Although most firms define project standards, they often struggle to ensure that these standards are adhered to. It is not unheard of for two members of the same project team to produce deliverables that look completely different. What if you had a solution that enabled your users to access standards from a centralized location? What if that solution facilitated the naming of files so that they were consistent with your company standards? What if that solution could help maintain standards differently per project?

Company-defined standards should be maintained automatically, not reactively.

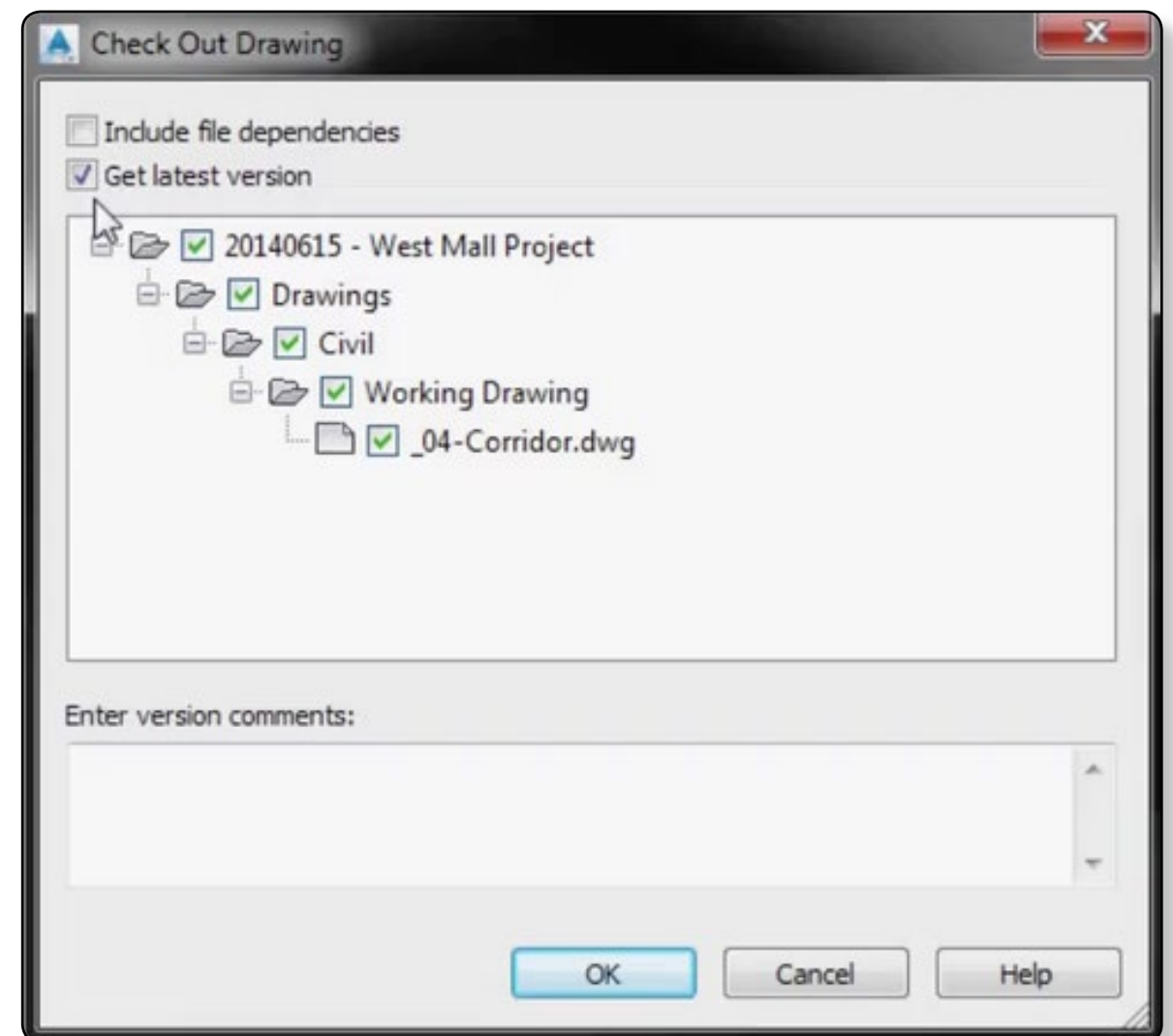


4. Improve workflows with actively managed versioning

Creating and completing project files typically occurs over time through a series of iterations and revisions. As a design project file is updated, it is important, and often a legal requirement, to maintain previous versions of the file. At the same time, you want to be sure that your people are always using the latest version of any file. Over the years, many strategies have evolved on how to best manage version control. However, this can be a time-consuming process and can require assistance from the IT department.

Relying on end-users to manually rename files or archive prior file versions is often inefficient and error prone. Instead, what if, as files were edited, the process of maintaining prior versions was transparent to the end user? What if everyone on the team could more easily determine that they were working with the latest version of their file? And what if the team members could be empowered to search for and retrieve older versions without assistance from IT?

File version control must be an active component of an effective project data management solution.

