

Answers to...

THE TOP TEN

Challenges of Engineering Data & Document Management

Synergis
Software 

The Top 10 Challenges of Engineering Data & Document Management

Let's face it: Problems are a part of business.

Our jobs often boil down to two words: solving problems. But what separates the exceptional businesses from the mediocre ones is how quickly and effectively they can identify and solve their top problems. The good news is that the top ten challenges can go away in three weeks or less because that's all the time it takes to implement, train, and go live with Adept engineering document management. Once you understand how to solve these top 10 challenges, you'll have all the ammunition you need to prove the value of investing in a document management solution.

1. Find Any Document... Anywhere

The more effort you put into managing documents in your organization, the more likely that people will waste more time searching for the files they need. Even when company design standards are in place, people make mistakes. They lose files, overwrite them, store them on their hard drive, or someplace on the network. Most of the time there's absolutely zero document control.

This problem only gets worse when you want to collaborate with other departments, global sites or multiple contractors. Everyone has their own way of working, making it nearly impossible to share information efficiently. Research shows that an estimated 40% of an office worker's time is spent managing unstructured data, and 20% of an employee's time is wasted searching for a document.

SOLUTION:

With Adept you can:

- search or browse for documents based on any information you know about the document(s), independent of the document's location on the global network
- find files without the need to remember confusing folder or file names
- track attribute and property data from any AutoCAD, Autodesk Inventor, SOLIDWORKS, or MS Office document to eliminate duplicate data entry
- browse for a file using a tree-like file view, based on any combination of data fields on your Adept library card
- find, copy, and modify existing files for faster design reuse

DID YOU KNOW...

As much as 80% of data that companies collect, create and manage today is unstructured — more difficult to search, store, share and analyze. This volume is expanding 35% to 50% every year.

2. Document Security Your Way

Security is a top challenge for any organization. Proprietary engineering information is located in folders across the enterprise – sometimes even on a users' local hard-drive – yet it needs to be easily and safely accessible by other departments. A secure vaulting system protects files and ensures your organization's proprietary engineering information is not at risk of being lost, misplaced, deleted or even stolen. You need security AND you need to have access to your vaulted files. A document management system that scrambles file names and moves file folders is going to make it hard and tedious to get at your files if your system crashes or you want to migrate to another system.

SOLUTION:

Adept provides secure, controlled access to documents from any location. Whether you need a centralized vault or distributed vaults at each location, our unique smart vaulting maintains your native folder structure and file names without scrambling or moving your files. Adept supports vault replication for fast access to the latest revision anytime, anywhere in the world. Your IT staff is not required to manage these rights and it's often done by a project manager, CAD manager, or document control specialist.

DID YOU KNOW...

4,506 IT professionals estimate 49% of an organization's worth is derived from the information they own. What would it cost your company if your intellectual property fell into your competitors' hands?

3. Do You Have More than One Version of the Truth?

Manual methods of version control are difficult and prone to error. One mistake can mean an individual spends hours updating an obsolete version and has to repeat all that work all over again. Without version control it's common to find multiple revisions of a document across the organization. There's a copy on the server, on a user's hard drive, and a paper copy in a print room, making it hard to determine which is the latest, most accurate revision.

SOLUTION:

Adept serves as your central point for document access and automatically ensures users across the organization always have access to the latest version. Adept also saves previous versions and maintains the historical metadata so you can access a snapshot in time as well as a complete document history. Adept also maintains an audit trail for each document throughout its lifecycle.

DID YOU KNOW...

Use the incorrect version of an engineering document and you are vulnerable to increased corporate risk, failed audits, cost overruns that can extend into the millions of dollars, and significant risks to safety, schedules, and reputation.

4. Stay Compliant, Fly through Audits, Pass Industry Certification

Maintaining a complete audit trail for each document throughout its lifecycle is important not only for internal analysis and process optimization, but also for compliance with industry standards and regulations. Implementing the proper safeguards through an electronic audit trail provides your company with accountability to your customers and to industry and regulatory agencies. An electronic audit trail dramatically reduces the time, cost, and labor it takes to gain and maintain certification and increases your company's chances of passing through audits quickly.

