



# Engineering Documents Deserve More than an Enterprise Content Management System

**Understanding the Hidden Risks of Generic Document Storage  
Platforms, like SharePoint, and How to Make the Transition to  
Engineering Document Management**

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# Executive Summary

Engineering records are not static files. They are living controls that govern the way you build, modify, operate, inspect and retire your assets. This is why the concept of document management can feel misleadingly simple in the face of its complex operational realities.

If you're managing documents in generic platforms like SharePoint, it's highly possible you have inherited risks such as inconsistent versioning, unclear approval authority, unplanned downtime and even a slow erosion of trust in the system. Generic document platforms can seem like a sensible choice, especially when budgets are constrained and stakeholders expect a certain level of speed. But document control, especially in asset-intensive industries, is far more difficult with a generic solution.<sup>1</sup> Engineering environments stress these systems in ways they weren't designed to handle and breakdowns lead to big losses.

Data from Q4 2024 shows that 93% of executives worry over the impact of downtime, with 100% reporting revenue losses resulting from outage-related impacts.<sup>2</sup> A 2025 survey uncovered that when engineering downtime occurred, more than half (52%) of respondents said that just one hour of this downtime ended up costing them \$50,000 or more.<sup>3</sup> And downtime is just one hurdle. Non-compliance costs average around \$14.82 million which is more than double the average cost of maintaining compliance (\$5.47 million).<sup>4</sup>



<sup>1</sup><https://www.qse-academy.com/document-control-what-it-is-and-how-to-keep-it-simple/>

<sup>2</sup><https://www.cockroachlabs.com/blog/the-state-of-resilience-2025-reveals-the-true-cost-of-downtime/>

<sup>3</sup><https://simutechgroup.com/cost-of-engineering-downtime/>

<sup>4</sup><https://www.complianceandrisk.com/blog/the-unseen-invoice-unpacking-the-true-financial-impact-of-compliance-failures/#h-the-alarming-truth-non-compliance-costs-outstrip-prevention>

**The buyer decision is shifting from “where should our organization store documents?” to “how can we maintain engineering-grade control over the records that protect our assets, people and operations?”**

To get engineering-grade document control you need built-in capabilities that generic platforms usually treat as optional or add-on, such as role-based governance, standards-driven metadata and auditable traceability across an asset’s full lifecycle.

This paper discusses generic document platforms, specifically the difference between storing documents and managing them as well as how generic systems break down. It explains what is required for engineering-grade document control with a look at Accruent EDMS and a guide for transitioning away from generic solutions.

## Core Takeaways



**Understand why generic document platforms seem like an attractive option**



**Get insight into what it costs you when these systems break down**



**Learn what is needed for engineering-grade document control**



**Gain insight into a practical pathway for moving beyond generic platforms**



## 5 Reasons Why Generic Document Platforms Seem Like a Strong Option

The pressure to modernize systems, control costs and move fast plays a critical role in making generic document management platforms feel like the more rational choice. These solutions promise simplicity, standardization and speed, all without the complexity of needing to add another specialized system, so they feel “good enough”. Seems sound, right? It is on the surface and the following outlines five reasons why.

### Enterprise-Wide Standardization and IT Preference

From an IT perspective, if you can standardize on a single, organization-wide platform that goes a long way in simplifying governance, security management and vendor relationships. Couple this with broader enterprise mandates to consolidate tools and reduce system sprawl, and choosing a generic platform can feel aligned to corporate strategies. This is especially true if your engineering teams are expected to fit into an existing digital ecosystem.

### Familiar Interface with Minimal Onboarding

There may be teams in your organization that already use generic platforms for collaboration and file sharing. The interface of that system is already familiar, so broader adoption feels simple and training needs appear minimal. Essentially, the impression is created that you can transition engineering documents with limited disruption to business or resistance from users.

### Easy Collaboration Capabilities Across Departments

Engineering does not operate in a silo and the ability to easily share files with procurement, finance, legal and executives is valuable. Generic platforms are built to support broad collaboration, so cross-functional access feels more seamless. This flexibility makes the system appear as though it supports transparency and organizational alignment.

### Quick Initial Deployment Without Deep Process Design

Project timelines can be tight so of course the ability to set up folders, assign permissions and launch basic workflows fast is appealing. You may not have the time to design comprehensive document governance right away and a generic platform lets you move forward immediately, postponing deeper or more nuanced process decisions until later.

# Document Storage vs. Engineering Document Management: What's the Difference?

Storing documents and managing them can look like the same activity on the surface. But the two serve very different purposes for your business. Treating complex engineering records like general business files means you risk overlooking governance, traceability and lifecycle control. Your assets depend on this, so let's get into what document storage and document management are, as well as how they are different.

## What is Document Storage?

Document storage helps you save, organize and retrieve your files.<sup>5</sup> You can create folders, assign permissions and lean on version histories to track edits. The primary goals with document storage is to provide accessibility and collaboration, so people can find and share information.