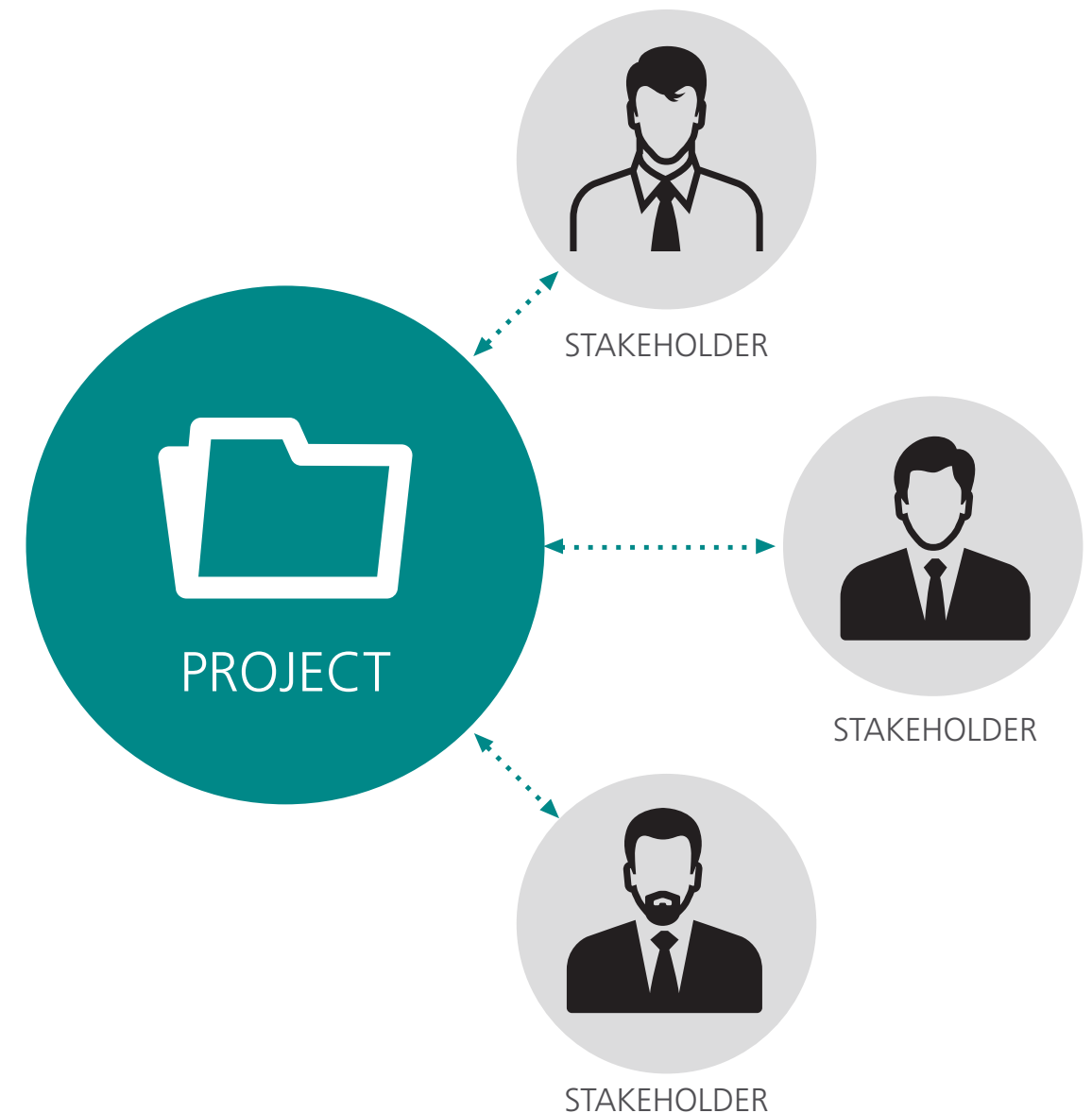


5. Collaborate like never before

Most civil engineering professionals would agree that collaboration between project stakeholders and effectively managing the data they generate are critical to a project's success. But if you're like most firms, the way you collaborate and manage data varies widely depending on the team member and their location. How you collaborate and share data with a person sitting next to you will be completely different from when you work with a team member across town or even in another country. The project, the person, and their location all influence whether you're sharing data in a drive on a server, exchanging files via emails, sharing flash drives, posting data to an FTP site, or even having it delivered by courier.

Considering geographically dispersed teams, high volumes of increasingly complex data, Internet speeds, and an ever-more-stringent and complex regulatory environment—one overriding truth emerges:

The need for fluid team collaboration and effective data management is greater than ever before.



The Autodesk Data Management vision

The Autodesk Data Management vision is to provide civil engineering project teams with a complete, accurate, digital view of a project, with access to information throughout the project lifecycle whenever and wherever they need it—from the office, the web, or the field.

The Autodesk Solution for Data Management

We're delivering on this vision now with our Autodesk® Vault Professional, which includes new capabilities specifically for the industry, an Autodesk Buzzsaw entitlement included with current Vault Subscription, and integration with AutoCAD, AutoCAD Civil 3D, Autodesk Navisworks Manage and Autodesk Navisworks Simulate.

Autodesk solutions for data management delivers a workflow-driven environment for civil engineers that automates, standardizes and tracks processes, helps you manage user access and improve accessibility of project content with small and large teams and collaborate across multiple locations—giving you a single source of truth for your engineering documentation.



Now there's a better way for your entire team to work together and share information

By centralizing the storage of all data and related documents, you can reduce time organizing files, avoid costly mistakes, and more efficiently release and revise designs. As product designs evolve and become more complicated, Autodesk® Vault Professional works with tools like AutoCAD Civil 3D to help protect civil engineering teams from unintentionally overwriting each other's data. In addition, the data management software's revision process can be quickly deployed or tailored to unique requirements.

With data replication, you can scale from locally managed projects to globally distributed enterprises. Robust version control allows project rollbacks and tracking. Vault offers easy administration, configuration, and scalability for every civil engineering firm involved in the project.

Maximize return on your company's investment in design data with Autodesk Vault Professional. Vault works with Civil 3D to help planning, design, and construction teams manage their projects like never before!

For more information, contact
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