SOLUTION:

With Adept a complete record is kept of every single action performed on every document throughout its lifecycle — automatically. Your company is protected from legal exposure with validated records of actions taken, and your path to industry compliance and certification is streamlined. You gain a fool proof method to visualize the ongoing activity history of a file, including what action was taken, by whom, and the date and time the action occurred to comply with industry standards and regulations and gain industry certifications. ISO-9000, QS-9000, FDA 21 CFR Part 11, Sarbanes-Oxley, and many others require this level of history detail. Best of all, you gain x-ray vision into your company's workflows, enabling you to identify where your processes can be improved for a leaner, more profitable organization.

DID YOU KNOW...

Ever been through an industry certification or audit? Then you know the impact: Countless hours are spent providing documentation while your core business productivity takes a hit.

5. Eliminating the ECN Ball and Chain

Your ability to compete, thrive, or even just survive depends on your ability to change...and change quickly. Walking isn't acceptable, you need to sprint.

And, for many manufacturing companies, the dreaded ECN process is the ball and chain around your ankle. It's one of the most common complaints we hear from manufacturers.

"Our ECN process is painfully slow, difficult to manage, lacks visibility, and error-prone."

And most ECN processes offered by other document management providers are difficult to set up and are inflexible.

Engineering changes, if not managed efficiently can drag down a project, adding time and expense and reducing your profits. Manual change processes make it impossible to streamline workflows and difficult for you to enforce engineering change policies and procedures. What's worse is you lose visibility to the change status; and manual change processes don't notify those people who need to move the change process along swiftly. For many organizations, engineering or design change is a way of life and any inefficiency increases production costs, time-to-market, and wastes resources.

SOLUTION:

With Adept you can create unique workflows that automate your engineering change process. You can accelerate your approval processes to keep the project on tight timelines. You can send automated notifications via email. You can set up time based alerts to help you identify bottlenecks before they stall a project. And you can see the status of an engineering change, including all the steps remaining and those that need completion. So here's a question for you: how much money and how many man hours would your company save if engineering change took half the time it takes now?

DID YOU KNOW...

According to an IGC Survey, the top challenges with change control are: Routing change requests within a workflow; obtaining necessary signatures to finalize; and managing simultaneous change requests.

6. Manage CAD Files & Their Complex File Relationships

Managing all your CAD data and the complex file relationships, versioning requirements, change processes and redlining is a huge challenge. It gets even more complex because you're managing AutoCAD xrefs, image and overlay file relationships, plus Autodesk Inventor and SOLIDWORKS parts, assemblies, drawings, and configurations. And if you want to reuse design files for new projects, keeping relationships and revisions intact manually is time consuming and difficult. When you make changes to one design there may be a ripple effect on other designs. Plus, there's no easy way to control whether a parent file is fixed on a specific version of a child or whether it floats to the latest version when the child is modified.

SOLUTION:

Adept is integrated with AutoCAD-based products, Autodesk Inventor, SOLIDWORKS, and MicroStation. Adept manages and tracks AutoCAD xrefs, image and overlay file relationships throughout their lifecycle. Adept manages the complex file relationships that exist between Inventor or SOLIDWORKS parts, assemblies, drawings and configurations. As files are checked out, revised, routed through workflows, copied, moved, or renamed, Adept makes sure all these relationships stay intact. And because the link between files is bidirectional, authorized users can update one or many attributes right from within the Adept interface in either single or batch mode without opening the files themselves. Adept also displays the file relationships in an easy-to-understand tree structure so you can see "where used" and "composed of" information.

DID YOU KNOW...

40% of engineering professionals are not able to find the design data they're looking for!

One of the greatest challenges organizations face today is effectively managing their CAD data, with its complex file relationships, versioning requirements, change processes and visualization needs.