## What is Engineering Document Management

Engineering document management governs any technical records that have a direct impact on asset performance, safety and compliance.<sup>6</sup> Its value comes in enforcing structured workflows, defined revision states and formal approval processes. Engineering document management goes further than simply storing files, it makes sure that the right version of a document is reviewed, approved, distributed and remains traceable across an asset's entire lifecycle.

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<sup>5</sup><https://info.courthousedirect.com/blog/bid/214727/what-is-document-storage-retrieval>

<sup>6</sup><https://www.accruent.com/resources/blog-posts/five-multi-national-companies-thriving-with-engineering-document-management-systems>



## Key Differences Between Storage and Management

The differences between document storage and engineering document management are structural. What may look similar on the surface and in theory operates quite differently in practice.

Document Storage	Engineering Document Management
Handles files	Governs controlled technical records tied to asset performance, safety and compliance
Relies on basic version history	Provides formal revision states with enforced approval workflows
Depends on folder structured	Uses asset-aligned metadata models connected to equipment, projects and locations
Emphasizes shared access	Requires distribution with role-based permissions and release controls
Updates drawings and documents	Drives the evolution of drawings and documents across design, construction, and operations phases through pre-determined workflows with formal governance at each stage
Highlights a single "current" version	Manages multiple formal documents states (e.g., <a href="#">IFC</a> , As-Built, As-Operated)
Has standard file repositories for common file types	Supports large file sizes and CAD-specific requirements, including license-free rendering and previews for easy review
Primarily optimized for internal collaboration	Offers structured contractor and third-party governance
Retains documents for defined periods	Supports long asset lifecycles with strict traceability and audit expectations
Primarily supports file sharing with limited traceability or control once documents are distributed	Enables controlled collaboration with stakeholders while maintaining governance, traceability and document integrity

General file storage focuses on where documents live. Implementing engineering document management lets you focus on how those documents are governed, validated and sustained throughout the time an asset is in operation.

# System Breakdown: How it Happens and What it Costs

Generic document platforms don't typically fail all at once. Breakdowns happen gradually over time because of workarounds, manual controls and the emergence of parallel processes as needs and complexity increase over time. Inevitably you may hit roadblocks where you need a certain functionality that the generic system simply can't support. Then, what started as simple storage solution has morphed into a fragmented environment that exposes your organization to a myriad of operational, financial and compliance risks.

Here is a structural view of how common breakdown points can cost you.

Where the System Breaks Down	What it Looks Like in Practice	What it Costs Your Organization
<b>Inconsistent or manual revision governance</b>	<ul style="list-style-type: none"> <li>• Approvals tracked via email</li> <li>• Unclear revision status</li> <li>• Multiple "final" versions</li> </ul>	<ul style="list-style-type: none"> <li>• Rework</li> <li>• Approval disputes</li> <li>• Schedule delays</li> <li>• Regulatory exposure</li> </ul>
<b>Limited traceability across lifecycle stages</b>	<ul style="list-style-type: none"> <li>• Difficulty proving who approved what and when</li> <li>• Gaps in audit readiness</li> </ul>	<ul style="list-style-type: none"> <li>• Delayed audits</li> <li>• Reputational damage</li> <li>• Compliance penalties</li> <li>• Increased inspection time</li> </ul>
<b>Weak linkage between documents and asset hierarchies</b>	<ul style="list-style-type: none"> <li>• Documents stored by folder vs. connected to specific equipment or locations</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance errors</li> <li>• Slow troubleshooting</li> <li>• Higher downtime</li> </ul>
<b>Reliance on naming conventions instead of metadata and search</b>	<ul style="list-style-type: none"> <li>• Teams must depend on file names to find documents</li> </ul>	<ul style="list-style-type: none"> <li>• Search inefficiency</li> <li>• Human error</li> <li>• Missed or misused documentation</li> </ul>
<b>Constrained offline capability for field teams</b>	<ul style="list-style-type: none"> <li>• Field crews rely on downloaded or printed document copies</li> <li>• Prior versions are improperly archived</li> </ul>	<ul style="list-style-type: none"> <li>• Out-dated or incorrect information</li> <li>• Increased risk of safety incidents</li> <li>• Corrective work</li> </ul>
<b>Spreadsheet registers and email approvals outside the system</b>	<ul style="list-style-type: none"> <li>• Parallel tracking tools emerge to compensate for system gaps</li> <li>• Teams store critical files locally</li> </ul>	<ul style="list-style-type: none"> <li>• No single source of truth</li> <li>• Inconsistent reporting</li> <li>• Administrative burden</li> <li>• Loss of trust in the system</li> <li>• Fragmented data</li> <li>• Reduced governance control</li> </ul>