7. Collaborate Across Departments & Geographic Locations

If you're using Windows Explorer for file sharing and collaboration, you already know it's a nightmare to share documents. There's no single version of the truth and sharing is frustrating and time consuming. Collaboration on large CAD or assembly files is painfully slow. Plus, using email for collaboration provides zero version control, which leads to complete chaos.

SOLUTION:

Adept makes it easy to replicate data vaults to ensure users everywhere have fast local access to the latest version of a document. Adept ensures everyone is working from a single version of the truth. Adept cuts out manual file processes, reduces errors, and takes your documents out of the email version control nightmare. Most importantly, Adept frees your people to be more creative and productive and lets them focus on what they do best.

DID YOU KNOW...

67% of data loss is directly related to user blunders, making them 30 times more menacing than viruses, and the leading cause of data loss.

8. Let Non-CAD Users View and Access Files

If you need to share CAD files with people outside of engineering the options aren't that great. You could buy more CAD licenses and train people, but it's expensive and time consuming. You could use a free CAD viewer, but you run the risk of losing quality and accuracy and add IT overhead to install and maintain multiple viewers. You could convert everything to neutral formats like PDF, but that takes time and adds yet a second copy of a document to manage. Probably the worst case scenario is to use hard copies of CAD files and redline them—an option you'd probably like to avoid.

SOLUTION:

Adept provides built-in view, markup and compare capabilities. Its built-in Oracle AutoVue visualization tool extends engineering design documents to all enterprise users. There's no need to buy additional CAD seats. It views hundreds of formats from CAD, MS Office, raster graphics, and also offers fully functional, high quality viewing of 2D and 3D files. It also improves global collaboration. A viewer is an essential tool that uses native file viewing to eliminate file conversion errors. What would it mean for you and your bottom line to have everyone on the same page—collaborating creatively and productively without the major expense of additional CAD licenses?

DID YOU KNOW...

The typical enterprise with 1,000 knowledge workers wastes \$2.5 million to \$3.5 million per year searching for nonexistent information, failing to find existing information, or recreating information that can't be found.

9. Creating Transmittals in No Time

No one likes how much time it takes to create transmittals. Gathering up all the documents, making sure you have the correct versions, making sure all the xref images and part files are included in the transmittal deliverable. It's all very tedious. Even when transmittals are assembled with painstaking care, there's a high risk for missing key components like xrefs, parts, drawings, and assemblies. And then once the transmittal is sent, how do you track, manage, and access its contents future?

SOLUTION:

Adept slashes transmittal creation time and eliminates costly errors. It provides automatic cover sheet creation, a built-in address book for quick recipient selection and sending, and automatic conversion of files to PDF when necessary. It also ensures automatic tracking, editing, and routing through workflows. You can send a transmittal via email or FTP, or to an Intranet and always maintain the relationship between the cover sheet and all the files that you send.

DID YOU KNOW...

According to an IGC Survey, collecting and packaging files for document transmittal is one of the top three issues facing document controllers today.

10. Automatic File Naming Turns Chaos into Order

People name files in a way that makes sense to them, which is a big problem when they have to collaborate and share files with other people. Some companies try to impose naming standards, but with no way to enforce or automate these standards all it takes is one person falling out of line and an important file could be irretrievable. And when more than one department or region or branch is involved—what do you have? Chaos!

SOLUTION:

Adept allows you to create diverse naming schemes for all your departments or branches—local or global—using combinations of any of the following: Auto-generated number sequences, fixed-width text place holders for user-entered text, predefined data from drop down lists, user-entered free texts, and delimiters. If you add up all the time your people spend naming, organizing files, and then trying to find them do you know how much time you would save if all your naming was done automatically?

DID YOU KNOW...

An IGC Survey reports that ensuring consistency of document structure is one of the top four challenges of document control and management.

Wrap-up

These document management challenges may seem overwhelming, but with the help of experts in the industry you can take the first step towards solving these problems.

If you're ready to chat with someone who can help, give us a call at 800.836.5440. Or visit our Demo Center at www.SynergisSoftware.com to see Adept in action.