Where the System Breaks Down	What it Looks Like in Practice	What it Costs Your Organization
<b>Manual metadata entry and duplication</b>	<ul style="list-style-type: none"> <li>• Data re-entered across systems</li> <li>• Inconsistent tagging</li> </ul>	<ul style="list-style-type: none"> <li>• Data quality issues</li> <li>• Reporting inaccuracies</li> <li>• Wasted labor</li> </ul>
<b>Poor project-to-operations handover</b>	<ul style="list-style-type: none"> <li>• Incomplete as-built documentation transferred to operations</li> </ul>	<ul style="list-style-type: none"> <li>• Extended commissioning timelines</li> <li>• Asset data cleanup costs</li> </ul>
<b>Limited scalability as document volumes expand</b>	<ul style="list-style-type: none"> <li>• Performance degrades with large CAD files and growing repositories</li> </ul>	<ul style="list-style-type: none"> <li>• Slower workflows</li> <li>• System glitches</li> <li>• Productivity loss</li> <li>• Need for costly system upgrades</li> </ul>
<b>Weak integration with <a href="#">EAM</a>, <a href="#">ERP</a> and/or <a href="#">GIS</a></b>	<ul style="list-style-type: none"> <li>• Engineering data is siloed from operational systems</li> </ul>	<ul style="list-style-type: none"> <li>• Decision delays</li> <li>• More duplicated efforts</li> <li>• Asset data remains inconsistent</li> </ul>
<b>Growing IT customization and administrative overhead</b>	<ul style="list-style-type: none"> <li>• Custom workflows, patches and scripts needed to meet governance and engineering needs</li> </ul>	<ul style="list-style-type: none"> <li>• Escalating maintenance costs</li> <li>• Fragile system performance</li> <li>• Upgrade constraints</li> </ul>

## The Compounding Effect of System Breakdowns

While manual revisions, scalability and any of the other breakdown points above may seem manageable on their own, these don't happen in a silo. You can have multiple breakdown points happening at the same time or occurring one after the other over a short period of time, causing impact to compound. That's when you find yourself spending more time validating information, recreating documentation, reconciling discrepancies and preparing for audits than you actually do getting real work done.

Over time, hidden costs of "good enough" document storage can exceed any investments you would need for engineering-grade control. Financial impacts show up in extended project timelines, higher maintenance costs, compliance risk and exposure as well as unplanned downtime and lost productivity. Operationally, impacts show up in a less quantifiable but equally critical way: diminished confidence in your integrity and ability.

# Engineering-Grade Document Control Calls for Purpose-Built EDMS

Document control is not an administrative function; it's an operational safeguard for asset-intensive industries. To achieve engineering-grade control you need systems designed to reflect how assets are structured, how projects are executed and how compliance is maintained as regulations shift, expand or are introduced.

What you need are structured asset hierarchies and metadata governance, so documents are linked to the equipment, locations and projects they govern. Controlled revision workflows must align with engineering standards where formal transmittal and approval processes can remove ambiguity around status and authority. And the system you use absolutely must have full auditability across document lifecycles already built in.

An engineering document management system (EDMS) is designed to provide what you need in an asset-heavy organization. From native support for large CAD and technical files to enabling secure contractor collaboration through role-based access, an EDMS solution, like Accruent EDMS, can provide mobile and offline access without compromising control. Preserving lifecycle traceability from capital project delivery through long-term operations, an EDMS reduces reliance on spreadsheets, email approvals and manual oversight. Governance is enforced by design versus requiring individual vigilance.

## How Accruent EDMS Fits in Today's Engineering Environments

Accruent EDMS is specifically designed for the built environment, supporting industries such as utilities, mining, energy and infrastructure. Document integrity directly impacts safety, uptime and compliance in these types of industries, so instead of adapting a generic platform to engineering needs, Accruent's system is built around engineering governance from the start.

With Accruent EDMS you get:

- Structured revision control
- Rich metadata
- Audit-ready compliance
- Formal workflows
- Collaboration across internal teams and external contractors
- Full visibility and control
- Strict distribution and access rules
- Alignment with enterprise IT security requirements
- Engineering governance and corporate standards operate together



# Your 5-Step Guide for Transitioning to a Modern EDMS

Making the move away from generic document platforms doesn't require a disruptive, all-at-once transformation. A focused approach with measurable phases can help you reduce risk and build momentum. Here are five steps to help guide your journey.

- 1. Start with a defined asset class or high-risk environment:** Look at where document integrity has the greatest operational or compliance impact so you can begin by addressing meaningful risk early to demonstrate tangible value.
- 2. Run a controlled pilot or proof of concept:** Test your workflows, revision governance and user adoption in a contained setting. This helps you validate assumptions before trying to scale across the business.
- 3. Measure governance uplift and process efficiency:** Track any improvements in revision control, approval cycle time, audit readiness and field access to quantify operational benefits tied to engineering-grade control.
- 4. Integrate with existing systems where required:** Be sure to connect your EDMS with EAM, ERP, GIS or specific project systems so all engineering records align with asset data and operational processes.
- 5. Expand incrementally across asset portfolios:** Conduct rollouts in planned and structured phases, applying lessons learned from initial tests and rollouts to strengthen governance consistency while minimizing disruption to ongoing operations.

Sequencing your transition in this way helps keep your teams and operations from getting overwhelmed. The goal is to not only implement a new system, but to build a stronger operational foundation for managing all your complex assets at scale.

Ready to gain engineering-grade control of your document management? [Get in touch with Accruent for an assessment and consultation today.](#)

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